

**BANKI
KUU YA
KENYA**

**CENTRAL
BANK OF
KENYA**

**BANKI
KUU YA
KENYA**



**CENTRAL
BANK OF
KENYA**

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**TENDER FOR PROPOSED OFFICE MODERNIZATION
AND
CREATION OF WORK – STATIONS
-PHASE III PROJECT-
INCORPORATING FIRE SAFETY
OCCUPATIONAL SAFETY AND HEALTH SERVICES
FOR
CENTRAL BANK OF KENYA**

**TENDER NO. CBK/28/2012-2013
CLOSING ON 11TH JUNE, 2013 AT 10.30AM**

BILLS OF QUANTITIES

**BIDDING DOCUMENT, BUILDERS WORK,
PRELIMINARIES
SPECIFICATIONS AND GRAND SUMMARY**

CLIENT'S REPRESENTATIVES:

Director

Department of Estates, Supplies & Transport
Central Bank of Kenya

P.O. Box 60000 – 00200

NAIROBI.

APRIL 2013

**PROPOSED OFFICE MODERNIZATION AND CREATION OF
WORK – STATIONS, PHASE III PROJECT – INCORPORATING FIRE
SAFETY OCCUPATIONAL SAFETY AND HEALTH SERVICES
FOR
CENTRAL BANK OF KENYA.**

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BILL NO. 01

**BIDDING DOCUMENT FOR
PROCUREMENT OF WORKS**

INVITATION TO TENDER, INSTRUCTIONS TO
TENDERERS, CONDITIONS OF CONTRACT AND
STANDARD FORMS

BIDDING DOCUMENT FOR PROCUREMENT OF WORKS

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TENDER NOTICE

NATIONAL COMPETITIVE BID

TENDER REF NO: CBK/28/2012-2013

PROPOSED OFFICE MODERNIZATION AND CREATION OF WORK – STATIONS -PHASE III PROJECT- INCORPORATING FIRE SAFETY OCCUPATIONAL SAFETY AND HEALTH SERVICES

1. The Central Bank of Kenya (CBK) invites sealed tenders from Suitable **MAIN CONTRACTORS** who must be registered in Category "A" or "B" with the Ministry of Public Works to undertake the Phase III of Office Modernization and Creation of Workstations programme at its Headquarters building and Marshalls House, Nairobi. The works include Building Works and other Engineering and Specialist Works listed below which will be undertaken by qualified Nominated Sub-Contractors.
 - a. Electrical Installations;
 - b. Plumbing, drainage and firefighting installations;
 - c. Air Conditioning and Mechanical Ventilation;
 - d. Lift Installations;
 - e. Structured Cabling;
 - f. PABX Installations;
 - g. Safety Installations(Fire Detection & Alarm System);
 - h. UPS equipment installation;
 - i. Audio Visual equipment installations;
 - j. Furniture suppliers.
2. The Main Contractor is expected to work and render attendance to the above listed engineering and Specialist Nominated Sub contractors. Their specific requirements are detailed in their respective tender documents.
3. Tender Invitation for Specialized Nominated Subcontractors is contained in a separate Advertisement
4. Further information as pertains to this tender may be obtained from the Office of the Director, Department of Estates, Supplies and Transport (**DEST**)(Tel: 254 20 2861000/2860000 Fax: +254 20 2863497, +25420310604), Fifth Floor, Central Bank of Kenya, Haile Selassie Avenue, Nairobi during working hours from Monday to Friday, comms@centralbank.go.ke.
5. Complete Tender documents may be obtained from Director, Department of Estates, Supplies and Transport, 5th Floor, Central Bank of Kenya, Head Office, Nairobi from Monday to Friday, between 9.00 am and 5.00 pm on payment of a non – refundable fee of **Kshs.3,000.00** (Kenya shillings three thousand) in cash or Banker's Cheque. **OR be downloaded from the CBK website; www.centralbank.go.ke and a payment of Kshs 2,000.00** (Shillings two thousands only) for those who choose to download from the website.
6. Payment will be made at the Central Bank of Kenya Banking Hall, Nairobi from Monday to Friday between 9.00 am and 2.00 pm prior to collection of the tender document.
7. Tender documents duly completed in sealed envelopes clearly **marked Tender No CBK/28/2012-2013** should be deposited in the **Green Tender Box No. 3** on the Ground floor of the Main Entrance of the CBK Building on Haile Selassie Avenue, Nairobi. Bidders shall submit an original and one copy as elaborated in the appendix to the instructions to tenderers.
8. Late bids will not be accepted and will be returned unopened. All tenders must be accompanied by **Bid Bond of Kshs. 2,000,000.00 (Two Million Only)** in format prescribed in the TenderDocument. Failure to attach the bid bond will lead to automatic rejection of the tender.
9. Tenders will be opened publicly on **Tuesday 11th June 2013 at 10.30 am** in the Presentation Room, 6th Floor, Central Bank of Kenya, Head Office, Nairobi. Interested tenderers or their representatives may attend the tender opening ceremony.
10. Bidders will attend a pre-bid Conference on **Tuesday 28th May 2013 at 10:30 am** in the Presentation Room, 6th Floor, Central Bank of Kenya, Head Office, Nairobi and sign on the Attendance Register.

**DIRECTOR
DEPARTMENT OF ESTATES, SUPPLIES AND TRANSPORT**

19 APRIL, 2013

/ZNT

SECTION II

INSTRUCTIONS TO TENDERERS

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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, all tenderers shall include the following information and documents with their tenders , unless otherwise stated: (See appendix for required details)
 - (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 three years;
- (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, authorised 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/= (See invitation to tender for actual amount)
- 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.

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- 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 one hundred and twenty (120) 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 instructions 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 VIII - 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 authorised 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 initialled 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. (See appendix to Instructions to tenderers)

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. (See appendix)
 - (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) (See appendix)
 - (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. (See appendix)
 - (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. (See appendix)
- 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.
 - (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 a 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.
- 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) (See appendix)
- 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.
- 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.

SECTION III – APPENDIX TO INSTRUCTIONS TO TENDERERS

The following information regarding the particulars of the tender shall complement, supplement or amend the provisions of the instructions to tenderers. Wherever there is a conflict between the provision of the instructions to tenderers and the provisions of the appendix, the provisions of the appendix herein shall prevail over those of the instructions to tenderers

Instruction to tenderers reference	Particulars of appendix to instruction to tenders
1.	General/Eligibility/Qualifications/Joint venture/Cost of tendering
1.1	<p>MANDATORY REQUIREMENTS (M.R).</p> <p>The following mandatory requirements (MR) MUST be met notwithstanding other requirements before the applicant is qualified for the works.</p> <p>A. General</p> <ul style="list-style-type: none"> i. Provide documentary evidence of the bidder Company's Certificate of Incorporation / registration (legal structure). ii. Provide copy of the company's current Certificate of Tax Compliance issued by Kenya Revenue Authority (KRA) and valid up to or beyond the tender closing date. iii. Submit a completed company profile using the Qualification Information, Tender Questionnaire and Confidential Business Questionnaire attached at Page 56 to 61 herewith. iv. Provide signed copies of Audited Accounts for the last three (3) years. v. Provide certified documentary evidence of the companys' Certificate of Registration with the Ministry of Public Works Category 'A' or 'B'. vi. Provide a Bid Security of Kshs. 2,000,000.00 (Two Million only) submitted in form of a Bank Guarantee or insurance bond from an Insurance company approved by the Public Procurement Oversight Authority (PPOA) and Valid for 30 days beyond the Tender Validity Period.

Instruction to tenderers reference	Particulars of appendix to instruction to tenders	
2	Evaluation Criteria of Company Profile, Qualification Information, Tender Questionnaire and Confidential Business Questionnaire.	
2.1	<p>Qualified Technical Staff in the company relevant to the building construction industry who will actively be involved in the proposed project (MUST provide detailed CV accompanied by relevant academic and professional certificates from institutions recognized by the Commission for Higher Education in Kenya. Telephone contacts MUST be provided)</p> <p>Project Manager/ Site Agent: (Marks will be awarded for Diploma/HND and above qualifications either in Structural/ Civil Engineering, Architecture, Quantity Surveying to a maximum of 3No. persons)</p> <ul style="list-style-type: none">• Holder of relevant degree with over 5yrs experience-----10• Holder of relevant degree with 3- 4yrs experience-----7• Holder of relevant Diploma/HND with over 5yrs experience-----5• Holder of Diploma/HND in relevant course with under 5yrs experience-----Zero score.• Holder of degree in relevant degree with under 3yrs experience-----Zero score• Project Manager/Site Agent with below Diploma will be given zero score.	Weighting %

Instruction to tenderers reference	Particulars of appendix to instruction to tenders	
	<ul style="list-style-type: none"> ○ Has financial resources equal to Kshs 50 Million or above ----- 15 ○ Has financial resources between Kshs. 30million- 49 Million --10 ○ Has financial resources below Kshs. 30million -----0 ○ Has not given evidence of any of financial resources -----0 	
	TOTAL	100
	<p>Note:</p> <ul style="list-style-type: none"> i. Only Tenderers scoring 75% and above SHALL be considered for Financial Evaluation. ii. Tenderers scoring below 75% SHALL be automatically disqualified and will not proceed to financial evaluation. iii. Responsive and prospective tenderers SHALL be subjected to due diligence after both Technical and Financial evaluations to confirm genuity of data and information submitted before consideration for Award of Contract. iv. The pre – bid minutes shall be an addendum to the tender. 	

SECTION IV

CONDITIONS OF CONTRACT

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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

- 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 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 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

X¹ = 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%.

X¹¹ = 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

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

- 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 Regulations issued under The Exchequer and Audit Act Cap 412 of the Laws of Kenya.

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.

SECTION V – APPENDIX TO CONDITIONS OF CONTRACT

THE EMPLOYER IS

Name: CENTRAL BANK OF KENYA

Address: P.O. BOX 60000 – 00200, NAIROBI

Name of Authorised Representative: DIRECTOR , DEPARTMENT OF ESTATES & TRANSPORT, CENTRAL BANK OF KENYA

Telephone: 2860000

Facsimile: 340192

E-mail: comms@centralbank.go.ke

The Project Manager is

Name: DIRECTOR , DEPARTMENT OF ESTATES & TRANSPORT, CENTRAL BANK OF KENYA

Address: P.O. BOX 60000 – 00200, NAIROBI

Telephone: 2860000

Facsimile: 340192

E-mail: comms@centralbank.go.ke

The name (and identification number) of the Contract is PROPOSED OFFICE MODERNISATION AND CREATION OF WORKSTATIONS, PHASE III – INCORPORATING FIRE SAFETY, OCCUPATIONAL SAFETY AND HEALTH SERVICES.

The Works consist of MODERNISATION AND CREATION OF WORK STATIONS AND INCLUDES FIRE SAFETY, OCCUPATIONAL SAFETY AND HEALTH SERVICES AT CENTRAL BANK OF KENYA BUILDING AND HEALTH FACILITIES AT MARSHALL HOUSE, NAIROBI.

Tender validity is 120 days

The Start Date shall be AGREED WITH THE PROJECT MANAGER

The Intended Completion Date for the whole of the Works shall be 55 - 70 WEEKS FROM DATE OF POSSESSION AND THE BIDDER TO QUOTE FOR THE CONSTRUCTION PERIOD ALONG THIS GUIDELINE AND PROVIDE A WORKS PROGRAM

The following documents also form part of the Contract:
AS LISTED IN CLAUSE 2.30 OF THE CONDITIONS OF CONTRACT

The Contractor shall submit a revised program for the Works within **14** days of delivery of the Letter of Acceptance.

The Site Possession Date shall be **AGREED WITH THE PROJECT MANAGER**

The Site is located at **CENTRAL BANK OF KENYA, HEADQUARTER, HAILE SELASSIE AVENUE, AND THE BANK HEALTH SERVICES AT MARSHAL HOUSE, HARAMBEE AVENUE, NAIROBI**

The Defects Liability period is **180** days. NOTE: All equipment to have a minimum of 1 (one) year warranty. The tenderer shall be agreeable to undertake 3 (three) years maintenance period after expiry of warranty period and if called upon to do so by the employer.

The minimum insurance covers shall be;

1. The minimum cover for insurance of the Works and of Plant and Materials in respect of the Contractor's faulty design is **Kshs 2.00M**
2. The minimum cover for loss or damage to Equipment is **Kshs 1.00M**
3. The minimum for insurance of other property is **Kshs 5.00M**
4. The minimum cover for personal injury or death insurance
 - For the Contractor's employees is **Kshs 2.00M**
 - And for other people is **Kshs 2.00M**

The following events shall also be Compensation Events:

1. **.... AS LISTED IN CLAUSE 24 OF THE CONDITIONS OF CONTRACT.**
2. _____
3. _____
4. _____

The period between Program updates is **14** days.

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

The proportion of payments retained is **10%** percent. The limit of retention is 5% percent.

The Price Adjustment Clause **SHALL NOT APPLY** (shall/shall not) apply

The liquidated damages for the whole of the Works is **Kshs. 581,000 (per week)**

The Performance Security shall be for the following minimum amounts equivalent as a percentage of the Contract Price 5 percent (%)

The Completion Period for the Works is 55 - 70 WEEKS AND THE BIDDER TO QUOTE FOR THE CONSTRUCTION PERIOD ALONG THIS GUIDELINE AND PROVIDE A WORKS PROGRAM

The rate of exchange for calculation of foreign currency payments is NOT APPLICABLE

The schedule of basic rates used in pricing by the Contractor is as attached [*Contractor to attach*].

Advance Payment SHALL BE GRANTED for imported goods and equipment only upon submission of advance payment guarantee from a commercial bank.

Price for VAT should be included at Grand Summary page and amount shown

PREPARATION OF TENDERS

The tenderer shall submit **ONE ORIGINAL** and **ONE COPY (HARD COPY ONLY)** of the bid document in accordance with clause 3.14 page 12 of the Instructions to tenderers.

SUBMISSION OF TENDERS

The tenderer shall seal the original and copy of the tender in two inner envelopes and one outer envelope, duly marking the inner envelopes as “**ORIGINAL**” and “**COPY**” 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.

TENDER OPENING AND EVALUATION

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.

EVALUATION AND ERROR CORRECTION

The evaluation and error correction shall be undertaken in accordance with clause 50 subsections (1) to (3) of THE PUBLIC PROCUREMENT AND DISPOSAL REGULATIONS (2006) and consequently the figure to be considered for award by the tender committee shall be the corrected and evaluated price in accordance with the above referenced clause. Therefore instructions to tenderers herewith shall be amended, read and construed accordingly. Confirmation shall be sought in writing from the tenderers whose tender sums will be determined to have any arithmetic errors to confirm whether they accept the corrected tender sums or not.

Tender award will be made on the corrected tender sum without adjustment of rates.

The Employer is not bound to accept the lowest tender or any tender.

COMPARISON OF RATES.

The evaluation committee will compare rates offered by different qualified bidders and note if there is inconsistency of rates or front loading. The Evaluation Committee will make a judgment and appropriate decision based on this comparison giving evidence for the decision made.

TENDER DOCUMENTS

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. Appendix to Instructions to Tenderers
- C. Form of Tender and Qualification Information
- D. Conditions of Contract
- E. Appendix to Conditions of Contract
- F. Bills of Quantities
- G. Forms of Securities

SECTION VI – SPECIFICATIONS AND LIST OF DRAWINGS

Specifications and list of drawings are included in the respective documents together with the bill of quantities.

SECTION VII - BILL OF QUANTITIES

The Bills of Quantities are annexed in 12 separate volumes as follows;

Volume 2: Builders work – MAIN CONTRACTOR.

Volume 3: Electrical installations – NOMINATED SUBCONTRACTOR.

Volume 4: Plumbing, drainage and firefighting installations – NOMINATED SUBCONTRACTOR.

Volume 5: Air Conditioning & Mechanical Ventilation – NOMINATED SUBCONTRACTOR.

Volume 6: Lift Installations – NOMINATED SUBCONTRACTOR.

Volume 7: Structured Cabling – NOMINATED SUBCONTRACTOR.

Volume 8: PABX Installations – NOMINATED SUBCONTRACTOR.

Volume 9: Fire Alarm system installations – NOMINATED SUBCONTRACTOR.

Volume 10: UPS equipment installation – NOMINATED SUBCONTRACTOR.

Volume 11: Audio Visual equipment installation – NOMINATED SUBCONTRACTOR.

Volume 12: Furniture suppliers – NOMINATED SUBCONTRACTOR.

SECTION VIII – STANDARD FORM

- (i) Form of Tender
- (ii) Letter of Acceptance
- (iii) Form of Agreement
- (iv) Form of Tender Security
- (v) Performance Bank Guarantee
- (vi) Bank Guarantee for Advance Payment
- (vii) Qualification Information
- (viii) Tender Questionnaire
- (ix) Confidential Business Questionnaire
- (x) Statement of Foreign Currency Requirement
- (xi) Details of Sub-Contractors
- (xii) Letter of Notification of Award

FORM OF TENDER

TO: _____[Name of Employer] _____[Date]
_____ [Name of Contract]

Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to construct, install and complete such Works and remedy any defects therein for the sum of Kshs. _____[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 quote to carry out the works in _____weeks to which we have provided a works program.
4. We agree to abide by this tender until _____[Insert date], and it shall remain binding upon us and may be accepted at any time before that date.
5. 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.
6. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this _____ day of _____20_____

Signature _____in the capacity of _____

duly authorized to sign tenders for and on behalf of
_____ [Name of Employer]
of _____[Address of Employer]

Witness; Name _____

Address _____

Signature _____

Date _____

LETTER OF ACCEPTANCE

[letterhead paper of the Employer]

_____ [date]

To: _____
[name of the Contractor]

[address of the Contractor]

Dear Sir,

This is to notify you that your Tender dated _____
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 [or whose registered
office is situated at] _____
(hereinafter called “the Employer”) of the one part AND
_____ of [or whose registered
office is situated at] _____
(hereinafter called “the Contractor”) of the other part.

WHEREAS THE Employer is desirous that the Contractor executes

_____ *(name and identification number of Contract)* (hereinafter called “the Works”) located at _____ *[Place/location of the Works]* 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 Kshs _____ *[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.

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_____

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(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 of20.....

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

To: _____(Name of Employer) _____(Date)
_____(Address of Employer)

Dear Sir,

WHEREAS _____(hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____(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 recognised 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 of 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 _____

BANK GUARANTEE FOR ADVANCE PAYMENT

To: _____ *[name of Employer]* _____ *(Date)*
_____ *[address of Employer]*

Gentlemen,

Ref: _____ *[name of Contract]*

In accordance with the provisions of the Conditions of Contract of the above-mentioned Contract, We, _____ *[name and Address of Contractor]* (hereinafter called "the Contractor") shall deposit with _____ *[name of Employer]* 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 _____ *[name of Employer]* 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 _____ *[name of Employer]* 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 _____ *(name of Employer)* receives full payment of the same amount from the Contract.

Yours faithfully,

Signature and Seal _____

Name of the Bank or financial institution _____

Address _____

Date _____

Witness: Name: _____

Address: _____

Signature: _____

Date: _____

QUALIFICATION INFORMATION

1. Individual Tenderers or Individual Members of Joint Ventures

1.1 Constitution or legal status of tenderer (attach copy of 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

Year	Volume	
	Currency	Value

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.

Project name	Name of client and contact person	Type of work performed and year of completion	Value of Contract
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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

Item of Equipment	Description, Make and age (years)	Condition(new, good, poor) and number available	Owned, leased (from whom?), or to be purchased (from whom?)
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
(etc.)			

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

Position	Name	Years of experience (general)	Years of experience in proposed position
Project Manager			
(etc.)			

- 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.

- 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

- 2.4 The information listed in 1.1 – 1.10 above shall be provided for each partner of the joint venture.
- 2.5 The information required in 1.11 above shall be provided for the joint venture.
- 2.6 Attach the power of attorney of the signatory(ies) of the tender authorizing signature of the tender on behalf of the joint venture
- 2.7 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.

TENDER QUESTIONNAIRE

Please fill in block letters.

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 Tenderer

Make copy and deliver to: _____ (*Name of Employer*)

CONFIDENTIAL BUSINESS QUESTIONNAIRE

(You are advised that it is a serious commission to give false information under this section as it may render your bid being automatically disqualified).

PART I: GENERAL INFORMATION

- a) The questionnaire must be fully and comprehensively completed in all respects.
- b) Information given by the applicant shall be treated in strict confidence.
- c) Any information given and later found to be incorrect shall lead to disqualification of the Tenderer.
- d) Deliberately incorrect information leads to disqualification of the application.
- e) Canvassing will lead to automatic disqualification of the applicant.

PART II: BIDDER DETAIL

The purpose of this section is to provide the required background information of the bidder organization.

1)	Provide documentary evidence of the registered name and number of your company and date of Registration.		
	Company Name	Company Registration Number	Registration Date
2)	Give full details of your Bankers.		

PART III: CONTACT PERSON(S) DETAIL

3)	Provide the contact person (s) name(s), addresses, phone numbers etc.	
	Contact Person Name	
	Landline Telephone Number	
	Cellular Telephone Number	
	Facsimile Telephone Number	
	E-mail	
	Postal Address	

	Physical Address	
4)	Please provide evidence of the registered street and postal addresses of the bidding organization	
	Registered Street Address	Registered Postal Address of your organisation
	LR No.	
5)	Please provide evidence of current registration with relevant regulatory body within your industry, if any.	

PART IX: CERTIFICATION

	<p>I/We do hereby certify that the above information is correct in all respects.</p> <p>FULL NAME:</p> <p>DESIGNATION/POSITION:.....</p> <p>SIGNATURE:</p> <p>DATE:</p> <p>COMPANY SEAL AND/OR STAMP:</p>
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STATEMENT OF FOREIGN CURRENCY REQUIREMENTS

(See Clause 23] of the Conditions of Contract)

In the event of our Tender for the execution of _____
_____ (*name of Contract*) 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.

(Signature of Tenderer)

DETAILS OF SUB-CONTRACTORS

If the Tenderer wishes to sublet any portions 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 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:

.....

[Signature of Tenderer)

Date

LETTER OF NOTIFICATION OF AWARD

Address of Procuring Entity

To: _____

RE: Tender No. _____

Tender Name _____

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

BILL NO. 02
SPECIFICATIONS TRADE
PREAMBLES AND LIST OF
DRAWINGS

PREAMBLES

GENERAL SPECIFICATION

- A. The General Specification as prepared by **The Quantity surveyor** is issued to the Contractor with the Bills of Quantities.
- B. All items in the Bills of Quantities shall conform to the full Specification for similar items in the General Specification.
- C. Where the wording "as described" is included in the Bills of Quantities this wording shall be construed as either an abbreviation of a detailed description for a similar item in the General Specification or as a reference to the preambles.
- D. Where detailed descriptions in the Bills of Quantities differ in any respect to similar descriptions in the General Specifications, then such descriptions in the Bills of Quantities shall be deemed to take precedence.

EXCAVATION

- E. Shall be to the widths as provided for by Standard Method of Measurement for building works of East Africa and depths indicated on the drawings or to such lesser or greater depth as the Architect may deem necessary and so instruct the contractor in order to obtain satisfactory foundations.

STARTING LEVEL

- F. Unless otherwise described, the starting level of all excavations has been measured from the level remaining after completion of reduced level excavation, generally taken as the underside of 200 surface strip.

CLASSIFICATION OF EXCAVATED MATERIAL

CLASS 1 ROCK OR HARD MATERIAL

- G. This shall be material which cannot be removed except by blasting or by ripping and which can not be ripped to an average rip of more than 300mm by track type crawler tractor in good working order rated less than 335 Hp fly wheel power with an operating weight of less than 37.2 tons operated by a hydraulic simple line heavy duty ripper and operated to the satisfaction of the Engineer.

Boulders greater than 0.5cm; when their nature and size is such that they cannot be removed without recourse to one or more of the methods described above shall also be in class one.

Where the boulders constitute 50% or more of a particular part of the excavation, such part shall be considered as class 1 material throughout.

A. CLASS 2 NORMAL OR SOFT MATERIAL

This class shall constitute all materials, which can be removed without recourse to the methods described for class 1 above, and/or class 3 below.

B. CLASS 3-COMPACTED GRAVEL OR DECOMPOSED ROCK

This class shall constitute all materials such as consolidated murrum or gravel decomposed or stratified rock, stones and boulders less than 0.5m, harder than class 2, but which can be excavated by ripping or which in confined spaces, requires excavation by hand using compressor tools.

C. Excavation Work

Excavation work is measured nett as before digging and the Contractor must allow for increases in bulk after digging.

D. Filling

Filling is measured net after consolidation. Filling obtained from surplus excavated materials is to be free from all weeds, roots, vegetables soil or other unsuitable materials and is to be filled in layers each of not more than 225mm finished thickness. Each layer shall be well wetted and consolidated as described thereafter.

E. No Borrow Pits

No borrow pits will be allowed to be opened on the site unless with written approval from the Architect.

F. Removal of Surplus Material

All surplus excavated material, and all rubbish, is to be carried away from the site and the Contractor shall find his own dump and pay all charges unless contrary instructions are issued by the Architect.

G. Foundations not to be covered

No excavations or foundations work shall be filled in or covered up until all measurements necessary for the adjustment of variations have been made by the Quantity Surveyor.

H. Hardcore Filling

Hardcore for filling under floors, etc, shall, be hard broken quarry waste to the approval of the Architect broken to pass not greater than a 150mm ring or to be 75% of the finished thickness of the layers being compacted whichever is the lesser and graded so that it can be easily and thoroughly compacted by rolling. The filling is to be laid in layers each of a consolidated thickness not exceeding 225mm and well watered and rolled with a vibrating roller where rolling is impossible, compaction shall be by hand or mechanical tampers.

The top surface of the hardcore shall be levelled or graded to falls as required and blinded with similar material broken to 25mm gauge and surfaced with 25mm layer of stone dust, well watered and rolled to receive concrete or paving.

CONCRETE WORK

A. NOTES CONCERNING MEASUREMENT AND 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 concrete shall include for mixing and depositing as described or indicated and for hoisting and depositing 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 also include for levelling off the surface as described under "Compaction" and all temporary formwork to form construction joints at bay edges.

Prices for reinforced concrete shall, in addition, include for filling into, between or on formwork, and thoroughly compacting between and around rods or fabric reinforcement and for forming all additional construction joints between varying mixes. Where described as 'vibrated', prices must include for fully vibrating as described.

Prices for formwork shall include for extra material at joints, extra labour and waste for narrow widths, small quantities, splayed edges, notchings, etc., and for fixing at the various levels including battens, struts and supports for bolting, wedging, easing, striking and removal. Prices for linear items such as boxings, shall include for angles and ends.

Prices for steel rod reinforcement shall include for cutting to lengths and all labour in bending and cranking, forming hooked ends, handling, hoistings and fixing in position and for providing all necessary tying wire and supports. Prices for fabric reinforcement shall include for all straight cutting and waste, handling, hoisting fixing in position, prodding all necessary tying wire and supports and all extra material laps.

Prices of all precast concrete shall include for all moulds, finishing as described, handling reinforcement, hoisting and fixing at the required levels, bedding, jointing and pointing in cement and sand (1:5) mortar also for casting or cutting to the exact lengths required and any waste resulting from such cutting.

B. ARCHITECT/ENGINEER

For the purpose of the concrete structure, the Structural Engineer shall be deemed invested with the duties and be the representative of the Architect in all aspects regarding instructions and supervision.

CONCRETE WORK

TRADE PREAMBLES

A. CODE OF PRACTICE

All workmanship, materials, tests and performance 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.114 for "The Structural Use of Reinforced Concrete in Buildings") where not inconsistent with these preambles.

A. SUPERVISION

A competent person approved by the Engineer shall be employed by the Contractor whose duty 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.

B. 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, holding 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 arrangement, 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 the 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 requirement contained in these Preambles governing the quality of the materials of the finished work.

C. LEVELS AND FOUNDATIONS

The foundations of the Works shall be carried down to depths as directed by the Engineer and they must be cut as nearly to the size of the concrete as possible and the vacant spaces between the concrete and the solid ground, except where otherwise shown, must be carefully filled in as directed by the Engineer.

All temporary timbering shall be removed but should any timber be left in or should any other work be done beyond that specified, it will be at the Contractor's own cost.

D. TOLERANCES

On all setting out dimensions of six metres and over a maximum non-accumulative tolerance of plus or minus 6mm will be allowed. On all setting out dimensions under six metres a maximum non-accumulative tolerance of plus or minus 3mm will be allowed. On the cross sectional dimensions of structural members, unless otherwise required by the Drawings, a maximum tolerance of plus or minus 3mm will be permitted. The top surface of concrete floor slabs and beams shall be within 6mm of the normal level and line shown on the Drawings.

Columns shall be truly plumb and non-accumulative tolerance of 3mm in each storey and not more than 12mm 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.

A. 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 own expense. No materials shall be stored or stacked on suspended floors without the Engineer's prior written approval.

B. 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 exceptions that it may contain reactive Volcanic ash of not more than 10 per cent of the total weight and the quantity of insoluble residue permitted in B.S. 12 may be exceeded on this account only. A Manufacturer's Certificate of Test in accordance with B.S. 12 shall be supplied for each consignment delivered to the Site.

Cement may be delivered to the Site either in bags or in bulk if delivered in bags, each bag shall be properly sealed and marked with the manufacturer's name and on the Site is to be stored in a weatherproof shed of adequate dimensions with a raised floor. Each consignment shall be kept separate and marked so that it may be used in the sequence in which it is received. Any bag found to contain cement which has set or partly shall be completely discarded and not used in the works. Bags shall not be stored more than 1,500mm in height.

C. AGGREGATES

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 done 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 good, sharp, hard quality and shall be free from lumps of stone, earth, loam, dust, slat, 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.

Coarse aggregate shall be good, hard clean approved black trap of similar stone, free from dust, decomposed stone, clay, earth 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 at the Contractor's expense.

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

The Engineer shall be entitled to require a Certificate from an approved testing laboratory in connection with each source of fine and coarse aggregates showing that materials comply with the Specification. All such testing shall be carried but at the Contractor's expense.

A. WATER

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

B. 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 bag of cement.

Aggregate

- i) For grades "35", "30" and "25" concrete, aggregates shall be measured by weight in a weight batching machine as described hereinafter.
- ii) For lower grades concrete, aggregates may be measured by weight or by volume. Where by volume, approved gauge boxes of such a size as will give the correct proportions shall be used.

C. WEIGHT BATCHING MACHINE

Weight batching machines shall be of an approved type and shall be properly maintained and checked for accuracy at regular intervals.

D. CONCRETE MIXES

The weights of fine and coarse aggregate to be used in concrete mixes "35" "30" and "20" shall be limited in accordance with the table below. The proportions of fine to coarse 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 per cent higher than the strengths specified for work cube tests. If the contractor is unable to produce specified cube strengths, he will be required at his own cost to increase the cement contents 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 is unchanged, no claim for additional cost will be considered.

<u>Mix</u>	<u>Grade 34</u>	<u>Grade 30</u>	<u>Grade 25</u>	<u>Grade 30</u>
Minimum cement content by weight to combined total weight of aggregate	1 to 5	1 to 6	1 to 7	1 to 7

A. WORK CUBE TESTS

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

Four cubes shall be made on each occasion, from different batches, the concrete being taken from the point of deposit.

Each cube shall be marked with a distinguishing number (number 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

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 one at 28 days and the remaining one at the discretion of the Engineer. No cube shall be despatched within 3 days of casting.

Copies of all Work Cube Test results 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 have concrete which does comply with the requirement 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 as ascertained by Work Cube Tests.

The Contractor must allow in his rates for concrete test cubes for all expenses in connection with the preparation and conveyance to the Testing Laboratory and testing of test cubes and no claim in respect of his failure to do so will be entertained.

A. MIXING AND PLACING OF CONCRETE

The concrete shall be mixed only in approved power driven mixers of a type and capacity suitable for the work, and in any event not smaller than 0.5/0.33 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 not less than two minutes after the water has been added and until there is a uniform distribution of the materials and the mess is 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 per cent 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 allow for the costs of such tests. 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.

The concrete shall be mixed as near to the place where it is required as is practicable, and only as much as required for a specified section of the work shall be mixed at one time, such section 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 the prior approval of the Engineer.

Concrete shall be placed from a height not exceeding 1.500m 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 1.500m deep in walls and similar members.

Concrete in columns may be placed to a height of 4.00m with careful placing and vibration and satisfactory results. Where the height of the column exceeds 4.00m 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, a construction joint of the form and in the position hereinafter specified shall be made. If stopping or 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.

A. MIXING AND PLACING OF CONCRETE (CONT'D)

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

The Contractor shall provide runways for concreting to the satisfaction of the Engineer. Under no circumstances will the runway 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 session 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.

B. 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 450mm before it is compacted.

During and immediately after placing, the concrete shall be thoroughly compacted by means of continuous tamping, spacing, slicing and vibration. Vibration is required for concrete of Grades "35", "30 and "25" and "20".

Care shall be taken to fill every part of the forms, to work the concrete under and around reinforcement without displacing it and to avoid disturbing recently placed concrete which has begun 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 vibrations shall be of a frequency of not less than 7,000 cycles per minute and shall have a rotating acentric weight of at least 0.75 kg. with an eccentricity of not more than 15mm. Such vibrators shall visibly affect the concrete within a radius of 250mm 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 500mm centres 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.

A. COMPACTION (CONT'D)

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 two 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 1.200m centres.

In addition to internal and external vibration, the upper surface of suspended floor slabs shall be levelled with a tamping or vibrating screed prior to finishing. Vibrating elements shall be of the low frequency high amplitude type operating at a speed of not less than 3.00 r.p.m.

B. CONSTRUCTION JOINTS

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

Suspended concrete slabs are generally to be cast using alternate bay construction in bays not exceeding 15.00m in length No.2 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 therefrom, and immediately before placing the new concrete the surface shall be saturated with water and covered with a coat of mortar at least 25mm in thickness composed of cement and fine aggregate in the proportions used in the concrete.

C. 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.

CURING AND PROTECTION (CONT'D)

The Contractor must allow for the 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 to use bags, hessian or other material in small pieces.

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.

A. 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 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.

B. ROD REINFORCEMENT

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

- Hot rolled M.S. for the reinforcement of concrete B.S. 4449
- Hot rolled H.Y. steel for the reinforcement of concrete B.S. 4449
- Cold twisted H.Y. steel for reinforcement of concrete B.S. 4461
- Hard drawn steel wire B.S. 4482

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

C. FABRIC REINFORCEMENT

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

A. FIXING ROD REINFORCEMENT

Reinforcement shall be accurately bent to the shapes and dimensions shown on the Drawings and Schedules and in accordance with B.S. 4466. Reinforcement must be cut and bent cold and no welded joints will be permitted unless so detailed.

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

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 on the concretors to adjust and correct the positions of any reinforcement which may be displaced. The vibrators are not to come into contact with the 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 bending schedules and is fixed exactly in the positions shown therein and in the positions to give the prescribed cover.

The contractor will be held entirely responsible for any failing 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 bonding schedules.

Spacing blocks of approved sizes 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. wire set into the spacer blocks or other approved means shall be provided where necessary to ensure that the requisite cover is obtained. The contractor is to include for providing sufficient such spacer blocks in his prices for steel reinforcement.

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

Foundations against earth face 75mm

Foundations against blinding 50mm

Columns 40mm

Beams 25mm

Slabs 15mm

Walls 25mm

A. 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 300mm laps and bound with No. 18 S.W.G. annealed iron wire.

Where reinforcement projects from a concrete section of the structure and this reinforcement is expected to remain exposed for some time, it is to be coated with a cement grout to prevent rust staining on the finished concrete. This grout is to be brushed off the reinforcement prior to the continuation of concreting.

B. FIXTURES AND INDENTATIONS IN CONCRETE

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 build into the concrete including the proposed positions of all conduits 25mm and over in diameter shall be submitted to the Engineer for his approval before being placed.

C. CHASES, HOLES, ETC., IN CONCRETE

The Contractor shall be responsible for the co-ordination with the Electrical and other Sub-Contractors for incorporating electrical conduits, 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.

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.

D. FORMWORK

The method and systems 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.

E. 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 casing and removal of the formwork without jarring the concrete. Where formwork is supported on

CONSTRUCTION OF FORMWORK (CONT'D)

previously constructed portions of the reinforced concrete structural frame, the Contractor shall in 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 10mm for each 4.000m 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 Engineer's 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 Contractor's 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 prior to placing of the concrete.

Temporary openings shall be provided at the base of columns, wall and beams 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 from 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, casing, 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 at the Contractor's expense. Any voids or honeycombing shall be treated as described under "Faulty Concrete".

A. STRIPPING FORMWORK

All formwork shall be removed without undue vibration on short 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:

STRIPPING FORMWORK (CONT'D)

Beam sides, wall and column (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

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 position 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.

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 after 7 days after casting of the floor slab.

A. FAIR FACE FINISH

Where fair face finish is specified the concrete shall be brought to a perfectly true smooth and even surface by rubbing with carborundum stone dipped in cement grout. Such work must be commenced within one hour of removing the formwork and actively and rapidly pursued until completed, the object being to complete the finish as soon as possible after the removal of the shuttering. On no account may such work be postponed to a later stage in the contract. Fair face surfaces shall be clean, smooth, even true, to form and free from all board marks, joints marks, honeycombing, pitting, etc. The Contractor is permitted at his own expense provide smooth lining to the forms which will achieve the required finish without rubbing down. All rubbed down work must be lightly washed with plain cold water at the completion of the contract, and not before the cement grout used in the finish is at least four weeks old after initial mixing.

B. BOARD MARKED FINISH

Where so directed or measured, the finish shall be that of a board marked pattern in panels, the boards shall be arranged vertically or horizontally and of widths and sizes, all as detailed on the Drawings. All exposed concrete will be left unpainted and therefore every care and attention shall be paid to obtain a satisfactory visual appearance and the maintenance of the same throughout the building operation. The finished surfaces shall be free from blowholes, hungry patches and other blemishes and a sample panel is to be provided and approved by the Engineer before work commences.

BOARD MARKED FINISH (CONT'D)

Unless otherwise specified, the formwork shall be rip sawn softwood to the Engineer's approval and shall have a sufficiently strong grain to impart a corresponding pattern on the concrete surface. Unless otherwise approved it shall have four uses only and shall be carefully cleaned from adhering grout after each use. It shall be lightly oiled with approved non-staining mould oil.

COMPOSITE

A. SUSPENDED SLABS

Hollow concrete blocks shall be used in composite suspended slabs. The blocks shall be 225mm wide, 225mm long and 125mm high with chamfered edges and having 25mm thick members. Blocks shall be well made, true to shape and of uniform density, free from cracks and distortion to the approval of the Engineer. The topsides and soffites shall be finished so as to provide an efficient key between concrete and plasterwork. Any blocks not conforming to the specified requirements shall be rejected.

The blocks shall be laid in the positions shown on the Drawing, care being taken to ensure that units maintain the full specified rib widths throughout and do not encroach upon any space intended for insitu concrete beams or otherwise also that gaps between the Units do not exceed 1.6mm anywhere.

The Units shall be supported with supports to the approval of the Engineer. Reinforcement in composite slabs shall be positioned accurately as shown on the Drawings secured against displacement and specified cover provided.

Before concreting, the positioned blocks shall be thoroughly sprayed with water. All gaps between the blocks shall be stopped with a stiff grout and all open ends shall be sealed with cement mortar (1:5) minimum 40mm thick then left to mature for one week before concrete is placed.

The concrete mix to be used shall be as specified and any limits as to size of aggregate etc., specified must be adhered to.

The curing of composition slabs. The temporary supports under slabs shall be left in position for a period of fourteen days and they shall not be removed any earlier except with the approval of the Engineer.

B. PRECAST CONCRETE

Unless otherwise approved by the Engineer, all precast concrete construction shall be carried out on the site and shall conform to requirements given elsewhere in these Preambles.

The maximum size of coarse aggregate in precast concrete shall not exceed 20mm and for thickness less than 75mm it shall not exceed 15mm.

The compacting of precast shall conform with requirements given elsewhere in these Preambles except for thin slabs where use of immersion type vibrators is not practicable.

PRECAST CONCRETE (CONT'D)

The concrete in these slabs may be consolidated on a vibrating table or by any other methods approved by the Engineer.

The precast work shall be made under cover and shall remain under the same for seven days. During this period and for a further seven days the concrete shall be shielded by sacking or other approved material kept constantly wet. It shall then be stacked in the open for at least a further seven days to season before being set in position.

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 units will not be permitted and the damaged units shall be replaced by the Contractor at his own expense.

Except where pre cast work is described as "fair face" or as having an "exposed aggregate" or terrazzo finish, the moulds shall be made of suitable 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 fair face to the finished concrete suitable to receive a painted finish direct and free from all shutter marks, holes, pinnacles, etc. In his prices for such precast work the Contractor shall include for all rubbing down to produce the finish required, to the satisfaction and approval of the Engineer. Where precast work is to have "exposed aggregate" or terrazzo finish the moulds shall be constructed to the requirements given for moulds for "finished fair" work. The method of achieving the exposed aggregate finish shall be the "aggregate transfer" or other approved methods.

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

A. CONCRETE SURFACE BEDS

Concrete for surface beds shall be Grade 25.

Before placing concrete and where specified or shown on the Drawings a layer of 500 gauge polythene or diothene sheeting shall be laid on the base course. Minimum 300mm laps shall be provided at all joints.

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 50mm less than the

CONCRETE SURFACE BEDS (CONT'D)

finished thickness shall first be spread and struck off at the correct level to receive the top fabric reinforcement. The top layer shall then be added. Not more than 30 minutes shall elapse, between spreading the bottom layer and the start of 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 compaction and finishing of the concrete shall be effected by immersion vibrators and hand or mechanical tamper weighing not less than 10kg. per metre run and having a tamping edge shod with a steel strip 75mm wide fixed to the tamper by countersunk screws. Immersion vibrator with "spade" attachment will be permitted. Compaction shall be continued until a dense, scaled surface finish is achieved. Over-compaction causing an excessive amount of lines to be brought to the surface shall be avoided.

The surface of the concrete shall be finished to the surface texture specified to the levels, falls and cross-falls, as directed or shown on the Drawings and shall be subject to the following tolerances:-

- The level shall be within + or - 6mm of the levels specified;
- The falls shall be within 10% of the falls specified;
- The smoothness shall be such that departures from a 3.00m straight edge laid in any direction shall not exceed 3mm.

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.

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 such material is sufficient 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 shall be responsible for making it good.

MASONRY AND BLOCKWORK

A. GENERALLY

- i) Prices for all walling shall include for normal rough and straight cutting, plumbing angles, all cutting and waste and split courses necessary for bond, bonding at angles, intersections and junctions of walling of all thicknesses, split courses, cutting and pinning up to columns, beams, slabs, etc., hoisting and building at any level, forming all openings and reveals to same and all cutting and waste to walling in short lengths such as millions unless specifically measured.

- ii) Prices for hollow block walling must further include for all necessary solid blocks or fine concrete filling to open ends of blocks at intersections, ends and angles of walling.
- iii) Prices for damp-proof courses, which are measured the net area covered, shall include for all cutting and waste and extra material in laps at joints, angles, etc.

A. CEMENT

All cement used for making mortar shall be Portland cement as described in "Concrete Work".

B. SAND

All sand used for making mortar shall be clean, well graded, siliceous sand of good sharp quality, equal to samples which shall be approved by the Architect. It shall be free from lumps of stone, earth, loan, dust, salt, organic matter and any other deleterious substances, sieved through a fine sieve and washed if so directed by the Architect.

C. LIME

- i) Lime for mortar shall be non-hydraulic or semi-hydraulic quick lime or hydrated lime in accordance with B.S. 890, Class 'B'.
- ii) Quick lime shall be run to putty immediately after delivery to the site in a pit dug on the Site or in an approved container. The water to be first run into the pit or container and the lime to be added until it is completely submerged and stirred until all lumps are disintegrated and the resulting mild lime shall then be run through a 3mm square mesh sieve and run into a pit or other container and kept clean and moist for not less than 4 weeks before use.
- iii) Hydrated lime shall be added to water in a clean receptacle thoroughly mixed to the consistency of thick cream and allowed to stand, and be kept clean and moist for not less than 16 hours before use.

D. CEMENT MORTAR

Cement mortar shall be composed of Portland cement and sand in 1:5 ratio by volume, measured in specially prepared gauge boxes and thoroughly mixed in an approved mechanical mix or mixed dry on clean and approved mixing platforms, with water added afterwards until all parts are completely incorporated and brought to a proper consistency. The use of re-tempering of wholly or partially set mortar will not be allowed.

E. CONCRETE BLOCKS

- i) Concrete blocks shall be solid, hard, true to size and shape with sharp arises in accordance with B.S. 2028, type 'A', and approved by the Architect.
- ii) They shall be obtained from an approved manufacturer or manufactured on Site in approved block making machines. The cement aggregate mix used shall be not less than 1:9 by volume and the maximum size of aggregate shall not exceed 12mm.

- iii) All solid and hollow concrete blocks used in walling must be capable of withstanding a crushing pressure of not less than 10.5 N/mm^2 after 28 days.
- iv) The blocks on removal from the machine shall be carefully deposited on edge on racks under sheds erected by the Contractor and left for 3 days during which period they shall be kept constantly wet after which they shall be placed on edge in the open on the racks protected by sacking or other approved covering and kept wet for a further 5 days. Thereafter the blocks shall be left in the same position without wetting for a further 20 days.
- v) No blocks will be allowed to be used in the work until 28 days old and until samples have been taken and approved by the Architect.
- vi) They shall be laid dry except for the top surface which shall be wetted immediately before mortar is spread on. After laying no further water shall be applied.
- vii) The concrete blocks shall be 200mm high to bond in satisfactory with all other walling.

A. STONE WALLING

- i) The stone for walling shall be sound and hard throughout, free from all defects, and shall be obtained from a quarry approved by the Architect. It shall be chisel dressed into true rectangular blocks, with each surface even and at right angles to all adjoining surfaces.
- ii) The Contractor shall if necessary re-dress the beds of stones on the site to the minimum extent required to obtain uniformity of coursing, and his Tender shall be deemed to include for such re-dressing.
- iii) Stone blocks for general walling shall nominally be 200mm high, 90mm, 140mm or 190mm thick as required for the works, the maximum permissible variations of any of the foregoing dimensions being 12mm.
- iv) Stone shall not be less than 450mm long but a proportion of 20% will be permissible in lengths between 300mm and 450mm long. Samples shall be submitted to the Architect for approval and when so approved shall become the standard for the works.

B. STABILISE EARTH BLOCKS

These shall consist of cement mixed with selected approved red soil in a proportion not less than 1:20 by volume.

The manufacture and curing of the blocks shall generally be as described for concrete block above.

C. BEDDING AND JOINTING

The blocks shall be bedded and jointed in cement and sand mortar as described with beds and joints not more than 12mm or less than 6mm thick, all flushed up and grouted solid as the work proceeds.

A. REINFORCED WALLING

Walls of less than 200mm thickness shall be reinforced with one row of 20 gauge hoop iron 20mm wide, built into every third course, well lapped at junctions and joints and carried at least 100mm into abutting walls at intersections.

B. PROTECTION

All walling shall be properly protected while mortar is setting, as the Architect shall direct.

C. SETTING OUT RODS

The Contractor provide proper setting out rods and set out all work on same for courses, openings, heights, etc, and shall built the walls, piers, etc., to widths, depths and heights indicated on the Drawings. Setting out rods to be gauged to allow an average height of 200mm for each course.

D. BONDING ETC

- i) The blocks or stone for general walling shall be bedded and jointed as described, properly bonded together and in such manner that no vertical joint in any one course shall be within 100mm of a similar joint in the courses immediately above or below.
- ii) Alternate course of walling at all angles and intersections shall be carried through the full thickness of the adjoining wall.
- iii) All walling shall be built entirely solid in blocks, without voids.
- iv) All perpend, reveals and angles of the walling shall be built strictly true and square.
- v) All walling shall be flushed up and grouted solid as the work proceeds.
- vi) All walls throughout the work shall be carried up evenly, no part being allowed to be carried up more than 100mm 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 levelled around at each state. All faces of walls to be plastered are to have all projections dressed off and the joints raked out as key for plaster.

E. FIXING OF TIMBER DOOR FRAMES

- i) All doorframes are to be bedded, and pointed in cement mortar (1:5).
- ii) All frames are to be securely fixed to reveals by means of 25x3mm mild steel cramps 300mm long, bent and screwed to backs of frames and with fanged end built 200mm into joints of walling, three cramps to each side frame of each door. Where the door is provided with fanlights etc., four cramps are to be used to each side frame.

A. DAMP PROOF COURSE

The bituminous felt sheeting for damp-proof course shall be three-ply "Pluvex" No.1 or other equal and approved in accordance with B.S. 743, weighing not less than 3.80Kgs. per square metre. The sheeting is to be lapped 150mm at running joints and the full width of walls at angles. The net area covered is measured and the Contractor shall allow in his prices for all cutting and waste and extra material in laps at joints angles etc.

B. CONCRETE TILE ROOFING

- i) Concrete roofing tiles shall be size 420x335mm single lap, double roll interlocking precast concrete type with no granules and with colours premixed during manufacture and with minimum strength to comply with B.S.550. Socketed hips and third or half round ridge tiles shall be provided as required. Colours shall be selected by the Architect.
- ii) All tiles shall be uniform in size, shape and colour and free from twists or other defects and shall be laid in strict accordance with the manufacturer's printed instructions.
- iii) On gable ends to roofs the tiles should be laid with straight joints with the special left-hand verge tiles provided by the manufacturer.
- iv) All tiles to be laid shall be equal in every respect to samples to be deposited with and approved by the Architect. No broken, chipped, cracked or otherwise defective tiles shall be used in the work.
- v) All tiles so verge, top and eaves courses shall be securely fixed to precast hollow clay roof beams ('Claymat') with cement mortar (1:3).
- vi) The tiles shall be laid on precast hollow clay roof beams ('Claymat'). The tiles will be laid and fixed strictly to manufacturer's instructions.
- vii) The ridge and hip tiles shall be bedded in coloured cement mortar (1:3) to match colour of tiles.
- viii) Extreme care should be taken to avoid any staining or marking of the roof tiles with mortar and any tiles so marked must be replaced immediately.

C. 150MM DIAMETER HALF ROUND CLAY ROOF TILES

150mm diameter half round clay roof tiles shall be of approved manufacture. They shall be laid at verges, top and eaves as described for concrete tiles.

The tiles shall be laid on precast hollow clay roof beams ('Claymat'). The tiles will be laid and fixed strictly to the manufacturer's instructions.

Ridge and hip tiles shall be bedded in coloured cement mortar (1:3) to match colour of tiles.

Care should be taken to avoid any straining or marking of the roof tiles with mortar and any tiles so marked must be replaced immediately.

A. PRECAST HOLLOW CLAY ROOF BEAMS ('CLAYMAT')

Precast hollow clay roof beams shall be 'Claymat' roof beams as produced by M/S Clayworks Ltd, who can produce and supply them to the Contractor if the Contractor so chooses.

The precast hollow clay roof beams shall be 300mm wide x 100mm or 125mm thick as detailed in the measured works and to lengths shown therein. They shall be made out of standard 300mm wide hollow clay pots as recommended by M/S Clayworks Ltd, and each beam shall be reinforced at the bottom with 1No. 12mm diameter square twisted bar. The trough section of the beam shall be filled in with concrete Grade 30 (5mm aggregate) giving a crushing strength of not less than 30N/mm^2 at 28 days. The top surface of the beam shall be reinforced with modified B.R.C. mesh No. 610. The tenderer's price is to include for both top and bottom reinforcement and concrete fill to trough.

B. PRECAST HOLLOW CLAY FLOOR BEAMS ("FREESPAN")

Precast hollow clay floor beams shall be 'Freespan' floor beams as produced by M/S Clayworks Ltd., who can produce and supply them to the Contractor if the Contractor so chooses.

The precast hollow clay floor beams shall be 300mm wide x 100mm thick and to lengths detailed in the measured works. They shall be made out of standard 300mm wide hollow clay pots as recommended by M/S Clayworks Ltd., and each beam shall be reinforced at the bottom with 1No. 12mm diameter square twisted bar. The trough section of the beam shall be filled in with concrete Grade 20 (12mm aggregate) giving a crushing strength of not less than 20N/mm^2 at 28 days. The tenderer's price is to include for both top reinforcement and concrete fill to trough.

ROOFING

C. GENERALLY

Bituminous felt, flashing, etc., have been measured the net area covered. Prices shall include for all straight cutting and waste and laps and in the case of flashings, covering to kerbs, etc., where the net covered girth is measured and necessary overlaps for bond with adjoining areas.

BITUMINOUS FELT ROOFING

D. BUILT-UP ROOFING

The built-up roofing shall be in accordance with B.S. 747 (Classes 1, 2 and 5) applied to a screeded base and shall comprise the following applications (see Clause 'E' below), laid strictly in accordance with the Manufacturer's printed instructions and the Code of Practice 144.101.

E. STORAGE

Rolls must be transported and stored on end, one roll high, and adequately protected from the sun.

A. SCREED

The minimum fall for the screed on flat roofs be 1 or 30. The screed must be thoroughly dry and swept clean before commencing laying operations.

B. SEQUENCE

- i) Jointing Compound: One application of hot bituminous compound weighing not less than 16.3 Kgs. per 10 square metres.
- ii) First Layer: One layer of Self-Finished felt weighing not less than
(Class 1A) 13.6 Kgs. per 10 square metres.
- iii) Jointed Compound: As described in (i) above.
- iv) Second Layer: One layer of Self-Finished felt weighing not less than
(Class 1A) 13.6 kgs. per 10 square metres.
- v) Jointing Compound: As described in (i) above.
- vi) Third Layer: One layer of mineral surfaced roofing felt weighing not
(Class E) less than 36.2 Kgs. per 10 square metre. (Colour to be decided by the Architect).

C. ALUMINIUM FLASHING

Aluminium flashings shall be formed out of 22 gauge super purity aluminium with natural mill finish to B.S. 1470. Where flashings are built into joints or tucked into groovers the minimum depth is to be 25mm and they are to be secured by folded aluminium wedges at 450mm centres and pointed in cement mortar (1:3).

D. CEMENT AND SAND ROOF SCREEDS

The roof screeds shall be formed of cement and sand (1:3). The screeds shall be laid in bays, square where possible, of maximum 10 square metres. Each bay shall be formed between stop boards of the correct height and cut on each side to indicate the slope required in the roofing. The screed shall be trowelled with a wood float to true and accurate falls or cross falls upto the stop boards. A 10mm wide gap shall be felt between each screed bay for the full depth of the screed.

The screeds shall be allowed to cure thoroughly to attain maximum shrinkage. Any cracks which appear due to shrinkage shall be made good.

The gaps between the screed bays shall be filled as follows:-

1. Brush or blow out joints to remove dirt, dust, etc., and prime the sides of the joints using a piece of sponge or similar dipped in a mixture of equal volumes of "Flintkote" Type 1 or Type 3 emulsion and water. Allow to dry.
2. Fill up joints slightly proud on the surface using a 1:2:3) mastic.

This mastic shall be prepared by mixing one volume of cement with three volumes of sand, adding a little water to dampen the mix, then adding two volume of "Flintkote" Type 1 or Type 3 emulsion. The mastic is thoroughly mixed together adding further water as necessary until it is a uniform brown colour, without being too sloppy. Allow to set and dry.

The screed joints shall then be covered with a 200mm wide strip of building paper not bonded to the screed joint and well lapped at angles and junctions before the application of the roof covering.

A. LIGHTWEIGHT ROOF SCREED

Lightweight roof screed shall be composed of bases of cement sand and pumice (1:4:8) finished with a 12mm cement and sand (1:5) topping laid whilst the base is still green and trowelled smooth to the satisfaction of the Architect.

The screeds are to be laid as described in 'Cement and Sand Roof Screeds'.

B. PVC RAINWATER PIPES

PVC rainwater pipes and fittings are to comply with B.S. 4576 with rubber ring seal joints.

Pipes are to be fixed to the structure with PVC holderbats or brackets built-in or plugged and screwed at maximum 2 metre centres.

Bends, swan necks, discharge chutes and fittings generally are to be fixed where necessary to facilitate the flow of water.

Rainwater outlets shall be PVC suitable for the roof finish in which they occur with domical PVC grating.

C. PROTECTION

The Contractor is to take all necessary precautions to protect the finished work and must ensure that no damage occurs to the roofing until completion of the works.

D. COMPLETION OF THE WORKS

On completion of the works, the contractor shall clear away, ensure that rainwater outlets are clear and generally leave the roof areas in a clean and watertight condition to the satisfaction of the Architect.

ROOFING

ASBESTOS ROOF SHEETING

A. MATERIALS

Asbestos cement roof sheeting and accessories shall be of approved manufacture in accordance with B.S. 690 and of an approved colour. The thickness of the sheeting shall be as specified and shall be laid and fixed strictly in accordance with the manufacturer's printed instructions. The sheets shall be super seven asbestos cement sheets. Cooker hoods and flue extraction accessories shall be as per the specifications by the manufactures (M/S Simbarite).

B. LAPS

Sheeting shall be laid with ends laps of 150mm and side laps of one corrugation on the side away from the prevailing wind.

C. FIXING TO PURLINS

The sheets shall be fixed on to timber purlin 150 x 50mm with 8mm galvanised gum let pointed screws 114mm long and which shall have "Selawasher" plastic washers or other equal and approved.

D. HOLES

Holes shall be drilled through the ridges of corrugations, not in the hollows.

E. RIDGES ETC.

Ridges and other accessories shall be supplied as shown on the Drawing and shall be fixed to purlins as above described.

F. FIXING BOLTS

All fixing bolts shall comply with B.S. 1494

G. OUTLETS

All outlets to be fixed 25mm below finished screed level.

H. PIPES TO BE LAID BEFOREHAND

The Contractor must ensure that all necessary plumbing, outlet etc., pipes passing through roof are fixed in position before laying is commenced.

I. LAPS AND JOINTS

All laps to the fleet layers shall be in the directions of the slope and 100mm minimum and sealed in bituminous compound. All joints of successive layers must be staggered.

A. PROTECTION

The Contractor will take all necessary precautions to ensure that no damage is caused to the built-up roofing after completion of laying by further building operations, storage of heavy objects, traffic or any cause whatsoever.

B. GUARANTEE

Unless otherwise specified the Sub-Contractor will be required to submit a written guarantee to the Architect at the time of tendering.

FIBRE CONCRETE ROOFING TILES

C. SPECIFICATION

The Specification shall be as "Draft Kenya Standard Specification for Fibre Concrete Roofing Tiles, Ref.K502 - 749" which is briefly described in the following clauses.

D. MATERIALS

- i) Cement - ordinary Portland Cement of an acceptable standard and quality
- ii) Sand - A clear graded sand is required
- iii) Fibre - Many types of natural and artificial fibre are acceptable, Sisal, Coir and Jute are the most commonly used. The fibre should be free from sugar and other chemicals.

E. PREPARATION OF MATERIALS

- i) Sand - This is sieved and only the fraction passing 2mm is used. If the sand contains above 5% clay and silt then washing will be necessary.
- ii) The fibre is chopped to an average length of 15mm with a maximum length of 20mm and a minimum of 10mm.

F. PRODUCTION PROCEDURE

- i) Cement and sand are mixed dry in the proportions of 1:3 (cement: sand) by weight.
- ii) 0.75% by weight (of the cement and sand mixture) is added and mixed in to provide even distribution. The fibre is added to hold the matrix together when in its wet state and to control cracking during curing. It does not act as a reinforcement.
- iii) Water is added and mixed with the dry fibrous mortar taking care not to add an excess of water. A slump of approximately 28mm is normally considered ideal.

PRODUCTION PROCEDURE (CONT'D)

- iv) The hinged frame on the vibrating table is lifted and a polythene interface sheet is placed on the table. The frame is then closed and locked in position.
- v) A measured quantity of mortar is then placed on the vibrating table and is vibrated and screeded for approximately 40 seconds until a flat, smooth and even surface is achieved.
- vi) A small quantity of the mortar is then placed in the nib or lug position and vibrated for 5 seconds to ensure adequate bonding to the tile.
- vii) A wire loop is then pushed into the nib which can be nailed to act as fixing between tile and batten. Alternatively, a hole can be made in the nib itself by pushing a nail through the nib.
- viii) The metal frame on the vibrating table is then unlocked and lifted.
- ix) The polythene interface sheet under the vibrated mortar is lifted and thus the mortar is transferred to the pan tile mould. Care is taken in aligning the wet mortar on the mould to ensure the correct shape of the finished pan tile.
- x) After 24 hours the FC tile is carefully removed from the mould and interface sheet and the edges of the tile "cleaned off" with a knife. The mould and interface sheet should both be cleaned with soap and water before reuse.
- xi) The tile is now placed under water for 7 days to allow maximum strength gain in optimum curing conditions.
- xii) After 7 days the tiles are removed from the water and air cured for a further 14 days after which they are ready for use.
- xiii) Ridge tiles are made using the same procedure with a 10mm square frame and a V shape mould.

NOTE

The production process of Fibre Concrete Tiles is very simple and can be learnt in a few days at the ITW training facility at Karen, Nairobi.

CARPENTRY

A. ALL TIMBER

Shall be in accordance with the latest approved Grading Rules issued by the Government of Kenya (Legal Notice No. 358). Timber for Carpentry shall be SECOND (OR SELECT) GRADE.

A. 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 hardwood to avoid possible shortage at a later date.

B. SPECIES OF TIMBER

The following timber shall be used:-

<u>Standard Common Name</u>	<u>Botanical Name</u>
Podocapus	Podocarpus spp
Cedar	Juniperus Procera
African Mahogany (Munyama)	Khay Anthotheca

C. TOLERANCES IN THICKNESS

Shall conform with the following extracts from the government of Kenya Grading Rules (or the Metric equivalent).

- 1) Hardwood Grading (First and second grade)
The following tolerances in thickness will be admitted:-
 - a) 1½mm oversize on pieces upto 25mm in thickness
 - b) 3mm oversize on pieces over 25mm and upto 50mm in thickness
 - c) 6mm oversize on pieces over 50mm in thickness
2. Softwood grading: Strength Grades (for carpentry) first and second grades.

On no account shall undersize timber be allowed for use.

Oversize: All timber to be sawn oversize by 1½mm per 25mm thickness and width. Not more than 3mm in thickness and not more than 6mm in width.

3. Softwood Grading: Appearance, Grades (for joinery) First and Second Grades.

All as for strength grades above.

A. TIMBER

All timber shall be free of live borer beetle or other insect attack when brought upon the site. The Contractor shall be responsible upto the end of the maintenance period for executing at his own cost 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.

B. SEASONING OF TIMBER

All timber shall be seasoned to a moisture content of not more than 22% for carpentry.

C. PRESSURE IMPREGNATED TREATMENT

All carpentry-timbers, sawn joinery and timber groups of fixing shall be treated with pressure impregnated "Celcure" or "Tanalith" solution with a minimum net retention of 5.6 kg of dry salt per cubic metre. If so required "Charge Sheets" issued after treatment with "Celcure" or "Tanalith" shall be submitted by the Contractor to the Architect for his retention. All cut ends and any other cut faces or timbers sawn after treatment shall be treated before fixing with "Celucure" B or "Wolmanol" solution brushed on. The Contractor's prices for such timber hereinafter must allow for the above treatment.

D. 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 or 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.

E. CLEARING UP

The Contractor is to clear out and destroy or remove all cut ends, shaving and other wood waste from all parts of the building 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.

F. WORKMANSHIP

All carpenter's work shall be accurately set out strictly in accordance with the drawings and shall be framed together and securely fixed in the best responsible manner with properly made joint; all brands nails and screws, etc., shall be provided as necessary, directed and approved, and the contractor's prices shall allow for all the foregoing. All workmanship shall be of the best quality.

G. DIMENSIONS

Dimensions of timber for carpentry left with sawn faces shall comply with the previous clause specifying tolerance in the thickness. Dimensions for wrought members shall be as described in joinery.

A. 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 the work, the holes for nails are to be prebolted at diameter not exceeding 4/5th of the diameter of the 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-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

B. ALL TIMBER

All timber shall be FIRST (OR PRIME) grade. Species of timber tolerance shall be as defined under "Carpentry".

C. GENERALLY

All joiner's work shall be accurately set out on board 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 joiner's work shall be cut out and framed together as soon after the commencement of the building as is practicable, but not wedged up or glued until the building is ready for fixing same. Any portions after completion of the works shall be removed and new fixed in their place together with all other work which may be affected thereby, all at the contractor's own expense.

All work shall be properly mortise, tenoned, housed, shouldered, dovetailed, notched, pinned, branded, etc., as directed and to the satisfaction of the Architect and all properly glued up with the best quality glue.

Joints in joinery must be as specified or detailed, and so designed and secured as to resist or compensate for any stresses to which they may be subjected. All nails, spring, 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. Glued for load bearing joints or where conditions may be guaranteed casein or organic glues may be used.

All exposed surfaces of joinery work shall be wrought and all arises "cased off" by planing and sandpapering to an approved finish suitable to the specified treatment.

A. INSECT DAMAGE

All timber shall be free of insect damage as defined under "Carpentry".

B. SEASONING OF TIMBER

All timber shall be seasoned to a moisture content of not more than 15%.

C. DIMENSIONS

3mm reduction of specified sizes will be allowed to each wrought face except where described as finished size in which joinery shall hold up to the full dimensions.

The Contractor is to note that all joinery timber size are nominal unless otherwise stated as finished sizes. These nominal sizes have been calculated in accordance with Standard Method of Measurement of Building works for East Africa, 1st Edition Metric and no regard has been taken of metric sizes of timber at present being sold.

D. 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 screw shall be used for fixing of all hardwoods, the head let in and pelleted over with wood pellets to match the grain.

E. BEDDING, FRAMES, ETC.

The Contractor's rates must include for bedding frames, sills, etc. in mortar or dressing surfaces of walls, etc., in lieu.

F. 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 "Philiplug" rawl plastic or raw plugs in accordance with the Manufacturer's instructions.

Alternatively and where so agreed by the Architect hardwood dovetailed fixing flips, dipped in "Wolmanol" or "celcure" solution and cut and pinned or bedded in cement mortar (1:3) may be used.

G. FIBREBOARD

Shall be 12mm "Celotex" or equal and approved.

H. PLYWOOD

Shall comply with B.S.1455 (First Quality "Interior type unless otherwise specified).

A. BLOCKBOARD

Shall be laminated board faced with sides with 4mm plywood. Exposed edges and shall be lipped with 19mm hardwood and rates shall include for lipping.

B. PLASTIC SHEETING

Shall be "Formica" sheeting 1.5mm thick and securely fixed with approved type waterproof adhesive, and in the colours approved by the Architect.

C. FLUSH DOORS

All flush doors shall be manufactured to the thicknesses specified and consists of 100mm wide fraying all around with horizontal core battens at not more than 75mm centres pressure impregnated as described and bored with 12mm diameter ventilation holes at 300mm centres. Doors shall have two lock blocks and be faced with both sides with 6mm plywood and have 25mm mahogany twice rebated lipping all round and otherwise be equal to an approved ample. External flush doors shall be as described above but faced both sides with marine quality plywood and same should be for kitchen and bathroom.

D. PRICES TO INCLUDE

Prices of items hereafter shall include for the foregoing labours, etc., and in addition all prices for linear items are to include all internal and external angles, either metered or tongued, all fair, fitted, stopped, notched or returned ends, all similar incidental labours and all short lengths.

E. BOTTOM EDGES

Bottom edges of doors shall be painted with one coat of approved primer before fixing.

F. 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 decorating, and left in perfect working order. All keys shall be labelled with the door reference marked on labels before handing to the Architect on completion.

IRONMONGERY

G. GENERALLY

Prices for fixing ironmongery shall before only fixing before woodwork is decorated and for removing lock handles, fingerplates and the like and re-fixing after decoration is completed, and it shall not include the price of ironmongery. Ironmongery shall be supplied by a nominated supplier.

H. IRONMONGERY

I) Ironmongery shall be fixed with suitable screw to match and prices shall include for this.

- ii) The keys of all locks shall have labels attached with door references marked on before handing to the Architect.

A. MOVEABLE PARTS

All locks, springs and other items of ironmongery with moveable parts shall be properly tested, cleaned and adjusted where necessary to ensure proper working order at the completion of the works and left in perfect working order by the Contractor.

B. SAMPLES

- i) Samples of all ironmongery specified shall be submitted to the Architect for approval, and the approved samples shall thereafter be regarded as the standard for the work. Ironmongery which in the opinion of the Architect does not conform to this standard shall be removed from the site.
- ii) Alternatively, ironmongery of an equal standard will be acceptable providing samples are submitted to and approved by the Architect before orders for such ironmongery are placed.

METAL WORK

C. ALL MATERIALS

Shall be of the best quality, free from defects. The materials in all stages of transportation, handling and piling shall be kept clean and injury from breaking, bending and distortion prevented.

D. NAILS, SCREWS AND BOLTS

Shall be of the best quality mild steel of lengths and weights approved by the Architect. Nails shall be to B.S.1202 and bolt to B.S.916.

E. 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 screw work shall have full internal and external threads and holes shall have been cleaned off. Counter-sinkings must be concentric.

F. "NACO" LOUVRES

Shall be of steel, aluminium-lacquered, single control type, unless otherwise described, carefully screwed into timber sub-frames or plugged and screwed to walling. Louvres of equal quality of other manufacture may be substituted on approval.

Prices shall include for oiling and adjusting and leaving clean and undamaged on completion.

A. MILD STEEL

For burglar bars and reinforcement shall comply with B.S.15. Work shall be fabricated until size dimensions have been checked and no additional claim will be accepted should final dimensions differ from those on the drawings.

All welds shall be ground smooth and the Contractor shall ensure that the metalwork is prepared for painting as described in painting and decorating.

The Contractor is to ensure that all work is erected plumb and true and be so maintained until properly secured by permanent fixings.

B. PAINING

All steel is to be wire brushed and any loose scale, dirt or greases 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.

C. MATERIALS GENERALLY

i) MATERIALS

Specified in this section may be applicable to any or all of the subsequent subtrades in metalwork.

ii) SUPPLIERS

Obtain all materials from suppliers approved by the Engineers.

iii) STANDARDS

Produce the manufacturer's certificate of compliance with the standards specified if so requested by the Engineer.

iv) FINISHES

Metal commodities for making components must be either pre-finished or suitable to receive the finished specified.

D. SECTIONS ETC.

i) HOT ROLLED STEEL SECTIONS

Except equal and unequal angles: to B.S. 4: part 1, made from steel to B.S.4360 part 2

ii) HOT ROLLED EQUAL AND UNEQUAL ANGLES

Part 1 (metric converted from imperial dimensions) or to B.S.4848: Part 4 (accordinated metric dimensions). Do not substitute sections of dimensions other than those specified without the prior approval of the Engineer.

iii) HOT ROLLED HOLLOW STEEL SECTIONS

Part 2, made from steel to B.S. 4360: Part 2

iv) HOT ROLLED STEEL BARS

To B.S.4449

v) COLD ROLLED STEEL SECTIONS

To B.S.2994, made from steel to B.S.1449: Part 1B (HR, CR, HS, or CS quality unless otherwise specified or shown on the drawings)

vi) STEEL TUBE AND TUBULARS

To B.S.1387 medium thickness unless otherwise specified. If steel tubes to B.S.1775 are required, they will be specified or shown on the drawings.

vii) STAINLESS STEEL TUBE

To B.S.3014, welded unless otherwise specified.

viii) COPPER AND ALUMINIUM ALLOYS

If the alloy is not specified or stated on the drawing, it is to be suitable for the application.

ix) ALUMINIUM ALLOY BARS, TUBES AND SECTIONS

To B.S.1161 and B.S.1474

x) COPPER AND COPPER ALLOY RODS AND SECTIONS

To B.S.2874

xi) COPPER AND COPPER ALLOY TUBE

To B.s.2871: Part 2

xii) TIMBER FOR CORES OF DRAWN SECTIONS

To B.S.1186: Part 1, concealed surfaces class, straight grained of mahogany or other approved hardwood.

STEEL MESH FABRIC

- i) To B.S.4483, welded type, and of square, structural or long mesh as specified or shown on the drawing.

- ii) MOSQUITO MESH

Approved fine wire mesh or gauge of non-corroding metal, for example aluminium.

B. PLATE SHEET AND STRIP

STEEL PLATE

For welding to B.S.4360, Section 2 unless otherwise specified. Steel to this standard is equally suitable for bolting and rivetting, and may be used unless steel plate to B.S. 1449 is specified.

PAVINGS AND PLASTERWORK

C. GENERALLY

- i) Prices for paving shall include for preparation of concrete floor and painting with cement grout as described , and any extra thickness consequent upon the floor not being finished to the true levels and also for all temporary rules and for all formwork to stop pavings at openings or edges as required. Prices for tile and similar paving shall include for any pointing to exposed edges.
- ii) Plastering to walls has been measured over concrete columns, lintols, etc., flush with the wall face, and prices for plastering shall include for hacking concrete or for raking out joints to form key, and for any necessary dubbing out.
- iii) Prices of superficial items of paving and plastering are to include for narrow widths and small quantities, fair edges and arises, rounded external angles up to 10mm radius, making good to metal windows or door frames and making good around pipes, holder bats, and other metalwork and for all similar incidental labours unless specifically measured.
- iv) Prices of lineal items are to include for all short lengths, angles, arises, mitres, ends and the like, and for all necessary dubbing etc.
- v) Prices for floor or wall tiling shall include for all straight cutting and waste, small quantities and narrow widths.

D. CEMENT

Cement shall be as described in "Concrete work".

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A. SAND

Sand shall be as described in "Masonry and Blockwork"

B. LIME

Lime and treatment before use shall be as described in "Masonry and Blockwork" except that it shall comply with B.S.890, Class `A'.

C. WATERPROOFING COMPOUNDS

All waterproofing compounds are to be to the Architect's approval and used strictly in accordance with the Manufacturer's printed directions.

D. MIXING

All materials for paving and plastering must be measured in proper gauge boxes in the proportions specified and mixed on clean wood or iron platforms and turned over at least three times dry until the mix is of a uniform colour. Water shall then be added by means of a rose nozzle and the materials again turned over until the mass is thoroughly mixed with water. Alternatively, mechanical mixing methods may be used to obtain the same result if approved by the Architect.

E. PREPARATION FOR PAVINGS AND SCREEDS

As soon as the paving has set sufficiently it is to be covered with a well wetted layer of sawdust, hessian or other approved materials and this layer is to be kept damp for at least seven days during which period no traffic is to be allowed over the paving. When no longer required as a protection to the surface, the material is to be removed and the paving left clean and perfect.

All pavings shall be laid with joints coinciding with the construction joints in the concrete beds upon which they are laid and the pattern set out accordingly.

F. VERMICULITE ROOF SCREEDS

Vermiculite screeds are to be mixed in the proportions of 250kgs. Portland cement to 1 cubic metre vermiculite Grade 5, all in strict accordance with the Manufacturer's printed instructions. The screed is to be finished with 10mm cement and sand 1:3, trowelled smooth to receive roof finish as previously specified. No vermiculite is to be laid on rainy weather and screeds are not to be walked on for three days after laying.

G. SCREEDS TO RECEIVE FLOOR AND WALL FINISHINGS

These are to be laid true and level, particular care being taken to obtain a perfectly smooth surface to receive P.V.C. and similar floor finishing's.

H. CEMENT AND SAND PAVINGS

To be in cement and sand (1:4) and finished perfectly smooth and level with a steel trowel.

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A. SKIRTINGS

Skirtings to cement paved floors shall be in cement and sand (1:4) to match the paving, with rounded arris and 38mm radius cove at junction with paving.

B. JUNCTION STRIPS

At the junction of differing floor finishes fix in position 3mm x 25mm plastic jointing strips cut to lengths, bedded in and finished flush with pavings. All plastic jointing strips shall be black in colour.

C. FLOOR HARDENER

Treat the surface where specified with three coats of sodium silicate or other equal and approved hardener in accordance with the manufacturer's instructions.

D. P.V.C. FLOORING

Dunlop Vinylex asbestos floor tiles to B.S.3261 of thickness specified and colours selected by the Architect and executed by approved sub-contractor. Upon completion the flooring is to receive two coats of approved polish.

E. GRANOLITHIC AND TERRAZZO PAVING AND WALL FINISHES

a) GENERALLY

- i) Construction joints between bays of paving are to be straight and vertical and are to coincide as far as possible, with those in the concrete under.
- ii) After spreading and before finally striking to screed levels the pavings etc., are to be lightly tamped each stage of the laying operation is to be properly carried out at the optimum degree of stiffness of the mix so that the aggregate remains correctly distributed throughout the pavings etc., and so finished that the surface is true to level dense, smooth and free of laitance and other defects and blemishes. The use of dry cement or sand to absorb surplus moisture will not be allowed.
- iii) The thickness of the pavings etc., in these Bills of Quantities include for the combined screed or backing and the granolithic or terrazzo finish.
- iv) All granolithic and terrazzo finishings shall be divided into areas not exceeding 3 square metres with dividing strips as specified.

b) SCREED AND BACKING

To be in cement and sand (1:4)

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c) GRANOLITHIC

- i) To be composed by volume of one part of cement, one part of sand and two parts 6mm black trap chippings free of dust, laid or applied to screeds or backings whilst they are still green.
- ii) Paving shall be 25mm minimum combined thickness comprising 15mm thick cement and sand (1:4) backing and 10mm thick granolithic.
- iii) Dadoes shall be 20mm minimum combined thickness comprising 12mm thick cement (1:4) backing and 8mm thick granolithic.
- iv) Polished granolithic to be finished with a metal roller and all surplus cement lightly brushed off when surface is sufficiently hard to resist dislodgement of aggregate, when the surface is hard enough it shall be wet ground, using a machine, until the aggregate is uniformly revealed and then well washed with clean water. Any small voids or holes left in the surface are to be filled with cement grout rubbed down-by hand. Mouldings etc., not accessible to machines are to be hand rubbed and polished with carborundum. After an interval of 1 to 3 days the surface is to be finally machine ground using a fine abrasive.

d) TERRAZZO

- i) To be composed of one part of "Snowcret" "Colorcrete" or other equal and approved white or coloured cement to two parts of clean imported marble chippings, well washed and free from dust. The marble chipping may vary in colour and from 3mm to 9mm dependent on the effect required and sample areas must be prepared for the Architect's approval.
- ii) Pavings to be 25mm minimum thickness overall as for granolithic (ii) preceding.
- iii) Polished terrazzo to be finished as granolithic (iv) preceding.

A. PLASTIC DIVIDING STRIPS

To be 3mm x 25mm strip set in position before paving is commenced, and embedded straight and true.

B. PLASTERING GENERALLY

- i) All surfaces to be plastered or rendered shall be brushed clean and be well wetted before plaster is applied. All plaster and rendering shall be kept continuously damp for seven days after application.

All arises shall be finished true and slightly rounded except where otherwise stated, and shall be run at the same time as the adjoining plaster.

No partially or wholly set plaster or rendering will be allowed to be used or re-mixed.

- ii) The Contractor shall prepare samples of the Plastering and rendering as directed until the quality texture and finish required is obtained and approved by the Architect, after which all plastering executed in the work shall conform to the respective approved samples.
- iii) The Contractor shall cut out and make good all cracks, blisters and other defects and leave the whole of the work perfect on completion. When making good defects, the plaster or rendering shall be cut out to a rectangular shape with edges undercut to form dove-tailed key, and all finished flush with face of surrounding plaster or rendering.

C. INTERNAL OR EXTERNAL CEMENT AND SAND RENDER

Plaster described as internal cement and sand (1:5) render or external cement and sand (1:5) render shall be executed in two coats and be composed of one part cement to five parts sand. The first coat shall be laid to a uniform surface finished with a wood float well scored and allowed to dry out for at least 7 days before applying the finishing coat. The second or finishing coat shall be thoroughly worked and finished hard and true with a steel trowel or wood float as specified hereinafter.

The total finished thickness of plaster shall be not less than 12mm thick.

D. INTERNAL GAUGED PLASTER

Plaster described as "Internal gauged plaster in two coats" shall consist of a first or rendering coat composed of one part cement, two parts lime and nine parts sand and finishing coat composed of one part cement, three parts lime and six parts sand. Application and thickness will be as for the last item.

E. GLAZED WALL TILING

- i) Glazed wall tiles shall be 150x150x6mm thick cushion edge tiles with matching fittings all conforming to B.S.1281 in colours specified by the Architect.
- ii) Tiles are to be bedded in "Richafix" or other equal and approved tiles fixing compound applied strictly in accordance with the manufacturer's printed instructions.
- iii) Walls are to be dry before tiles are fixed and tiles are not to be soaked in water before use. Tiling is to be set and closely straight jointed with 1.5mm joints. If non-lu tiles are used cardboard or plastic spacer pieces are to be used to obtain constant joint width. On completion tiling is to be painted in white or coloured cement and cleaned down.

F. GLAZING

- i) Glass panes shall be cut to sizes to fit the openings with not more than 1.5mm play all round.
- ii) The rebates of all windows shall be painted one coat before puttying.

- iii) All glass, where fixed with putty, is to be back and front puttied and care must be taken to ensure that putty does not project beyond the sight lines of panes and it to be neatly mitred at angles.
- iv) Putty which has not set hard within seven days must be removed and the glass re-puttied at the Contractor's expense.
- v) Allow for removing all cracked or broken panes of glass, cleaning rebates and re-glazing with new glass throughout sides and leaving perfect upon completion.

A. BEDDING STRIPS

Wash-leather, velvet, etc., bedding strip to edges of glass is to be of sufficient width to be turned over 6mm to each side of pane and shall be trimmed to the sight lines of the pane.

A. GENERALLY

- i) Prices must include for rubbing down with glass paper between successive coats and all cutting in at edges.
- ii) Prices shall include for all work in parti-colours all cuttings to line.

B. MATERIALS

- i) Paints shall be obtained from manufacturers approved by the Employer.
- ii) The materials for all other finishes shall be of the best quality available of approved manufacture.
- iii) Before commencing painting, the Contractor shall submit to the Architect for approval a list of all the brands of paints and finishing's including the necessary primers and undercoats he intends to use and immediately upon being so approved, orders shall be placed and total requirements obtained for the works.
- iv) Once approved, no other brand of material shall be used without the express permission of the Architect, in writing.

C. MORDANT SOLUTION

All galvanized metal work to be painted shall first receive a coat of a proprietary mordant solution, approved by the Architect as suitable for this purpose.

D. KNOTTING

To be "Shellack" knotting to B.S.1336.

E. STOPPING

To be composed of linseed oil putty, white lead, red lead and gold size suitable proportioned and mixed.

F. POLYURETHENE

To be "Ronseal" polyurethane or other equal approved by the Architect.

G. WAX POLISH

Wash polish is to be furniture polish of an approved proprietary brand.

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A. SUPPLY AND PREPARATION

- i) All paints etc., shall be delivered on site in the original drums or tins, and shall be mixed and applied strictly in accordance with the Manufacturer's printed directions. The only addition which will be allowed to be made will be liquid thinners, driers etc., supplied by the makers for the purpose. No paint, distemper, etc., shall be thinned more than approved by the Architect.
- ii) Paint for external work shall be of the special quality recommended by the manufacturers for external use.

B. GENERAL WORKMANSHIP

- i) The priming, undercoats and finishing coats shall each one be of different tints and the priming and undercoats shall be the correct brands and tints to suit the respective finishing coats, all in accordance with the Manufacturers directions.
- ii) All surfaces must be thoroughly cleaned down previous to painting and decorating work, and no external painting may be done in rainy weather. All paint must be thoroughly well worked on and excess of paint in any coat must be avoided.
- iii) All brushes, tools and receptacles are to be kept clean and free from dirt or old paint and are to be thoroughly cleaned each time after use.
- iv) Each coat is to be well brushed into the surface so that every part, including joints, angles etc., is adequately covered, but care is to be taken to avoid excessive or uneven thickness of paint film, particularly at edges and in angles, etc.
- v) Each coat of paint, etc., shall be properly dry and shall be well rubbed down with fine sandpaper and be brushed clean before the next coat is applied. The paintwork shall be finished smooth and free from brush marks.
- vi) Where so required or directed, painting shall be in part-colours and picked out and cut in and the prices shall include this.
- vii) All ironmongery, metal or plastic plates and electrical outlet plates and fittings and the like shall be removed before painting is commenced, and re-fixed on the completion of the work.
- viii) No spray or roller painting will be allowed unless permission is given by the Architect.
- ix) 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.

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A. SAMPLES AND COLOURS

All colours will be selected by the Architect from the B.S. range of colours. Samples and colour cards of all paints, distemper, and materials shall be submitted for approval of the Architect before the same are applied and sample panels shall be executed for the Architect's approval where and when directed. Such samples when approved shall become the standard for the work.

B. PREPARATION AND PRIMING OF PAINTED SURFACES

a) Plastered and rendered surfaces:

- i) Plastered surfaces are to be perfectly smooth, free from defects and ready for decorations. All such surfaces shall be allowed to dry for a minimum period of four weeks and rubbed down with No.2 grade sandpaper to remove trowel marks, stains etc. After the priming coat, all cracks and imperfections are to be made good with 'Polyfilla' (or similar approved hard filler), well rubbed down and then touched up with the priming coat.
- ii) Priming for plastic emulsion paint shall be the paint thinned with 25 per cent water.
- iii) Priming for oil paint shall be with an alkali-resistant primer.

b) Hardboard surfaces:

- i) Priming for plastic emulsion paint shall be the paint thinned with 25 per cent water.
- ii) Priming for oil paint shall be with a thin oil primer.

c) Ferrous metalwork:

All surfaces shall be thoroughly brushed down with wire brushes to remove all scale, rust, etc and rubbed down with No.2 grade sandpaper and brushed and left perfectly clean immediately prior to decoration.

- i) Shop-primed: Surfaces to receive oil paint shall have all bare places touched up with approved metal zinc chromate primer.
- ii) Unprimed: Surfaces shall be given one coat of primer as last.
- iii) Galvanised: Surfaces shall be treated before painting with mordant solution. The surfaces shall then be thoroughly washed down with clean water, allowed to dry and primed as last.

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- iv) Coated: Surfaces already treated with bituminous solution shall receive an insulating coat of anti-

bitumen primer or ~Shellac' knotting

d) Wood surfaces to receive paint:

- i) The woodwork shall have all knots or resinous parts carefully treated with well-knotting aluminium primer. All cracks, nails, or other holes shall be thoroughly cleaned out and after priming all such cracks etc., are to be filled with matching hard stopping which is to be rubbed down flush with the adjoining surfaces.
- ii) Priming for oil paint shall be with self-knotting aluminium primer.
- iii) The back of all joinery work is to be primed before fixing.

A. PREPARATION, PRIMING ETC. OF CLEAR TREATED WOOD SURFACES

All wood surfaces to receive clear treatment shall be rubbed down to a satin finish with fine sandpaper immediately prior to application.

B. COVERING UP

All floors etc., shall be covered up with dust sheets when executing all painting and decorating work.

C. DELIVER UP CLEAN

Paint splashes, spots and stains, shall be removed from floors, woodwork, etc. Any damaged surfaces shall be toughed up and the whole of the work left clean and perfect upon completion.

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ROAD WORKS

A. GENERALLY

The specification of work and materials in this section, which repeat similar work in processing sections, shall be deemed to be the full specification of work and materials contained in the preceding Bills.

ACCESS ROADS AND CAR PARKS

B. EXCAVATION

Excavation shall be to levels approved by the Engineer. All soft spots are to be excavated and filled with hard filling thoroughly compacted.

C. FALLS

Roads and car parks shall have a minimum fall of 1 in 36. The actual falls will be decided by the Engineer on site.

D. COMPACTION OF FORMATION

The maximum dry density of the soils to be compacted shall be determined by Test 9 as described in B.S.1377/49.

The dry density of the soil in the field shall be determined by Test 10 as described in B.S.1377/49.

The relative compaction of the formation shall be determined by the percentage rates of the dry density in the field (Test 10) to the maximum dry density (Test 9).

The relative compaction of the formation is to be not less than 100% when compacted at optimum moisture content plus a minus 2%. Water shall be used as necessary to achieve the desired moisture content.

E. COMPACTION SUB-BASE

The murram sub-base shall be built up in layers as described hereafter, each layer shall be compacted at B.S. optimum moisture content plus or minus 2% until a relative compaction is obtained of 95% for the lower layer and 102% for the top layer. Water shall be used as necessary to achieve the desired moisture content.

F. MURRAM SUB-BASE

The murram shall be approved clean, hard, dark coloured, imported murram free from all vegetable matter, clay or other deleterious substances and obtained from an approved source. The murram sub-base shall be 150mm thick (finished) laid in two layers to the required compaction as described herein to form on completion a firm dense surface.

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The surface thus formed shall be blinded with stone dust or other approved material, watered if necessary and as directed by the Engineer and rolled to levels, falls and cambers to form on completion a firm dense surface to receive stone pitching.

A. STONE PITCHED BASE

The stone pitched base shall be laid in one layer 150mm thick (finished) and shall consist of approved selected stones, each stone being roughly prismoidal in shape with a base area of not less than 200 square centimetres, and with a height of not less than 150mm. The stone shall be hand-packed in regular courses across the prepared murram sub-base, well wedged and bonded together, the stone in adjacent courses breaking joint as far as possible. The stones when set as described above shall have all projections broken off to form an even contour and the interstices thoroughly filled in and bound with smaller angular stones, crushed stone aggregate and stone dust. On completion the base shall be rolled and thoroughly consolidated with a 10-12 ton roller and any depressions or surface irregularities shall be made good with crushed stone. The surface thus formed shall be blinded with stone dust or other approved material, watered if necessary, and as directed by the Architect and rolled to form on completion a firm dense surface to receive the topping.

B. PRIMING COAT

The priming coat shall consist of Grade M.C.O. Medium Curing cutback bitumen, or bitumen emulsion as directed by the Engineer.

Priming shall not commence until all loose fines, superficial films and foreign material have been removed from the surface of the base by sweeping with mechanical or hard hand broom. The prepared base shall be watered, if necessary, in order to ensure that the surface is damp when the prime coat is being applied. Care shall be taken not to cause free water to lie on the surface.

On the properly cleaned and prepared base, the M.C.O. cut-back bitumen shall be applied at a temperature of 43°C, and at a rate of 1 litre per square metre by means of a pressure distributor. The prime coat shall be applied over the full width of the base and shall be left undisturbed for a period of not less than two (2) days and preferably until complete absorption has taken place and the applied prime coat has dried off thoroughly. Any excessive prime remaining on the surface shall be blotted with crusher fines or sand.

After the prime has been applied the surface of the base shall be checked for smoothness and accuracy of elevation, grade and cross-section and any irregularities or inaccuracies shall be corrected by filling in or surfacing with premixed bituminous material and compacting until specified requirements are obtained to the satisfaction of the Engineer, at the Contractor's expense.

PREMIX SURFACING

C. GENERAL

Premix surface dressing shall consist of two layers of aggregate and bitumen applied over the whole of the clean primed surfaces of the roads and car parks to be surfaced.

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PREMIX SURFACING (CONT'D)

A. PREMIX

The premix, its materials, its grading, method of manufacture, method of laying and tolerances of laying shall comply with B.S.1621 except where modified hereunder.

B. MANUFACTURE AND LAYING

The premix shall be manufactured in an approved mixing plant and shall, where required by the Architect be laid by means of an approved paving machine such as a Blaw-Knox or Barber Green type paver, or otherwise shall be laid in an approved manner.

C. BITUMEN

The bitumen used in the premix shall be straight-run bitumen as follows:-

Base Course - 80-100 penetration

Wearing Course - 60-70 penetration

"Wet fix" or other approved additive may be used if the Architect so instructs.

The bitumen shall be from an approved source delivered in sealed drums and opened with care to ensure cleanliness.

D. AGGREGATE

The aggregate shall be blacktrap, hard, dense stone free from dust, impurities or admixture of softer stone. Before commencing manufacture the Contractor must submit to the Engineer samples of all sizes of stone he proposes to use and these, when approved, shall form the standard for the work. If the samples are rejected, the Contractor shall be responsible for providing samples from alternative source.

E. BASE COURSE

The base course premix shall be of specified thickness after consolidation of crushed blacktrap aggregate with 80-100 penetration straight run bitumen and approved filler.

The grading shall comply with Table 2 of B.S.1621. The soluble bitumen binder minimum shall be raised from 3.0% to 3.5%.

F. WEARING COURSE

The wearing course premix shall be of the specified thickness after consolidation of crushed blacktrap aggregate with 60-70 penetration straight run bitumen and approved filler.

The grading shall comply with Table 5 of B.S. 1621.

WEARING COURSE (CONT'D)

The finish surface shall be to the required gradients and cambers and shall be well rolled and neatly finished off at all curbs, walls, drainage gulleys etc., to the approval of the Engineer.

A. CONCRETE KERBS

Concrete kerbs shall comply with B.S.340 (Figure 7) for 250x125mm splayed, plain or circled kerbs.

Kerbs will be set on concrete (1:3:6) foundations sizes 225 wide x 100mm thick and have a 100mm high haunching behind.

Kerbs to be bedded, jointed and pointed in cement mortar (1:3) and to be laid true to line, perfectly level or to even gradients and to be free from all chips, cracks, blemishes and cement stains at joints.

FOUL DRAINAGE

MATERIALS AND TESTING OF MATERIALS

A. GRANULAR MATERIAL FOR UPVC PIPE BEDDING

Granular material for pipe bedding shall consist of free-draining course or fine gravel at good self compacting nature free of sharp stones, rock fragments or other debris. The maximum particle size shall not exceed 20mm generally and not more than 5% by mass shall be retained on a 20mm sieve. Material giving a compaction fraction over 0.3 when tested in accordance with B.S. CP12 shall be deemed unsuitable and material giving a CF between 0.1 and 0.3 shall be given extra care in compaction and shall not be used where pipes are subjected to water logged conditions after laying.

B. UPVC PIPES AND FITTINGS

UPVC pressure pipes, couplers fittings shall comply with B.S.3505 and shall be clearly marked to show diameter, class, thickness and effective length. All flanges shall conform to B.S. 4504 NP16 unless otherwise specifically stated.

UPVC pipes couplers and fittings for drains and gravity sewers shall comply with B.S.2494, 4660, 5481 as applicable.

C. DELIVERY STORAGE AND HANDLING

All pipes and fittings shall be unloaded and handled using approved lifting tackle and slings.

Steel wire ropes or chains shall not be used as slings. The Contractor shall inspect all pipes and fittings before accepting and any items found to be damaged, distorted or in any other way not in accordance with the specification shall be rejected.

Where pipes are stored at any point prior to stringing out they shall be placed neatly in stacks not more than 1.5m high.

UPVC pipes shall be stored on a flat surface previously cleared of any debris. Side supports shall be provided having a minimum bearing width of 75mm at intervals not greater than 1m. They shall be supported continuously along their entire length or on transverse bearers of 75mm width at a maximum of 1m centres.

Pipes of different sizes and thickness shall be segregated to separate stacks. When spigot and socket pipes are being stacked the bottom layer of sockets shall be prevented from direct contact with the ground wither by a shallow excavation under socket area or by the use of transverse supports. Successive pipe layers shall have sockets protruding at opposite ends of the stack so that pipe barrels are then evenly supported by one another along the entire length.

UPVC pipes shall be sheltered from the sun at all times. Pipes affected by sunlight or found to be defective in any way shall be removed from the site as required by the Engineer

While in transit, pipes shall be well secured and supported over their entire length and shall not be allowed to come in contact with any sharp corners or objects, they shall not be allowed to project unsupported over the tail-board of a lorry.

A. VALVES AND FITTINGS

For diameters greater than 50mm valves shall conform to B.S.5163. They shall not be flanged, the flanges being drilled to B.S.4504 NP16 and shall meet the requirements of the closed end test. The direction of closing shall be clockwise and shall be clearly cast on the valve cap or handwheel.

For diameter of 50mm and less gate valves shall conform to B.S.1952 wedge type, class as mentioned in the Bills of Quantities with femal screwed ends, non-rising stem and handwheel.

Small oriface single air valve shall be Glenfield and Kennedy Apex Pattern Cat. No.1251 or similar approved type. They shall be 25mm male screwed and fitted with an isolating cock, or be flanged 80mm to B.S.4504 NP 16 according to positions. The oriface shall be 1.75mm unless other wise specified.

Double air valves shall be Glenfield and Kennedy Apex pattern Cat. No.1772 valve size 400 or similar approved type. They shall be flanged 80mm unless otherwise specified to B.S.4504 NP16 and fitted with an isolating butterfly valve.

Non-return valves shall be from bronze upto 40mm and from Mechanite iron above 40mm. They shall be swing pattern and rated for at least 40 bars or as required. The ends shall be screwed to B.S.21 or flanged to B.S.4505 NP14 as required.

Surface boxes shall be of cast iron Glenfield and Kennedy type 1702, hinged and locked or similar approved where pipeline is greater than 50mm and type 1807 where the pipeline is 50mm.

Valve keys shall be of mild steel with ends to suit either valves to B.S.1952 with handwheels or to B.S.5163 with valve caps.

Hydrants shall be lugged outlet Glenfield and Kennedy Cat. No.1101 or similar to B.S.750 or the relevant Kenya Standards. Saddles for use with PVC pipes shall be nylon covered aluminium or similar approved.

B. JOINTS

All flanges shall conform to B.S.4505 NP16 unless otherwise specified.

Rubber rings between flanges shall conform to B.S.2494 and all flanged joints shall be complete with bolts, nuts and washers, B.S.W. Hezagon headed mild steel and dimensions of bolts and nuts shall conform to B.S.916.

Screwed joint shall be to B.S.21.

JOINTS (CONT'D)

Joints in UPVC pipes shall be as follows:

- a) UP to and including 50mm: Solvent cement to ISO 2044
- b) Above 50: Mechanical type ISO 2045

For solvent cement joints, only approved cleaners and adhesives shall be used and they shall be applied in accordance with the manufacturer's instructions.

Flange adaptors or couplings shall be of Viking Johnson type or similar approved, cast iron fittings and adaptors used with UPVC pipes shall conform to B.S. 4346 Parts 4 and 5, or as recommended by the pipe supplier and approved by the Engineer.

A. PENSTOCKS AND HANDSTOPS

Penstocks and handstops shall be obtained from an approved manufacturer and shall be provided with all extension spindles, guides, headstocks and handwheels as required. Where necessary gearing shall be supplied so that the pen-stock can be operated by one man without undue effort.

B. EXCAVATION AND BACKFILLING

Trenches shall be excavated to such depth and widths as shall allow easy and proper laying and jointing of pipework and placing of pipe protection to the specified dimension and to allow a minimum 900mm cover to the pipeline generally and 1200mm under roads and drains.

- C. The length of trench to be excavated without pipe laying and backfilling shall be approved by the Engineer and trenches in roads shall be subject to approval by the relevant authority.
- D. The maximum width of trench excavation shall be 700mm or overall diameter of the pipe plus 400mm whichever is the greater. Any excess trench width due to slip or other cause shall be filled with class 10/40 concrete to at least the height of the pipe crown or additional pipe protection at no extra cost to the Client.
- E. Where existing structures interfere with the proposed line of the pipe, the Engineer may instruct the Contractor to deviate from the straight line provide any necessary short lengths of pipe slow bends, additional joints etc. Any additional work so required will be paid for at the rates in the Bills of Quantities.
- F. All materials used for backfilling shall be selected readily compatible material free from large stones, tree roots, vegetable matter, refuse, silt black cotton soil, organic clay or material with an unacceptable moisture content.

G. LAYING UPVC PIPES, VALVES, FITTINGS

All handling shall be carried out using ropes or web sling. Lighting hooks shall not be placed in the spigot or socket end pipes.

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Pipes shall be laid as soon as possible after trench excavations have been approved by the Engineer. The bottom of the trench shall be cleared of any foreign matter and the underside of the pipe shall be

supported throughout its entire length. Additional depressions in the excavation and bedding for joints shall be reduced to a minimum to ensure that the socket, collar or couplings is fully supported. All pipe laying shall comply fully with the manufacture's recommendations and in accordance with the Engineer's instructions and good practice.

The Contractor, in the presence of the Engineer, shall examine all pipe lengths, valves and fittings and shall remove or correct any damaged material to the satisfaction of the Engineer. All pipes, valves and fittings shall be kept clean and free from foreign matter during laying and installation. Long radius curves may be negotiated by deflection of joints or pipes only in accordance with the manufacturer's recommendations. When the pipe line has been inspected by the Engineer each pipe length shall be covered to a depth not less than 600mm for two thirds of its length in accordance with this specification leaving the joints exposed until they have been satisfactorily tested.

B. JOINTING

In all cases a perfectly watertight and secure joint shall be obtained under the specified test pressure. All pipes with flexible joints shall be accurately marked on the spigot end prior to jointing to ensure the correct gap is left in the joint after laying. Pipe spigots shall not be driven home tight into the sockets.

UPVC pipes shall not be jointed before being placed in trenches. Where a deflection in the line of a pipe is to be made at a joint, or where the pipe is to be laid to a radius, the joint shall first be made in a straight position and may be deflected only after completion of the joint. Patent and special joints shall be made fully in accordance with the manufacturer's instructions unless otherwise directed by the Engineer.

Flanges shall be thoroughly cleaned before making the joint and care shall be taken to ensure that the gasket is concentric with the pipe. Bolts shall be carefully tightened, gradually and diametrically opposite bolts tightened in succession.

Pipes shall be cut as required to permit installation of junction, valves, hydrants etc., in their correct position; the Contractor shall allow for all such cutting and waste in pricing the Bills of Quantities. Approved tools shall be used for cutting and cambering pipes.

C. PIPE BEDDING AND PROTECTION

Pipes shall be laid on a firm and continuous granular bed. The granular bed shall give a consolidated uniform thickness for the width of the trench.

D. PIPE BEDDING AND PROTECTION (CONT'D)

The pipe shall be carefully laid to ensure even bearing and along the full length of the barrel. The granular surround and hunching and fill shall be carefully placed and hand compacted around the pipe and to a height of 300mm above the pipe special care being taken to ensure a firm support to the underside of the pipe.

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A. TESTING GENERAL

It shall be a condition precedent to the issue of a Certificate of completion that all pipe lines shall have been successfully tested and finally cleaned out and that all valves in the pipe line have been satisfactorily operated under working pressure.

The Contractor shall submit for approval, details of his proposed methods and programme for testing, including details of test equipment and shall arrange for all tests to be witnessed by a person authorised by the Engineer.

B. TESTING WATER AND SEWAGE RISING MAINS

Sufficient refill material shall be placed and consolidated in the pipe trench to restrain movement of the pipe under test. All joints however shall remain exposed until after successful completion of the tests to enable visual examination.

Before testing, the ends of the pipes shall, where necessary, be effectively stopped with cast iron plugs or caps, properly jointed and securely pinned and strutted, and the Contractor shall ensure that all necessary anchor and thrust blocks have been constructed and attained their required strength.

The pipe line shall be tested as the works proceed in lengths between valves or in such shorter lengths as the Engineer may approve or direct on the understanding that no extra cost will be incurred to the Employer but the maximum lengths of main to be tested shall not exceed 1km.

The Contractor shall supply all necessary materials to carry out the test in accordance with the requirements including force pumps, water, pressure gauges, including two for the use of the Engineer, interconnecting pipework, blank flanges, temporary stop ends, struts etc. Testing shall not take place against closed valves.

After the main has been cleared of debris, and all necessary stop ends and gauges fitted to the Engineer's approval the Contractor shall fill the pipe with water reasonably free from silt, sand and grit and bring up the pressure steadily to the working pressure of the main, and maintained with a force pump for 24 hours. The pressure should be increased steadily in increments of 1.00 bar with a pause of one minute between each increment to the specified test pressure for the section of main under test and maintained by force pump, and the rate of leakage measured by the fall in the pump feed tank.

The pressure test will be generally according to Code of Practice No.310, 1965, Section Five. Leaks must be made good, and any faulty pipes replaced before approval will be given for backfilling. In the event of pipes, fittings or valves being found fractured after laying, even though they are to all appearance properly laid, the Contractor will be held responsible and will be required to replace such defective work at his own cost, including the purchase of a similar new pipe or fittings to the original specification.

The test pressure, unless otherwise directed shall be 1.5 times nominal working pressure for the class of pipe being tested, and maintained for a minimum of 5 hours.

PIPE BEDDING AND PROTECTION (CONT'D)

A. TESTING GRAVITY SEWERS

Each length of sewer shall be tested with air or water as required by the Engineer or Engineer's Representative. The apparatus used for testing shall be of a size, design and make approved by the Engineer and a gauge or U-tube indicating the pressure shall be provided if required. The test shall in all cases be applied in the presence of and to the satisfaction of the Engineer's Representatives. The testing apparatus, pump, gauge and all stoppers, shall be provided by the Contractor.

For the air test, air shall be pumped into the length of the sewer under test until a pressure equivalent to head of 100mm of water is indicated on the gauge and without any further pumping the pressure shall not fall below 75mm pressure of water in a period of 5 minutes. Any length of sewer which is found to be defective shall, at the Contractor's expense, immediately be put into a sound and satisfactory condition by repairing any defective part or, if necessary by relaying the whole of the defective length and such length shall be re-tested to the Engineer's Representative satisfaction

For the water test each length of sewer shall be tested with water after jointing and before any pipe protection is placed. A minimum head of water 1.5m shall be maintained for half an hour without additional filling with water.

If the Engineer has any reason for suspecting that the pipes or joints on any portion of the sewer have been damaged during the refilling of the trench or heading or by any other cause or reason and that the portion of sewer would no longer comply with the requirement of the test, he may order the Contractor to carry out a second test and should the length of sewer prove defective, the Contractor shall repair or make good the defects or relay the length of sewer at his own expense. Extra payment will be allowed for carrying out second test should the length of sewer prove to be satisfactory.

Where there are junctions, the branches shall be closed with rubber stoppers to be provided by the Contractor unless the branch is already sealed with a "joinder" cap and the testing of such junctions shall be included in the price for testing the sewer.

An independent final test of the whole of the work shall be applied by the Engineer's Representative and the fact that any part of the work has passed any test during the progress of the work will not relieve the Contractor or any of his obligations, and any defects found in this final test or during the Period of Maintenance shall be located and made good at the Contractor's expense.

B. STERILISING WATER MAINS

At such time as the Engineer may direct all mains shall, before being handed over to the Employer, be chlorinated, after first being cleaned and flushed with water with the following preparation of chlorinating reagent per 10,000 litres of clean water:-

- a) 1 litre sodium hypochlorite solution containing not less than 10 per cent of chlorine.
- b) 1kg. of bleaching powder

If bleaching powder is used, it shall be mixed with water to a creamy consistency before being added to the water to be injected into the mains. After thorough mixing in a suitable tank, the chlorinated water shall be injected into the mains and left therein for at least three hours, in preference over-night. All mains shall be thoroughly flushed out with treated water before any water is permitted to be used for supply to consumers.

The Contractor shall provide suitable chlorination equipment together with all necessary pumps, piping, cocks, gauges and other materials required for injecting the requisite doses of chlorinated water into the mains. The whole of the equipment and method of application shall be such as to ensure the complete sterilization of the mains, etc., to the satisfaction of the Engineer.

A. DE-CHLORINATING WATER MAINS

It may be a requirement that heavily chlorinated water shall not be discharged into streams, ditches or water-courses. In the event the Contractor will be required to de-chlorinate any such water by injecting into it, sodium thiosulphate or sulphur dioxide. Apparatus properly designed for the purpose, and to the Engineer's approval, shall be used. It is appreciated that the application of the chemical cannot easily be carried out with sufficient accuracy to react precisely with the chlorine in the water leaving no excess. For this reason a residual content of Sodium Thiosulphate, sulphur dioxide or chlorine of upto 0.5 parts per million in the water to be discharged will be accepted. The Contractor will be required to make available the necessary testing equipment to determine the residual content. Where the requirement of this clause is needed the work of de-chlorinating is covered by provisional quantities in the Bill and the Contractor shall enter prices to cover all his expenses in this connection.

MANHOLES

A. GENERAL

At each change of section, direction or of gradient, at intersections with other sewers and at such other points as are indicated upon the drawings or where required by the Engineer, the Contractor shall construct a manhole similar to one or other of the types shown upon the drawings but the dimensions and details will depend upon the site and the depth of the sewer and the exact construction will be decided in each case by the Engineer or Engineer's Representative.

Where the site of a manhole is liable to flooding or, where the Engineer shall order the shaft or chamber shall be carried above the natural ground level to such a height as the Engineer may determine.

B. COVERS

The covers and frames for the manholes shall be in accordance with B.S.497 and obtained from approved manufacturers. They shall be coated before delivery by hot dipping in an approved bituminous materials to the satisfaction of the Engineer.

All ventilated manhole covers shall be provided with dirt-boxes of approved pattern and the rates for fixing manhole covers and frames shall include for fixing and dit-boxes, if any.

The manhole covers shall be bedded and painted in cement mortar on two courses of blockwork, corbelled as necessary. Alternatively, except where the manhole is in a roadway the blockwork may be omitted on the order of the Engineer and the manhole cover bedded and pointed in cement mortar on the concrete manhole slab, and access shaft being extended as necessary. Two sets of lifting irons for the covers shall be provided. and handed over to the Engineer's Representative as soon as fixing of the covers commences.

C. STEP IRONS

Galvanised malleable iron step-irons of approved size and pattern shall be provided and built into the walls in true vertical alignment evenly spaced apart.

D. BASE AND INVERTS

The base of all manholes (other than those constructed in segmental rings) including foundations, inverts, benchings and walls shall be formed of in-situ concrete grade 20/20 as shown on the drawings and shuttered or formed internally to the dimensions shown.

The inverts shall, together with all benchings, be rendered in cement mortar in two coats. The Contractor shall make good at his own expense any damages done to soft rendering by water flowing down the sewers for dropping through the covers or from any other cause.

E. PRECAST CONCRETE MANHOLES

Excavation for precast concrete manholes shall be as described under excavations in the preambles.

The walls shall be formed of precast concrete manhole chamber rings and, where the depths exceed about 2.5m from ground level to the pipe barrels, the manhole shall include a precast concrete taper ring together with the necessary shaft rings.

The chamber, taper, shaft rings and a cover slab shall conform with B.S.556 except that after test pieces have been immersed in water for a period of 24 hours the total absorption shall not exceed 4½% of the dry weight.

In all cases, the chamber, taper and shaft rings shall be surrounded by concrete class 20/20 100mm in thickness.

The shaft and chamber rings shall be provided in special lengths or cut as necessary to permit cover slabs and tapers to be set at the required levels and for the reception of branch sewers and backdrops. The slabs shall be left between the underside of the slabs and the top of the precast rings.

All precast manhole section shall be jointed in cement mortar.

A. IN-SITU MANHOLES

Excavation for in-situ manholes shall be as described under excavations in the preambles.

The manholes shall be constructed of blockwork and reinforced concrete and shall be formed to the shapes and sizes shown on the drawings.

The whole of the exposed concrete surface in the manhole shall be finished to a smooth and even surface.

B. CONNECTING EXISTING SEWERS AND DRAINS

Where shown on the drawings existing sewers and drains shall be properly extended, connected and jointed to new sewers, culverts, drains or channels. All such connections shall be made during the construction of the main sewer, drain or other work and a record of their position kept for future use or reference. Where pipe connections are made to a sewer, culvert, stone pitched or lined channel, the pipes shall be well and tightly built into the concrete or masonry work and be so placed as to discharge in the direction of flow of the main sewer, drain or channel and with the end of the pipe carefully cut to the necessary angle. Where the connections are between pipe sewers or drains, special connecting pipes as shown on the drawings shall be supplied and be truly laid and properly jointed.

C. TEMPORARY STOPPERS

Junction pipes which are laid but not immediately connected to gullies shall be fitted with temporary stoppers or seals, and the position of all such junctions shall be clearly defined by means of stakes or training wires properly marked and labelled.

D. PROVISION FOR FUTURE CONNECTION TO MANHOLES

Inlet pipes of the required diameters shall be built into the walls of manholes and elsewhere for future use and shall be of the diameters shown on the drawings. The external ends of all such connections shall be sealed off with temporary stoppers, or otherwise sealed off as approved as specified earlier and shall be adequately supported during the placing of concrete.

A. ELECTRICAL MATERIALS AND WORKS REGULATIONS

This specification covers the requirements of lighting and power installations in Kenya.

All apparatus and materials supplied for all work carried out shall comply with the Kenya Government Electrical Specifications, GES 1 and GES 2, local statutory regulations and the Supply Authority By-Laws. Installations should also be in accordance with the requirements of the 14th Edition of the "Regulations of the Electrical Equipment of Buildings" issued by the Institute of Electrical Engineers of Great Britain, which should be used as a "Code of Practice", except where they conflict with Kenya Government Legislation regarding electrical installations and local amendments.

B. STANDARDS

Except where otherwise indicated in this specification, the Contract works and all manufactured items shall comply with the relevant specifications of the British Standards Institution. Such specifications are hereinafter referred to as B.S. In each case, the latest editions of such specifications shall apply.

Should it be desired to offer equipment covered by other National or International standards, the approval of the Engineer must be obtained in writing before completion of the tender documents.

C. RECORD DRAWINGS

The sub-contractor shall mark accurately on one set of drawings the conduit laid during the progress of the work. This information must be made available on site for inspection by the Engineer.

At the completion of the contract the Contractor shall supply the Engineer with one set of transport originals, and two complete sets of prints showing the complete installation. The drawings shall include the location of all apparatus conduits and cable routes, and a schematic diagram of mains distribution indicating the phasing of the system.

A. CONTRACT DRAWINGS

These drawings forming part of this specification are to be read in conjunction with this specification to enable the Contractor to prepare a tender.

These drawings are not intended to be used as working drawings unless they are released for that purpose.

Circular or square boxes shall be provided at all outlet points, unless otherwise specified and lighting fittings, ceiling switches and other accessories will be screwed to the internal lugs of the boxes. Care must always be taken when considering the use of totally enclosed fittings with polyvinyl chloride circular boxes where the temperature within the box is likely to rise above 60°C (140°F) special steel insert slips should be used in on junction with circular boxes where this problem can arise and also in situations where heavy pendants are used.

Looping in boxes of circular polyvinyl chloride or square or oblong shape complete with polyvinyl chloride lids secured by 2BA brass or steel plated round headed screws. All adaptable boxes and lids for the same size shall be interchangeable. No adaptable box smaller than 75mm x 50mm or larger than 300mm x 300mm shall be employed. Boxes shall be of adequate depth in relation to the size of the conduit entering them.

Conduits shall be terminated at adaptable boxes, fuse boards, switches, sockets or other equipment not possessing push-in or threaded spouts, by means of appropriate size female adaptor and polyvinyl chloride hexagonal headed bare bush. All cemented joints to be made to a depth of not less than the diameter of the conduit being used.

Earth continuity shall be provided by a separate insulated conductor drawing into the plastic conduit and rated in accordance with circuit loadings and appropriate regulations, or as mentioned on the drawings.

Where required under the regulations, an earth continuity conductor shall be provided for lighting fittings in which case the control switches shall be equipped with an appropriate earth terminal.

B. ARRANGEMENT OF CONDUIT LAYOUT

The conduit system shall be carefully planned and erected to avoid all unnecessary bends or changes in direction. Conduits shall be laid in straight horizontal or vertical lines with easy sets. Where several conduits follow similar routes, they shall be neatly grouped in multiple runs. Where multiple runs change direction, the radii of the sets shall be laid out from a common centre. Where drawn-in boxes for right angled change of direction are required in multiple runs, adaptable boxes shall be used for such size as to allow all conduits to enter the box without sets.

The cables shall be coloured in accordance with Table B4 of Institute of Electrical Engineer Regulations. Cables used on extra low voltage circuits shall have distinctive colours other than these colours.

No reduction of the strands forming the conductors shall be allowed at switch or other terminals, but all strands shall be effectively secured by screws, nuts and washers or other approved means.

A. TYPE

Ceiling roses, ivory or white, shall be of the 3-plate pattern and fitted at all pendant points. An earthing terminal shall be provided and connected to the earth continuity conductor of the final substance circuit where applicable.

Ceiling roses of the white porcelain semi-recessed pattern shall be used for surface installation, and shall be of the all-insulated type for a flush installation.

LAMP HOLDERS

B. TYPE

Lamp holders shall generally be of plastic construction with porcelain interiors, and bayonet fitting.

Lamp holders for lamps rated 200 watts and above shall be of the Edison Screw type.

Batten type lamp holders shall be of the all-insulated bayonet type.

LIGHTING FITTINGS

C. GENERAL

The Contractor shall supply and fit all lighting fittings of the type indicated on the drawings and in the schedules. All fittings shall be suitable for operation on a 240 volts. 50 cycles supply. Lighting fittings rated other than 240 volts will not be accepted. All lighting fittings shall be supplied with lamps.

D. FLUORESCENT FITTINGS

Fluorescent fittings shall generally be of the batten type, with control gear contained within the supporting channel. All fittings shall be supported from conduits boxes, and shall be suspended by two 20mm conduits to give a clearance of 25mm between the top of the fitting and the ceiling. In the ceiling the conduit boxes, to B.S.31, shall be fitted with dome covers, to which the suspension conduit shall be joined, so that the lighting fitting hangs vertically below the conduit boxes. Fittings shall comply with B.S. 3820 or class 1, indoor normal temperature.

All fluorescent fittings shall be fitted with radio interference suppression capacitors and power factor correction capacitors and shall be earthed.

E. LAMPS

All fittings shall be supplied complete with lamps of the type and rating specified. Fluorescent tubes shall be of the "White" type, except where otherwise stated. Pearly type tungsten lamps shall be fitted in open fittings.

FLEXIBLE CORDS

A. TYPE

These shall be of 250 volt grade polyvinyl chloride insulated and shall comply with B.S.7. Flexible cords shall not be less than 24/20 (23/0076). Flexible cords for pendant fittings shall be circular type, heat resistant and white in colour.

B. EARTHING

Earth electrodes shall be minimum of two metres long by 15mm diameter hard drawn copper rod, and shall be located not less than three metres apart at a convenient position six metres away from the building. The terminal head of each electrode shall be in a concrete inspection pit, with cover. If the resistance to earth is not satisfactory with one electrode, then additional electrodes or an earth mat shall be provided, as directed by the Engineer.

C. DISTRIBUTION SYSTEM EARTHING

All distribution boards shall be earthed in accordance with the Institute of Electrical Engineer regulations. All metal work associated with the installation shall be earthed to comply with the regulations currently in force.

D. TESTING OR EARTHING SYSTEM

The resistance of the earth continuity system, when measured between the main earthing point and any other point in the installation, including all conduit and other metal work which may provide path or earth, shall not exceed 0.5hm, if the earth continuity system is composed entirely of copper, copper alloy or aluminium.

When the installation is complete, the sub-contractor shall carry out tests for earth loop impedance, polarity, insulation resistance, in the presence of, and to the satisfaction of the Engineer and the Kenya Power & Lighting Company. The Contractor shall rectify all work not giving test results within the limits prescribed.

Four copies of all test results shall be forwarded to the Engineer and a certificate of completion will not be issued until such tests have been approved.

E. WORKING DRAWINGS

Working drawings to be prepared by the Engineer shall be detailed as below but not restricted only the these:-

- a) General arrangement drawings showing plants, M.V. Switchboards, distribution boards, consumer units, fittings, switch sockets, etc.
- b) Layout drawings of concealed and surface conduits, ducts, trunking etc.
- c) Any other drawings that are not called for in the specifications.

Thereafter, the Engineers shall submit copies of approved working drawings for distribution to all parties concerned.

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The Contractor shall not be relieved of any of his obligations under the contract or from correcting any errors on site or elsewhere found consequently in the working drawings prepared by the Engineer.

A. LABELS

All switchgear, switchfuses, distribution boards, etc shall be clearly labeled with black and white background engraved labels to indicate the name, purpose and position of the gear. All circuits in distribution boards shall be clearly identified in respect of the number and location of the M.C.B. The chart shall be securely fixed inside the cover of the distribution boards.

C. GALVANIZING

Galvanising shall be applied by the hot process and shall consist of smooth clean zinc coating free from defects can be in uniform thickness. The thickness shall not be less than 160gms of zinc per square metre of surface and tested in accordance with the requirements of B.S.729 where applicable. Sheradizing or other alternative processes shall not be used without approval in writing of the Engineer.

The preparation of galvanizing and the galvanising itself shall not adversely affect the mechanical properties of the coated material.

Surfaces which are normally in contact with oil shall not be galvanised or cadmium plated.

All out-door structures, access ladders, platforms, equipment cubicles shall be galvanised.

NON-METALLIC CONDUIT

D. STANDARDS AND INSTALLATION

All non-metallic conduit shall be class A heavy gauge, high impact, polyvinyl chloride complying with B.S.4606 Part 2, type AH.

The minimum size to be used on the contract is 20mm external diameter. All conduit installations shall be concealed in the walls and floors or in structural slabs.

JOINTS

Conduits will be joined and terminated utilizing the appropriate rigid polyvinyl chloride compounds as detailed below, or standard conduit entry electrical equipment. Jointing will conform to one of the following techniques:-

a) Permanent Adhesives

The solvent cement supplied by the conduit manufacturers will be used to produce a rigid sealed connection.

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b) Flexible Adhesive

A non-hardening adhesive supplied by the conduit manufacturers will be used to produce a flexible sealed joint where allowance is necessary for longitudinal movement (e.g. expansion couplers).

A. BENDS

Bends and sets in the conduit will be made in accordance with the manufacturer's instructions. The radius of the bend shall not be less than 2.5 times the outside diameter of the conduit, or such greater radius which will facilitate easy drawing into cables.

B. EXPANSION

Adequate allowance shall be made for longitudinal expansion and contraction of the conduit under normal working temperature variations as follows:-

- a) Expansion couplers should be used in straight runs exceeding 6 metres with a loose or flexible type joint, (A. above then (b) at the long spout end of the coupler.

Where conduits are concealed or laid on structural floors, they shall be secured by a fixed method to be approved by the Engineer. Where it is essential that conduits cross one another in floors, the chases shall be deepened and the conduits set to create the minimum desirable diversion.

Care shall be taken to ensure that there is no obstruction to cables within the conduits caused by the ingress of plaster, concrete, or other matter. Conduit ends must be cut square and cleaned of burrs.

C. CLEANING AND PAINTING

Having due regard to the destination and climatic conditions under which the plant is to operate, extreme care shall be exercised in the manufacture of the equipment to prevent the formation of any corrosion.

All equipments shall be cleaned of all dust, oil, grease, dirt, scale and rust by power tool operated metal brush or preferably by shot or grit blasting and then ground smooth where necessary.

Unless otherwise approved, they shall then immediately have applied to them two coats of approved primer paint. After inspection, any rough surfaces shall be filled in and smoothed over and further painting in the factory shall be as follows:-

- a) All interior surfaces of cubicles, kiosks, boxes and the like, containing wiring or other apparatus and internal components of the plant which are despatched to site in an assembled condition, shall be finished painted with at least two coats of white enamel. The final coat shall be of white anti-condensation finish, where so specified.
- b) The external surface of the panels shall be finished in grey stove enamel to B.S.381 C shade 631 or other shade as may be approved by the Engineer.

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- c) All interior surfaces of tanks and other oil filled chambers and external surfaces of piping therein shall be painted finally with an oil resisting coating to the approval of the Engineer.
- d) All wall and floor mounted junction boxes, loose starters etc., throughout the works shall be finished in grey stove enamel or painted to B.S.381 C shade 631 or other shade as may be approved by the Engineer.

After all erection has been completed at site, the Contractor shall make good all defects in painting and galvanizing which have arisen during transport, storage and erection on site and shall apply one undercoat and one finished coat of gloss paint to B.S.311 C shade 631 or other shade as may be approved by the Engineer to the external surface of all equipment.

Where all erection metalwork has been damaged it shall either be repaired by cold galvanising at site or alternatively, at the discretion of the Engineer, be returned to the manufacturer for re-galvanising by the hot process.

DISTRIBUTION BOARDS

A. TYPE AND RATING

General lighting and power distribution boards shall comply with B.S.3817, B.S.5861 and B.S.214 and shall be of the metal clad pattern, flush mounted, except where otherwise specified on the drawings.

B. CONSTRUCTION

Enclosures shall be substantially constructed from 16S.W.G. minimum thickness sheet steel having hinged front cover, and shall be vermin and insect proof. Each unit shall house miniature circuit breakers and shall be supplied complete with bus-bars, earthing terminal, neutral bar, circuit chart, and blanking plate for any spare ways. The incoming isolator switch shall be integral with the distribution board in consumer's unit only.

C. MINIATURE CIRCUIT BREAKERS

All distribution boards shall be supplied with M.C.B. manufactured to B.S.3871 and of a rating as specified on the drawings. The circuit breakers shall incorporate both terminal overload and magnetic short circuit tripping, with a trip free-mechanism.

All distribution boards shall be supplied with MCB manufactured to B.S.3871 and of a rating as specified on the drawings. The circuit breakers shall incorporate both terminal overload and magnetic short circuit tripping with a trip free mechanism.

Three phase circuits shall be controlled by integrally manufactured three pole breakers, with one common operating lever. An inter-tripping mechanism shall ensure isolation of all three poles in the event of an overload or short circuit on any one phase.

D. EARTH LEAKAGE CIRCUIT BREAKERS

If specified or indicated on the contract drawings, the use of E.L.C.B. for isolation of incoming supply in the distribution board, it shall be an approved type for flush mounting.

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The general requirements of the E.L.C.B. are as follows:-

- a) It shall be high sensitivity i.e. it shall operate in 30 milliseconds for a leakage current of 30 milli-ampere.
- b) Its operation shall not rely on the mains supply for tripping under fault conditions. For example, in the event of a leakage from the live of each conductor occurring at the same time a break in the neutral supply wire, the breaker shall trip.

A. **LABELLING**

A circuit chart with each board shall show the name, location and current loading of each circuit connected. Each board shall be fitted with an engraved identification label in black and white, such as 'distribution board D.1.' etc., and all three phase boards shall be labelled in white or red, 'DANGER 415 VOLTS'.

B. **ERECTION**

Conduits for each circuit shall be completely erected before any cable is drawn in. Adequate draw-in points shall be provided.

Straight runs shall have draw-in facilities at distance not exceeding 12 metres. Runs incorporating sets or bends shall have draw-in facilities at a distance not exceeding 9 metres. These distances may need to be reduced in difficult situations or with particular cable complexes.

Not more than four easy sets, or two right angle bends or sets may be installed between draw-in points. Solid elbow or tees shall not be accepted.

FINAL SUB-CIRCUIT WIRING

C. **TYPE**

All power and lighting wiring cables shall be 600/1000 volt grade, single core polyvinyl chloride, insulated, with stranded copper conductors, manufactured in accordance with B.S.6004. The minimum sizes on lighting circuits shall be 1.5 sq.m sizes on power spur circuits shall be 4.0 sq.mm. and on ring main circuits 2.5 sq.mm.

D. **INSTALLATION**

Cables forming sub-circuits connected to different sub-distribution boards, shall not be drawn into the same conduit or draw-in box.

Saddles as supplied by the manufacturers shall include a sliding support tolerance for longitudinal expansion.

Special consideration may need to be given to the fixing of accessories where this may prevent natural conduit movements. Oversize or slotted fixing holes may be necessary or introduction of expansion couplers.

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A. **SUPPORT**

Conduit should be supported by saddles at not less than 900mm intervals. Where working temperatures tend to be high this should be reduced to 600mm.

B. **CONDUITS BOXES AND FITTINGS**

All conduit boxes shall be circular or square pattern or rigid polyvinyl chloride suitable for plain connections conforming to shed 61 B.S.4607 part. Boxes for supporting a fitting or accessory shall be

fitted with a polyvinyl chloride lid held in position by means of two 2 BA round headed screws. Boxes shall have metallic screwed inserts.

C. P.M.E. SYSTEM

Provision shall be made for the P.M.E. system at supply intake (where applicable).

"P.M.E." means that system whereby the neutral conductor of the supply network is earthed at a prescribed number of points along its routes, together with the installation earth continuity conductor, at each consumer's installation, so providing a metallic path for the flow of earth fault currents. The connections between the neutral conductor of the supply network and the earth continuity conductor of the installation shall be made by the Supply Authority at the point of intake only. The connection at the isolators will be made by the Contractor in the presence of the Engineer after completion of all tests.

D. COMMISSIONING.

The whole installation shall be tested to the statutory requirements of the Electricity Authority, Institute of Electrical Engineer Regulations and commissioned in the presence of and to the satisfaction of the Engineer.

Four copies of test reports shall be provided within seven days of carrying out the tests, and the reports shall include full details of how each test was carried out, and a copy of all reading taken.

SOCKET OUTLETS

E. GENERAL

In all areas, general power outlets shall be of the 13amp. 3 pin fused plug type complying with B.S.1363.

They shall be flush pattern, with white or ivory cover plates unless otherwise specified on the drawings. Where the circuits are supplied from a common feed, two outlets shall form a twin unit in a common box. The earthing terminal of every socket outlet shall be connected to the earth continuity conductor of the final sub-circuit by an appropriately sized insulated copper conductor. Unless otherwise stated they shall be mounted at 300mm above the finished floor level.

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FUSED CONNECTION UNITS

A. GENERAL

All fused connection units shall be 13 amps. with fuse and neon indicator lamp. Boxes shall be flush type with white or ivory cover plates and shall be switched type unless otherwise specified on the drawings.

B. FUSES

All fused connection units shall be fitted with 12 amp. fuses, unless otherwise specified.

C. **LABELLING**

The front plate of each fused connection shall, unless otherwise specified be engraved with the name of the appliance connected to it.

LIGHTING SWITCHES

D. **TYPE**

Lighting switches shall be of the all-insulated rocker-operating plate-switch type to B.S.3676 of ample rating. Switch inserts shall be white, set in white or ivory cover plates.

Switches controlling points in bathroom shall be placed outside the bathroom or consist of a ceiling switch operated by a non-conducting cord, as specified switches mounted outdoors shall be of a weather tight pattern.

Switches shall be one way, two ways or intermediate as specified and where a number of switches are mounted together, they shall be fitted in common box.

Ceiling switches shall be white or ivory semi recessed pattern, and shall only be used where specified. Pull cords shall be fitted with shock absorbing springs.

STREET LIGHTING

E. **KENYA POWER AND LIGHTING SUPPLY**

The electrical supply shall be derived from Kenya Power and Lighting Company Limited at 240 volts x single phase 50HZ.

The electrical Contractor shall submit commencement and completion certificate and application for electrical supply to Kenya Power and Lighting Company Limited and make all the arrangements for the supply to each control pillar.

Provisional sum is allowed in the Bill for the Kenya Power and Lighting Company Limited's service line charges.

The electrical Contractor shall allow for all the necessary attendance to Kenya Power and Lighting Company Limited's work.

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A. **STREET LIGHTING COLUMNS**

Street lighting columns shall be steel columns conforming to B.S.1940/1952 having amounting height of 6.00 metres and shall be as shown on the drawings. The columns shall be installed at a minimum depth of 825mm in the ground on a 75mm thick concrete foundation.

After manufacture, and before erection the columns shall be treated with an approved mordant solution which shall be washed off and the whole allowed to dry. Thereafter the columns shall be painted with one coat of leylac enamel and two coats of gloss paint to an approved colour.

B. **LANTERNS**

Lanterns shall be of the completely enclosed type with antivandal bowl designed for side entry mounting on brackets with a 37mm diameter plain tube. They shall be capable of accommodating one single 125 watt M.B.F./U lamp 3-slot lamp holder connected with heat resisting cable. The lanterns shall be of semi cut-off type with light output ratio not less than 70% and with incorporated control gear, complete with lamp. The lantern shall be as 'SIEMENS' Cat No.5NA 383 or equivalent approved by the City Engineer and the Consulting Engineer. If any alternative make is to be used the details shall be given at the time of submission of tenders.

C. CABLES

Polyvinyl chloride armoured copper conductors cables shall be 250/440 volt grade confirming to B.S.3346/61.

4mm² x 2-core, 3-core P.V.C. wapvc cables shall be used for street lighting installation as indicated on the drawings.

All cables shall be terminated with brass glands of suitable size to maintain proper earth continuity throughout the system.

D. DUCTS

Ducts for road crossing shall be concrete pipes joined in an approved manner, with all internal diameter of not less than 100mm. The ducts shall be laid at least 0.5metres below the finished road level on a compacted bed of concrete mix 1:3:6 and at least 150mm concrete surround.

E. CONTROL PILLAR

The control pillar shall be metal pillar conforming to drawings.

The control pillar shall be erected on 300mm thick bed of concrete mix 1:2:4 and a minimum of 225mm above ground level in the position indicated on the drawings. The control pillar shall be complete with time switch, switch-gear, cutouts, earth leakage current operated circuit breakers and all associated wiring. The control pillar shall be adequately earthed.

A. SYSTEM OF WIRING

Cables shall be 4mm² x 2-core, 2-core pvc laid with a layer of soft sand underneath and over in a trench 500mm deep along the road approximately 600mm deep across the road and approximately 600mm away from the road kerbs. The loop-in and loop-out arrangement shall be through a cut-out mounted in pole windows. Galvanised armoured wires shall be properly earthed and to maintain earth continuity earth clips and connectors to be used. From the cut-out to the lantern 1.5m² pvc insulated and sheathed twin and earth cables shall be used protected by 5A cartridge fuse. The lantern shall be earthed separately with earthwire taken from the main point. Cables crossing the road shall be laid in ducts previously specified. The cables laid in trench shall be protected with "HATARI" cable tiles.

No underground joints will be allowed.

B. EARTHING

All poles, lanterns and other metal parts shall be properly earthed. Electrical and mechanical continuity shall be pre-served throughout the whole systems from the control pillar to the remotest pole and the earth resistance must be efficiently earthed through earth electrodes by means of substantial copper clamps secured by non-rusting bolts. The lead must be visible and adequately protected. No earthing lead shall be less than 6mm² twin with earth wire may be used.

C. EARTH LEAKAGE CIRCUIT BREAKER

The earth leakage circuit breaker shall be current operated as manufactured by 'CRABTREE' Cat No.13030/1 with over-current and short circuit protection and shall conform to B.S.4293.68 rated at 240 volts 50HZ alternating current.

D. CONSUMER UNITS

These shall be surface mounted 6-way SPN MCB consumer unit as manufactured by 'CRABTREE' Cat No.206/1 or equivalent with MCB ratings as shown on the drawing. The minimum fixing position height above floor level for the units shall be 1.8 metres.

E. TESTING

The installation when complete shall pass the following tests:-

- a) Insulation resistance between lines and line/neutral.
- b) Insulation resistant between line and earth and neutral and earth.
- c) Earth continuity resistance including all fittings.
- d) Polarity check. Contractor shall submit a completion certificate to Kenya Power and Lighting Company Limited for electricity connection.

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A. RESISTANCE

Test on earth electrode when carried out with earth (null balance) at any point within the network must not exceed 3ohms.

B. MAINTENANCE

The Contractor shall be responsible for maintenance of equipment for 12 months after substantial completion. He should allow his price for replacement of defective or burnt out lamps and other equipment.

All works to be carried out to the satisfaction of the Engineer. The Contractor shall be required to carry out all adjustments and improvements to meet the Architect's requirements at his own cost.

BILL NO. 03
PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS
	<p style="text-align: center;"><u>BILL NO. 03</u></p> <p style="text-align: center;"><u>PARTICULAR PRELIMINARIES</u></p>	
A	<p>PRICING ITEMS FOR PARTICULAR PRELIMINARIES</p> <p>Prices shall be inserted against items of 'preliminaries' in the tenderer's priced Bill of Quantities. The Contractor is advised to read and understand all preliminaries. Preliminary items not priced shall be deemed to have been included in the rates of items in the Bill of Quantities.</p>	
B	<p>DESCRIPTION OF THE SCOPE OF WORKS.</p> <p>The works to be carried out under this Contract involve Office Modernization and Creation of Work Stations and includes, Fire Safety, Occupational and Health Services, Electrical and Mechanical Installations and Exterior Refurbishment of Central Bank of Kenya Building and health services at Marshal House. Some internal demolition work will be necessary. The Tenderer to note that this is a renovation project where operations of Central Bank of Kenya should and will continue as renovation work is in progress. The tenderer to further note Central Bank of Kenya is a security installation where all security matters shall be obeyed and adhered to and all those working therein shall be vetted and shall work there to the description of Central Bank of Kenya.</p>	
C	<p>MEASUREMENTS</p> <p>In the event of discrepancy between the Bill of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any Contract documents shall immediately be reported to the Project Manager in accordance with Clause NO. 22 of the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 22 of the said Conditions.</p>	
D	<p>LOCATION OF THE SITE</p> <p>The site is located at Central Bank of Kenya, (Headquarter), and Marshals House along, Haile Sellasie and Harambee Avenue respectively. The tenderer is advised to visit the site to familiarize him/her self with its nature and position as no claim will be entertained for lack of knowledge in this respect.</p>	
E	<p>CLEARING AWAY</p> <p>The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate and upon completion of the works, remove and clear away all plants, equipment, rubbish, unused materials, and stains and leave in a clean tidy state to the satisfaction of the Project Manager.</p> <p>The whole of the works shall be delivered up clean, complete and perfect in condition in every respect to the satisfaction of the Project Manager.</p>	
	TOTAL CARRIED TO COLLECTION	

ITEM	DESCRIPTION	KSHS
A	<p>CLAIMS</p> <p>It shall be a condition of this Contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and/or expenses due to any of the Contract Conditions, or by any other reason whatsoever, he shall present such claim or intent to claim notice to the Project Manager within the Contract period and in accordance with Conditions of Contract Clauses No. 19 and No. 24. No claim shall be entertained upon the expiry of the said Contract period.</p>	
B	<p>PAYMENTS</p> <p>Payment will be done on monthly basis by the Project Manager on application by the Contractor. All payments shall be made by Client Department upon certification by the Project Manager. Subcontractors shall be paid through the Main Contractor. The Main Contractor must confirm that they have paid subcontractors to be legible for subsequent certificates. The Project Manager reserves the right to pay subcontractors directly.</p>	
C	<p>PREVENTION OF ACCIDENTS , DAMAGE OR LOSS</p> <p>The Contractor is notified that the works are to be carried out on a fairly busy site where the Client is going on with other normal activities. He/she is therefore instructed to take reasonable care in the execution of the works so as to prevent accidents, damage or loss and disruption of normal activities being carried out by the Client. The Contractor is also notified Central Bank of Kenya is a security installations where all persons working therein will be vetted before admittance. Further, there may be restricted time operations without prior notice to the Contractor .The Contractor shall allow in his rates any expenses he deems necessary by taking such care within the site. NO claim will be entertained for failure to allow for this item.</p>	
D	<p>WORKING CONDITIONS</p> <p>The Contractor shall allow in his rates for any interference that he may encounter in the course of execution of the works for the Client may in some cases ask for stoppage of the works until some activities within the site are completed. The Contractor shall allow in his rates any expenses he deems necessary for such interference encounters.</p>	
E	<p>NO LABOUR CAMPS</p> <p>The Contractor shall not be allowed to house labour on site. Allow for transporting workers to and from site during the Contact Period.</p>	
F	<p>STORAGE OF MATERIALS.</p> <p>The Contractor is notified that there is no storage space on site and they shall procure material storage space elsewhere and in premises nearby the site for the entire construction period. The Contractor shall allow for the cost of the Procurement of storage space in their tender rates and no claim will be admitted for the failure to do so.</p>	
G	<p>PRICING NOTES</p>	

ITEM	DESCRIPTION	KSHS
	The tenderer shall include for all cost in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract. The tenderer to note that this is a tender whereby the Main Contractor forms a consortia with relevant subcontractors in a regulated and controlled domestic arrangement of contract.	
	TOTAL CARRIED TO COLLECTION	

ITEM	DESCRIPTION	KSHS
A	<p>SECURITY OF THE WORKS</p> <p>The Contractor shall allow for providing adequate security for the works and workers during the Contract. No claim will be entertained for lack of enough security in this respect</p>	
B	<p>URGENCY OF THE WORKS</p> <p>The Contractor should note that these works are very urgent and must be completed within the agreed contract period.</p>	
C	<p>PAYMENT FOR MATERIALS ON SITE</p> <p>All materials for incorporation in the works must be in the site stores before they are considered for payment, unless specifically exempted by the Project Manager. This is to include materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.</p> <p>Payment of Furniture related materials on site shall only be made on furniture that is completely assembled on site.</p>	
D	<p>EXISTING SERVICES</p> <p>Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the and he/she shall make whatever provisions that may be required by the authority for support, maintenance and protection of such services.</p>	
E	<p>PERFORMANCE BOND</p> <p>A performance bond in the form of unconditional bank guarantee will be required is 5% of the bid price in accordance with clause No. 28 of the Conditions of Contract on award of contract. No payment on account for the works executed will be made to the Contractor until he has submitted the Performance Bond to the Project Manager duly signed, sealed and stamped from an approved bank.</p>	
F	<p>TENDER DOCUMENT</p> <p>Tender documents are listed in the Instruction to Tenderers and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents.</p> <p>Tenders will be opened at the time specified in the letter accompanying these documents. Tenders delivered or received later than the above time will not be opened.</p> <p>The tenderer shall submit one original and one copy of the bid document</p>	
G	<p>BID SECURITY</p> <p>A bid bond of Kshs. 2,000,000.00 (Two million only) in form of Bank Guarantee from a reputable bank or PPOA approved insurance company shall be submitted together with the tender document. Any tender not accompanied by Bid Security stipulated shall automatically be disqualified.</p>	

ITEM	DESCRIPTION	KSHS
	TOTAL CARRIED TO COLLECTION	

ITEM	DESCRIPTION	KSHS
A	<p>VALUE ADDED TAX</p> <p>The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1st September, 1993 which requires payment of VAT on all contracts. The Contractor must therefore add VAT on the Grand Summary Page as shown in the Bills of Quantities.</p>	
B	<p>WITHHOLDING TAX</p> <p>Withholding tax shall be deducted and shall be remitted to the Commissioner of Tax in accordance with the Law through all interim payments.</p>	
C	<p>CONDITIONS AND FORMS OF CONTRACT.</p> <p>The Conditions of Contract and Forms of Contract shall be as Section III and Section VIII of Standard Bidding Document annexed herewith in this Bidding Documents. These Conditions and Forms of Contract are available during working hours at the offices of the Project Manager.</p>	
D	<p>CONTRACT COMPLETION PERIOD</p> <p>The Contract Completion Period and terms of the Conditions of Contract must be strictly adhered to.</p> <p>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.</p> <p>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.</p> <p>MATERIALS' TESTING</p>	
E	Allow a Prime Cost Sum of Kenya Shillings One hundred fifty thousand Only for the testing of materials for the duration of the Contract	150,000.00
F	Include a Percentage Sum for the Contractor's Cost and Profit for the above	%
G	<p>PARTICULARS OF INSERTIONS TO BE MADE IN THE APPENDIX TO CONTRACT AGREEMENT</p> <p>The following are insertions to be made in the appendix to the Contract Agreement.</p> <p>(i) Period of final measurement - 6 Months from practical completion date</p> <p>(ii) Defects Liability Period - 6 Months from practical for building works completion date</p>	

ITEM	DESCRIPTION	KSHS
	TOTAL CARRIED TO COLLECTION	

ITEM	DESCRIPTION	KSHS
	<p>- 12 Months for Civil Works (e.g. Parking area) (Conditions of Contract Clause No. 20)</p> <p>- All equipment to have a minimum of 1 (one) year warranty</p> <p>(iii) Date for Possession "PROJECT MANAGER" - To be agreed with the [Conditions of Contract Clause NO. 14]</p> <p>(iv) Date of Completion - 55 - 70months from date of Possession The bidder to quote for the Construction Period along this guide line. [Conditions of Contract Clause NO. 31].</p> <p>(v) Liquidated and Ascertained Damages Conditions of Contract Clause NO. 27. shall be Kshs. 581,000/= per Calendar week.</p> <p>(vi) Period of issuing Interim Certificates - Monthly [Conditions of Contract Clause No. 23.1]</p> <p>(vii) Period of Honouring Certificates - Twenty eight (28) Days [Conditions Conditions of Contract Clause NO. 23.1]</p> <p>(viii) Percentage of Certified value retained - 10% [Conditions Conditions of Contract Clause NO. 26]</p> <p>(ix) Limit of retention fund - 5% of Contract Sum [Conditions Conditions of Contract Clause NO. 26]</p> <p>(x) Performance Bond ** The Bond required shall be from an approved Bank Guarantee or from PPOA approved Insurance Company and shall be 5% of the Contract Price. [Conditions of Contract Clause NO. 28]</p>	
A	<p>OFFICE FOR THE PROJECT MANAGER</p> <p>The Employer shall provide office for the Project Manager complete with necessary facilities where site meetings shall be held.</p>	
B	<p>NUISANCE</p> <p>The CENTRAL BANK AND HEALTH FACILITIES AT MARSHALL HOUSE shall continue to be operation during the Construction period and Contractor to allow for this in their pricing</p> <p>The Contractor shall not directly or indirectly or otherwise by himself or through his agents cause nuisance to users of the buildings, adjacent building or near the site or any way obstruct on going operation's should he do so he shall be directly responsible for such acts and any costs to compliance with this Clause shall have been deemed to be included in tender rates .</p>	
C	<p>APPENDICES</p> <p>The Appendices to the Bills of Quantities shall be regarded for contract purposes as part of the Bill and shall be read and construed with the appropriate sections of the Bills if contained therein</p>	

ITEM	DESCRIPTION	KSHS
	TOTAL CARRIED TO COLLECTION	
A	<p>SUFFICIENCY OF TENDER</p> <p>The Main Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in the Bills of Quantities which rates and prices shall cover all his obligations under the contract and all matters and things necessary for the proper completion of the works.</p>	
B	<p>NO SUBCONTRACTING OF BUILDING WORKS.</p> <p>Subcontracting of building works will not be admissible under whatsoever circumstances.</p>	

ITEM	DESCRIPTION	KSHS
	TOTAL CARRIED TO COLLECTION	

ITEM	DESCRIPTION	KSHS
	<p><u>BILL NO. 02</u></p> <p><u>COLLECTION</u></p> <p>Brought Forward From Page PP/1</p> <p>Brought Forward From Page PP/2</p> <p>Brought Forward From Page PP/3</p> <p>Brought Forward From Page PP/4</p> <p>Brought Forward From Page PP/5</p> <p>Brought Forward From Page PP/6</p>	

ITEM	DESCRIPTION	KSHS
	<i>TOTAL FOR PARTICULAR PRELIMINARIES CARRIED TO MAIN SUMMARY BUILDERS WORK</i>	

BILL NO. 04
GENERAL PRELIMINARIES

ITEM	DESCRIPTION	KSHS
	<p style="text-align: center;"><u>BILL NO. 04</u></p> <p><u>GENERAL PRELIMINARIES</u></p> <p>A <u>PRICING OF ITEMS OF GENERAL PRELIMINARIES AND PREAMBLES</u></p> <p>Prices shall be inserted against items of preliminaries in the Contractor's priced Bills of Quantities and Specifications.</p> <p>The Contractor shall be deemed to have included in his prices or rates for various items in the Bills of Quantities of Specifications for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.</p> <p>B Throughout these bills, units of measurement and terms are abbreviated and shall be interpreted as follows</p> <p>C.M. Shall mean cubic metre</p> <p>S.M. Shall mean square metre</p> <p>L.M. Shall mean linear metre</p> <p>MM Shall mean Millimeter</p> <p>Kg. Shall mean Kilogramme</p> <p>No. Shall mean Number</p> <p>Prs. Shall mean Pairs</p> <p>B.S. Shall mean the British Standard Specification Published by the British Standards Institution, 2 Park Street, London W.I., England.</p> <p>Ditto Shall mean the whole of the preceding description except as qualified in the description in which it occurs, where it occurs in brackets it shall mean the whole of the proceeding description which is contained within the appropriate brackets.</p> <p>M.S. Shall mean measured separately.</p> <p>a.b.d Shall mean as before described.</p> <p>TOTAL CARRIED TO COLLECTION</p>	

ITEM	DESCRIPTION	KSHS
A	<p><u>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</u></p> <p>Attendance;</p> <p>Clause B19(a) of the Standard Method of Measurement is deleted and the following Clause is substituted:-</p> <p>Attendance on nominated Sub-Contractors shall be given as an item in each case and shall be deemed to include: allowing use of standing scaffolding, mesh rooms, sanitary accommodation and welfare facilities; provision of special scaffolding where necessary, providing space for office accommodation, and for storage of plant and materials; providing light and water for the works; clearing away rubbish; unloading checking providing electric power and removing and replacing duct covers, pipe chasings and the like necessary for the execution and testing of Sub-Contractor's work and being responsible for the accuracy of the same.</p> <p>Fix Only;</p> <p>"Fix Only" Shall mean take and delivery at the nearest Rail Station (unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, distribute to position, hoist and fix only.</p> <p>B THE EMPLOYER</p> <p>The "Employer" is the CENTRAL BANK OF KENYA</p> <p>The term "Employer" and Central Bank of Kenya wherever used in the Contract Document shall be synonymous.</p> <p>C PROJECT MANAGER</p> <p>The term "PM" wherever used in this Bills of Quantities shall be deemed to imply the Project Manager as defined in Conditions of Contract or such person or persons as may be duly authorized to represent him on behalf of the Employer.</p> <p>PROJECT CONSULTANTS:</p> <p>D CONSULTING ARCHITECT.</p> <p>The term "Consulting Architect" shall be deemed to mean " M/S EDON CONSULTANTS INTERNATIONAL LTD OF P.O BOX 19684 - 00202 , NAIROBI.</p> <p>Any instructions, directions, approvals, and correspondence as regards this contract from the Consulting Architects shall be deemed for all purposes in the works as instructions, directions, approvals and correspondence from the Project Manager and shall be carried out appropriately as the actions of the Project Manager.</p> <p>E CONSULTING QUANTITY SURVEYOR.</p> <p>The term "Consulting Quantity Surveyor" shall be deemed to mean "M/S QUANTI - BILL CONSULT OF P.O. BOX 34360 - 00100, NAIROBI. Any instructions, directions, approvals, valuations and correspondence from the Consulting Quantity Surveyors shall be deemed for all contractual purposes in the works to be instructions, directions approvals valuations from the Project Manager and shall be carried out appropriately as the actions of the Project Manager</p> <p>TOTAL CARRIED TO SUMMARY</p>	

ITEM	DESCRIPTION	KSHS
A	<p>SIGN FOR MATERIALS SUPPLIED</p> <p>The Contractor shall be required to sign receipts for all articles and materials supplied by the Project Manager at the time of taking delivery thereof, as having received them in good order and condition, and will thereafter be responsible for any such loss or damage and for replacement of such any loss with articles and/or materials which shall be supplied by the Project Manager at the current market prices including Customs Duty and VAT , all at the Contractors own cost and expenses, to the satisfaction of the PROJECT MANAGER.</p>	
	<p>B STORAGE OF MATERIALS</p> <p>The Contractor is advised the bank will not allow on - site storage of materials for lack of space and the Contractor shall procure storage space elsewhere as detailed in page PP/2 item C. This being a consortia contract, the Main Contractor to allow for the storage facilities for the subcontractors.</p>	
	<p>C SAMPLES</p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the PROJECT MANAGER for his approval until such samples are approved by the PROJECT MANAGER may reject any materials or workmanship not in his opinion not to the approved sample. The PROJECT MANAGER shall arrange for testing of such materials as he/she may at his/her 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 Ministry of Public Works</p> <p>The procedure for submitting samples of materials for testing and the method of marking for identification shall be laid down by the PROJECT MANAGER. The Contractor shall allow in his tender for such samples and tests except for those in connection with nominated subcontractor's work.</p>	
	<p>D GOVERNMENT ACT REGARDING WORK PEOPLE ETC.</p> <p>Allow for complying with Government Acts, order and Regulations in connection with the employment of Labor and other matters related to the execution of the works. In particular, the Contractors attention is drawn to the provisions of the Factory Act of , 1950 and the tenderer must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to insurance, pensions, and holidays for workpeople or so the safety, and welfare of the work people. The Contractor must make himself fully acquainted with current Acts and Regulations, including police regulations regarding movements, housing, security and control of labor, labor camps, passes for transport, etc. It is important that the Contractor, before tendering obtains information regarding all such regulations and/or restrictions which may affect the organization of the works, supply and control of labor, etc, and allow accordingly in his tender. No claim shall be entertained for lack of knowledge in this respect.</p>	
	<p>E SECURITY OF WORKS, ETC.</p> <p>The Contractor shall be entirely responsible for the security of the works, materials, plant, personnel, etc, both his own and subcontractor's and must provide all necessary watching, lighting and precautions necessary to ensure security against theft, loss or damage and the protection of the public.</p>	
	<p>F PUBLIC AND PRIVATE ROADS</p> <p>Maintain as required throughout the execution of the works and make good any damage to Public or Private roads arising from or subsequent upon the execution of the works to the satisfaction of the local and other competent authority and the Project Manager.</p> <p>TOTAL CARRIED TO SUMMARY</p>	

ITEM	DESCRIPTION	KSHS
<p>A</p>	<p>EXISTING PROPERTY</p> <p>The Contractor shall take every precaution to avoid damage to existing property including roads, cables, drains, and other services and he will be held responsible for and shall make good all such damages arising from the execution of this Contract at his own expense and at his own cost to the satisfaction of the Project Manager.</p> <p>D</p> <p>VISIT THE SITE AND EXAMINE DRAWINGS</p> <p>The Contractor is advised to examine the drawings and visit the site location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted him/herself 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 advice shall be entertained.</p> <p>E</p> <p>ACCESS TO SITE.</p> <p>Means of accessing the site shall be agreed with the PROJECT MANAGER prior to commencement of the works and the Contractor must allow for building any necessary temporary access for the transport of materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary gates or any other means of accessing the site. Upon completing the works, the Contractor shall remove any temporary gate and make good and reinstate all works and surfaces disturbed to the satisfaction of the PROJECT MANAGER.</p> <p>F</p> <p>AREA TO BE OCCUPIED BY THE CONTRACTOR</p> <p>The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops etc; shall be defined on site by the PROJECT MANAGER.</p> <p>G</p> <p>WATER AND ELECTRICITY SUPPLY</p> <p>The Contractor shall provide at his own risk all necessary water, electric light and power required for use in the works. The Contractor must make his own arrangement for connection to the nearest suitable water mains and for metering the water used. He must also provide temporary water tank and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the PROJECT MANAGER. The Contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from mains and the Contractor must make his own arrangement for augmenting this supply at his own cost. Nominated Subcontractors are to be made liable for the cost of any water or electric current used and for any installation provided especially for their own use.</p> <p>SANITATION OF THE WORKS</p> <p>A</p> <p>The sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Project Manager, Local Authorities and Labour Department.</p>	
	<p>TOTAL CARRIED TO COLLECTION</p>	

ITEM	DESCRIPTION	KSHS
A	<p>PERFORMANCE BOND.</p> <p>The Contractor shall find and submit in the Form of Tender an APPROVED BANK and who will be willing to be bound to the Central Bank of Kenya in an amount equal to five per cent (5%) of the Contract amount for the due performances of the Contract up to the date of completion as certified by the PROJECT MANAGER and who will when and if called upon, sign a Bond to that effect on the relevant standard form included herein (without the addition of any limitations) on the same day as the Contract Agreement is signed, by the Central Bank of Kenya, and the Contractor. in the event that bank submitted does not sign the Performance Bond by the date the Contract Agreement is signed by the parties for whatsoever reasons, the Contractor shall furnish within seven days another Surety to the approval of the Central Bank of Kenya.</p>	
B	<p>COMMUNICATION FACILITIES</p> <p>The Contractor shall allow for telephone on site and to maintain the same for use by the Project Manager.</p>	
C	<p>NATIONAL INSURANCES AND PENSIONS</p> <p>The Contractor shall allow for making any National Social Security Fund Payments due in respect of work people.</p>	
D	<p>DIRECT CONTRACTS</p> <p>Notwithstanding the foregoing conditions, the Central Bank of Kenya reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum, the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.</p>	
E	<p>PROTECTION OF THE WORKS AND PERSONS.</p> <p>The Contractor shall allow for the protection of the whole of the works contained in the Bills of Quantities, including casing , casing up, temporary roofs, gutters, drains as may be necessary to avoid damage to finished works to the satisfaction of the PROJECT MANAGER and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Government.</p>	
	<p>TOTAL CARRIED TO SUMMARY</p>	

ITEM	DESCRIPTION	KSHS
	<p>From the beginning to the completion of the Works, the same shall be under the entire care and control of the Contractor, who shall take all possible precautions to ensure the safety of all wheeled traffic and pedestrians. The Contractor shall allow for providing all watching, lighting, barriers, covering open trenches, caution warnings and protection of the works including Sub-Contract Works, the protection of the public and his own and Sub-Contractors employees.</p> <p>In the event of any damage or loss occurring to the works or to materials or to any sewers, gullies, drains, paths or other existing works, on site in temporary possession of the Contractor for the purpose of the completion works of this contract, either from the weather, want or proper protection, defects, theft, insufficiency of the works or any other cause whatsoever during the progress of the works, or for any accident or damage to property or persons by reason of the works, the Contractor alone shall be responsible and shall without extra charge, make good all damage and pay all costs incurred.</p> <p>A PRICE FLUCTUATION CLAUSE</p> <p>This is a FIXED PRICE CONTRACT and no fluctuations will be entertained whatsoever in labour, materials or forex.</p> <p>The Contractor to price this tender as a fixed price contract as no fluctuations whatsoever will be permitted and no claim whatsoever will be entertained for failure to so price.</p> <p>B LIABILITY OF DEFECTS</p> <p>Defects, shrinkages, or other faults which are attributed by the PROJECT MANAGER to work executed under this contract shall be made good by the Contractor at their own cost.</p> <p>C GENERAL SPECIFICATION.</p> <p>For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads and Public Works 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 it shall apply.</p> <p>In the event of such conflict, the provision of the General and Particular Preliminaries, Trade Preambles and these Bills of Quantities shall take Precedence.</p>	
	TOTAL CARRIED TO COLLECTION	

ITEM	DESCRIPTION	KSHS
A	INCOMPETENCE	
	The PROJECT MANAGER and his Representatives reserve the right to dismiss any incompetent or negligent workmen from the job and such persons shall not be employed on the work again.	
	B TRIAL PITS IN FOUNDATIONS TO STRUCTURES.	
	The Contractor shall allow before commencing excavation for any foundation works on site for opening up trial pits within the areas of the foundation as directed by the PROJECT MANAGER. Where a trial pit is excavated to a level below the founding level of the structure, it shall be backfilled to that level with approved material or concrete as directed by the PROJECT MANAGER. No claim will be entertained for failure to allow for opening up of trial pits.	
	C DEDUCTIONS FROM MONEY DUE TO THE CONTRACTOR.	
D	The PROJECT MANAGER shall be entitled to deduct any monies which the Contractor shall be liable to pay under the Contract to the Employer from any sum which may become payable to the Contractor hereunder the PROJECT MANAGER in issuing his Certificates as provided in the Payment clause shall have regard to any sums so chargeable against the Contractor. Provided always that this provision shall not affect any other remedy by action at law or otherwise to which the Employer may be entitled for the recovery of such monies.	
	TRADE NAMES Where trade names or manufacturer's catalogue numbers are mentioned in these Bills of Quantities the reference is intended as a guide to the type or article or quality of material required. The Contractor may use any article or material equal in type or quality to those herein described subject to the prior approval of the PROJECT MANAGER and at his absolute discretion. The onus of proof as to equivalent quality will rest with the Contractor whose Tender will be deemed to include for the makes described.	
	TOTAL CARRIED TO COLLECTION	

ITEM	DESCRIPTION	KSHS
A SIGNBOARD	<p>The Contractor shall allow for providing, erecting and maintaining 1No. standard signboard at site or where shown, the sizes, type of construction and lettering of which shall be to the PROJECT MANAGER'S design.</p> <p>The names of the Client, Client's Representatives, Consultants and NCC Approval Number are to be fixed in lettering 50mm high. The board is to be fixed in an elevated position on the site or where indicated by the PROJECT MANAGER. On completion of the works, the notice board shall be removed and making good shall be carried out as necessary.</p>	
B SCAFFOLDING	<p>The Contractor shall allow for providing, erecting and dismantling and removal at completion of all general scaffolding required for the works. The Contractor must allow here on in his rates for providing all special scaffolding required by Domestic Sub-contractors and Nominated Sub-contractors carrying out works for which P.C. sums are included later in these bills.</p>	
C PUBLIC HOLIDAYS	<p>The Contractor shall allow in his programme for the following eleven (11) Public Holidays per calendar year in Kenya, during which the Contractor shall not be permitted to work.</p> <p>New Year's Day (1st January)</p> <p>Good Friday</p> <p>Easter Monday</p> <p>Labour Day (1st May)</p> <p>Madaraka Day (1st June)</p> <p>Idd-ul-Fitr</p> <p>Heroes Day (20th October)</p> <p>Jamhuri Day (12th December)</p> <p>Christmas Day (25th December)</p> <p>Boxing Day (26th December)</p>	
	TOTAL CARRIED TO COLLECTION	

ITEM	DESCRIPTION	KSHS
	<p>The Contractor should also allow per calendar year for a further two (2) unspecified public holidays which may be announced by the Government of Kenya without prior notification, and during which the Contractor shall not be permitted to work.</p> <p>No claim shall be entertained either monetary or extension of time for failure to allow for Public Holidays.</p> <p>A VALUATION OF LUMP SUM PRELIMINARY COSTS</p> <p>Lump sums entered in these Bills of Quantities against any items will be included in appropriate Valuations according to reasonable assessment of actual costs involved in the item. Any balance between this assessment and the actual sum entered in the Bills of Quantities will be included in subsequent Valuations as monthly installments over the balance of the Contract Period. Preliminary items must be in accordance with actual costs and loading may cause disqualification.</p> <p>B WORK TO BE OPENED UP AT THE REQUEST OF THE PROJECT MANAGER.</p> <p>The Contractor shall at the request of the PROJECT MANAGER and or Project Manager's Representative within such time as the Project Manager shall name, open for inspection any work covered up, and should the Contractor refuse or neglect to comply with such request, the Project Manager may employ workmen other than those employed by the Contractor to open up the same.</p> <p>If the said work has been covered up in contravention of the Architect's instructions or if, on being opened up, it be found not in accordance with the Drawings or the expenses of opening and covering it up against whether done by the Contractor or by the PROJECT MANAGER , shall be borne by and be recoverable from the Contractor or may be deducted from any monies due to the Contractor. If the work has not been covered up in contravention of such instructions and be found in accordance with the said Drawings and Bills of Quantities, then the expenses aforesaid shall be borne by the Employer and be added to the Contract sum; provided always that in the case of foundations or of any other urgent work so opened up and requiring immediate attention, the PROJECT MANAGER shall, within a reasonable time after the work has been opened, make or cause to be made the inspection thereof, and at the expiration of such time, if such inspection shall not have been made the Contractor may cover up again for inspection except at the expense of the Employer.</p> <p>TOTAL CARRIED TO COLLECTION</p>	

ITEM	DESCRIPTION	KSHS
A	<p>PROGRESS CHART.</p> <p>The Contractor shall provide within two weeks of Possession of Site and in Agreement with the PROJECT MANAGER a Progress Chart for the whole of the works including the works of Nominated Subcontractors; one copy to be handed to the PROJECT MANAGER and a further copy to be retained on site. Progress to be recorded and chart to be amended as necessary as the work proceeds.</p>	
	<p>PRIME COST OR P.C. SUMS.</p> <p>The term "Prime Cost or P.C. Sum" whenever used in these Bills of Quantities shall be expended upon the authority of the Project Manager.</p>	
	<p>ADJUSTMENT OF P.C. SUMS.</p> <p>In the final account, all P.C. Sums shall be deducted and the amount properly expended upon the PROJECT MANAGER'S order in respect of each of them added to the Contract Sum .The Contractor shall produce to the PROJECT MANAGER such quotations, invoices or bills, properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of attendance (as previously described) following P.C. Sums shall be adjusted to the physical extent of the work executed (not pro-rata to the amount paid) and shall apply even though the Contractors Priced Bills of Quantities shows a percentage in the rate column in respect of them.</p> <p>Should the Contractor be permitted to tender and his tender be accepted of any work for which a P.C. Sum is included in the Bills of Quantities profit and attendance will be allowed as it would be if the work were executed by a Nominated Subcontractor.</p>	
	<p>ADJUSTMENT OF PROVISIONAL SUMS</p> <p>In the final account all Provisional Sums shall be deducted and the amount properly executed in respect of them upon the PROJECT MANAGER's order added to the Contract Sum. Such works shall be valued as described for Variations in Clause No.22 of the Conditions of Contract, but the value of such work or articles for the work to be supplied by a Nominated Subcontractor, the value of such work or article to be supplied by a Nominated Supplier, the value of such work or article shall be treated as a P.C Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>	
	<p>NOMINATED SUB-CONTRACTORS.</p> <p>When any work is ordered by the Project Manager to be executed by Nominated Subcontractors, the Contractor shall enter into Sub - contracts as described in Clause NO. 08 of the Conditions of Contract and shall thereafter be responsible for such Sub - contractors in every respect. unless otherwise described the Contractors is to provide for such Sub - contractors any or all of the facilities described in these, Preliminaries. The Contractor should price for these within the Nominated Sub - Contractors work concerned in the P.C. Sums under the description "Add for Attendance" to include both Attendance and any Special Attendance that may be necessary.</p>	
	<p>DIRECT CONTRACTS</p> <p>Notwithstanding the foregoing conditions, the Employer reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.</p>	
	<p>TOTAL CARRIED TO COLLECTION</p>	

ITEM	DESCRIPTION	KSHS
A	<p>PAYMENTS TO DOMESTIC SUBCONTRACTORS.</p> <p>The Contractor shall be fully responsible for paying his Domestic Sub - Contractors but the Employer reserves the right in very exceptional circumstances to make such payments direct in the interest of the project where completion thereof might be jeopardized by any dispute between the Contractor and any of his domestic sub - contractors.</p>	
	<p>B ATTENDANCE UPON OTHER TRADESMEN, ETC.</p> <p>The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or any other persons employed for the execution of any work not included in this Contract every facility for carrying out the work and also for use in his ordinary scaffolding. The Contractor, however, shall perform such carting 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.</p>	
	<p>C INSURANCE</p> <p>The Contractor shall insure as required in accordance with Clause NO. 30.3 of the Conditions of Contract. No payment on account in respect of the works shall be made to the Contractor unless he/she has satisfied the PROJECT MANAGER either by production of an Insurance Policy certificate that the foregoing Insurance Clauses have been complied within 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 receipted premium renewals for the PROJECT MANAGER's inspection.</p> <p>The contractor shall allow for 9% of value of work over and above the value of work to cover professional fees for insurance purposes only.</p> <p>All Insurance Policies must have the interest of Central Bank of Kenya endorsed in them.</p>	
	<p>D PROVISIONAL WORK</p> <p>All work described as "Provisional" in these Bills of Quantities is subject to re-measurement 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 be left uncovered for a reasonable period of time to enable all measurements needed 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/she shall if the PROJECT MANAGER so directs uncover the work to enable all measurements to be taken afterwards reinstate at his own expense.</p>	
	<p>E ALTERATION TO BILLS, PRICING, ETC.</p> <p>Any unauthorized alteration or qualification made to the text of the Bills of Quantities may cause to Tender to be disqualified and in any case be ignored. The Contractor shall be deemed to have made allowance in his/her 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 prices of each item before they will be accepted.</p>	
	<p>F BLASTING OPERATIONS</p> <p>Blasting shall Not be permitted.</p> <p>TOTAL CARRIED TO COLLECTION</p>	

ITEM	DESCRIPTION	KSHS
	<p>MATERIALS ARISING FROM EXCAVATIONS</p> <p>A Materials of any kind obtained from excavations shall be the property of the Central Bank of Kenya. Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution for materials which the Contractor will otherwise have had to supply with the written permission of the PROJECT MANAGER. Should such permission be given, the Contractor shall make due allowance for materials so used at a price to be agreed.</p> <p>PROTECTION OF THE WORKS</p> <p>B Provide protection of the whole of the works contained in the Bills of Quantities, including casing, casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the PROJECT MANAGER and remove such protection when no longer required and make good any damage which nevertheless have been done at completion free of cost to the to Government.</p> <p>C WORKS TO BE DELIVERED UP CLEAN</p> <p>Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metal work and leave the whole of the buildings water tight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER.</p> <p>D TRAINING LEVY</p> <p>The Contractor's attention is drawn to legal notice No. 237 of October, 1971 which requires payment by Contractor of a Training levy at the rate of 1/4% of the Contract Sum on all Contracts of more than Kshs. 500,000.00 in value.</p> <p>E MATERIALS ON SITE</p> <p>All materials for incorporation into the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the PROJECT MANAGER. This includes the materials of the Main Contractor, Nominated Subcontractors and Nominated Suppliers.</p> <p>F HOARDING</p> <p>The Contractor shall enclose the site or part of the works under construction with a hoarding 2400mm high consisting of iron sheets on 100x50mm timber posts firmly secured at 1800mm centers with two 75x50mm timber rails. The Contractor is in addition required to take precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on the site.</p> <p>G NETTING ENVELOPE OF THE BUILDING.</p> <p>While working on the building envelope the Contractor shall provide for protective netting. No claim will be admitted upon failure to allow for hoarding and envelope netting as described.</p> <p>TOTAL CARRIED TO COLLECTION</p>	

ITEM	DESCRIPTION	KSHS
A	<p>CONTRACTOR'S SUPERINTENDENCE/ SITE AGENT</p> <p>The Contractor shall constantly keep on the works a literate English and Kiswahili speaking Agent 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.</p> <p>QUARRIES AND BORROW PITS, STOCKPILE AND SPOIL AREAS</p> <p>The Contractor shall be responsible for the leasing or renting of, and compensation for all land required for quarries, borrow pits, dump site, spoil and stockpile areas and access thereto. No claims whatsoever shall be entertained for failure to allow pricing on this item at all.</p> <p>KENYA BUREAU OF STANDARD COMPLIANCE</p> <p>The Contractor shall be KEBS compliance by meeting the relevant Kenya Bureau of Standards statutory levies in accordance with the law.</p> <p>LOCAL AUTHORITIES STATUROTY REQUIREMENTS.</p> <p>The tenderer shall included in their rates any Local Authority Charges e.g. Licenses, Cess, Parking Fee Hoarding Licenses, Vehicular toll charges, dumping licences and sites etc, as these will not be paid for separately.</p> <p>SAFETY AND HEALTH REGULATIONS.</p> <p>The Contractor shall provide for health and safety officer and comply with safety and health regulations in accordance with Industrial and Other Places of Work safety and Health Regulation Act.</p> <p>The Contractor shall allow for installing clearly visible "<i>warning sign</i>" and "<i>Warning Tapes</i>" as part of security and safety management.</p> <p>The Contractor shall allows for safety gear for workers in accordance with this Clause e.g. identification badge, helmet, grooves etc.</p> <p>PRE - TENDER SITE VISIT AND STATUS INSPECTION.</p> <p>The Contractor is adviced to visit the site before tender to appraise themselves of accessibility, restrictions, security controls, status conditions, environment of work delivery and any difficult variables. No claims will be accepted for failure to have acquainted themselves with the site and the environment in general.</p> <p>Central Bank of Kenya reserves the right to accept or reject any (or all) bids without any obligations to give reasons for so doing.</p> <p>TOTAL CARRIED TO COLLECTION</p>	

ITEM	DESCRIPTION	KSHS
	<p style="text-align: center;"><u>BILL NO. 03</u></p> <p style="text-align: center;"><u>COLLECTION</u></p> <p style="text-align: center;">Brought Forward From Page GP/ 01</p> <p style="text-align: center;">Brought Forward From Page GP/ 02</p> <p style="text-align: center;">Brought Forward From Page GP/ 03</p> <p style="text-align: center;">Brought Forward From Page GP/ 04</p> <p style="text-align: center;">Brought Forward From Page GP/ 05</p> <p style="text-align: center;">Brought Forward From Page GP/ 06</p> <p style="text-align: center;">Brought Forward From Page GP/ 07</p> <p style="text-align: center;">Brought Forward From Page GP/ 08</p> <p style="text-align: center;">Brought Forward From Page GP/ 09</p> <p style="text-align: center;">Brought Forward From Page GP/ 10</p> <p style="text-align: center;">Brought Forward From Page GP/ 11</p> <p style="text-align: center;">Brought Forward From Page GP/ 12</p> <p style="text-align: center;">Brought Forward From Page GP/ 13</p> <p style="text-align: center;">Brought Forward From Page GP/ 14</p>	
	<p style="text-align: center;">TOTAL FOR GENERAL PRELIMINARIES CARRIED TO MAIN SUMMARY BUILDERS WORK</p>	

**BILL NO. 05
BUILDERS WORK
(MAIN CONTRACTOR)**

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p align="center"><u>BILL NO. 05</u></p> <p><u>PROPOSED OFFICE MODERNIZATION AND CREATION OF WORK - STATIONS, PHASE III PROJECT FOR CENTRAL BANK OF KENYA, HEADQUARTER, NAIROBI.</u></p> <p><u>BASEMENTS</u></p> <p><u>The following works are to be carried out to the Basement areas.</u></p> <p><u>DEMOLITIONS.</u></p> <p><u>FLOORS.</u></p> <p>A Carefully hack off and remove the existing PVC floor finishes complete with and including existing cement and sand screed and all skirtings, repair, level and prepare the existing surfaces ready to receive new floor finishes (measured separately), and cart away debris from the site measured separately.</p> <p align="right">120</p> <p><u>Supply and fix the following NEW WORKS</u></p> <p><u>WALL PAINTING AND DECORATIONS in first Quality point to CROWN BERGER or other equal and approved to be executed by an approved Subcontractor.</u></p> <p>B Carefully rub to remove loosely adhering paint work, prepare the existing painted surfaces and, apply two coats of plastic emulsion paint to the internal walling to satisfaction of the Architect.</p> <p align="right">294</p>		SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>FLOOR FINISHES</u>				
A	Supply and fix approved 15mm thick Epoxy flooring finish laid in accordance with Manufacturer's Instructions and to the satisfaction of the Architect .	120	SM		
B	10 x 150mm High skirting to match.	56	LM.		
	<u>CEILING PAINTING AND DECORATIONS IN FIRST QUALITY PAINT TO CROWN BERGER OR EQUAL AND APPROVED as before described.</u>				
C	Carefully rub to remove loosely adhering paint work to the existing soffits of slab, prepare the existing painted surfaces and apply two coats of plastic emulsion paint to satisfaction of the Architect.	120	SM		
	TOTAL CARRIED TO COLLECTION				
	<u>COLLECTION</u>				
	Brought forward from page 01				
	Brought forward from above.				
	TOTAL FOR BASEMENT CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>GROUND FLOOR</u></p> <p><u>The following works are to be carried out to the Ground Floor areas.</u></p> <p><u>DEMOLITION.</u></p> <p><u>EXISTING LOBBY.</u></p>				
A	Supply and fix protective and access management hoarding at the existing entrance lobby. Hoarding to be of suitable materials to Architect's approval and to be painted three coats gloss of paint on both sides; Allow for removing the hoarding after completion of work and make good finishes (The tenderer is advised to assess the area on site).	1	Item		
B	Carefully demolish the existing 200mm thick masonry wall and cart away the debris from site as directed and make good the floor finish where wall is removed to match existing.	20	SM		
C	Carefully remove the existing double leave glass door size 1800 x 2400mm high with and including the framing and cart away from the site as directed and make good finish to match existing.	1	NO		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>PARKING</u>				
A	Carefully chisel and strip the existing tarmack to parking cart away the debris from site as directed and prepare the surface to receive new paving blocks (measured separately).	91	SM		
	<u>RECEPTION AREA.</u>				
B	Carefully demolish the existing granite top reception counter approximately 6000 x 600 x 900mm high, cart away the debris from site as directed and prepare make good the floors to receive new floor finish (measured separately).	1	Item		
C	Carefully hack off and remove existing PVC floor finishes complete with and including existing cement and sand screed and all skirtings, repair, prepare and level the surface to receive new floor finishes (measured separately), and cart away debris from site as directed	29	SM		
	<u>NEW WORKS.</u>				
	<u>ENTRANCE CANOPY.</u>				
	<u>EXISTING COLUMN AND R.C. SLAB TREATMENT.</u>				
D	Steel wire brush the existing aggregate finished columns and edges of R.C. Slab, air pressure clean and water wash to Architects approval and satisfaction.	43	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	<p><u>EXISTING RENDERED SOFFITS TREATMENT.</u></p> <p>Scrub the rendered soffites of the entrance canopy to remove loosely adhering paint work, prepare the surface and apply two coats emulsion paint to satisfaction of the Architect.</p> <p><u>FLOOR FINISHES.</u></p>	91	SM.		
B	Supply and fix approved granite floor tile 300 x 600 x 10mm thick laid on and including cement sand (1:4) backing screed and pointing in white cement to the satisfaction of the Architect.	63	SM.		
C	10 x 150mm Skirtings to match.	12	LM.		
TOTAL CARRIED TO COLLECTION					

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>POWDER COATED ALUMINIUM FRAMED GLASS PARTITION as Booth Manufacturers or other equal and approved (Note all aluminium herein and after to be golden colour to match existing to maintain CBK colours).</u></p> <p><u>Supply and fix the following powder coated aluminium glazed wall partitions and screens comprising 100 x 50mm aluminium top rail, bottom rail, transome, mullions, frames (including door frames) where applicable complete with aluminium glazing beads as specified in Architect's drawings, fixed to block work or concrete surfaces.</u></p>				
A	Aluminium partitioning to entrance lobby complete with and including 2No. Doors size 1800 x 2400mm high and 900 x 2400mm high respectively, fixed panels glazed and including in 10mm laminated glass with 4No. 300mm narrow band type sand blast films (Doors to be complete with all necessary ironmongery) to the satisfaction of the Architect.	56	SM.		
	<p><u>LIFT SHAFT.</u></p> <p><u>VIBRATED REINFORCED CONCRETE (GRADE 25) IN CONSTRAINED SPACE TO :</u></p>				
B	Walls of lift shaft, floor and enclosing top slabs (Measured overall in cubic).	50	CM		
	<u>SAWN FORM WORK DITTO TO:-</u>				
C	Sides of lift shaft walls.	470	SM		
D	Suspended enclosing slab.	8	SM		
E	Edges of slabs 150 - 225mm girth.	22	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>HIGH TENSILE SQUARE TWISTED STEEL BAR REINFORCEMENT DITTO to B.S 4461 and K.S. 02 - 22: 1976.</u>				
A	Assorted reinforcement square bars as instructed.	7500	KG		
	<u>The whole of the following work is to be executed by an approved subcontractor:-</u>				
B	Prepare and apply one undercoat and two finishing coat plastic emulsion paints to the walls of the lift shaft as before described.	470	SM		
C	Ditto to enclosing floor slab.	15	SM		
	<u>TREATMENT TO EXISTING EXTERNAL WALL.</u>				
D	Carefully wire brush existing aggregate finished external wall including air pressure cleaning and water wash to approval of the Architect	126	SM		
E	Ditto the existing parapet walling.	390	SM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>PARKING PAVING BLOCKS</u>				
A	Supply and fix 60mm Thick medium duty Parking paving blocks to Bamburi or other equal and approved Manufacturer laid onto existing floor slab including the necessary sand bed to manufacturer's instruction and including the necessary compaction with minimum strength of 45N/mm ² laid to satisfaction of the Architect.	91	SM		
	<u>EXISTING LIFT SHAFT.</u>				
	<u>EXTERNAL PAINTING AND DECORATIONS as before described:-</u>				
B	Scrub external surfaces to existing concrete lift shaft walls to remove loosely adhering paint work, prepare the surface and apply two coats emulsion paint to the shaft walls to satisfaction of the Architect (measured through flutting folds).	90	SM		
	<u>EXTERNAL CONCRETE COLUMN AND BEAM TREATMENT.</u>				
C	Steel wire brush the existing bush hammered aggregate finished columns and beams, air pressure clean and water wash to Architect's approval and satisfaction.	936	SM		
D	Ditto to Beams.	191	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>WALL PAINTING.</u>				
A	Rub to peel off existing loosely adhering paint and prepare the existing painted surfaces and apply two coats emulsion paint to the internal walling to satisfaction of the Architect.	170	SM		
	<u>EXISTING RENDERED EXTERNAL SOFFITS TREATMENT</u>				
B	Scrub the rendered soffits to remove loosely adhering paint work, prepare the surfaces and apply two coats emulsion paint to satisfaction of the Architect.	2033	SM		
	<u>THE FOLLOWING IN PLANTER.</u>				
C	Supply and fix 125 x 100mm Precast concrete (Grade 20) splayed Kerb laid upto 650mm high laid on and including 350 x 100 thick plain concrete (1:3:6 - 8mm aggregates) foundation and haunching at back on one side jointed in cement and sand mortar (1:3) and including all necessary excavations and formwork to satisfaction of the Architect.	310	LM.		
D	Carefully cut and strip existing paving slabs and cart away debris from site	308	SM		
E	Supply and fix 200mm thick approved Random field stone/ river stone laid to tapering design to 150mm thick 650mm high including jointing in coloured cement and sand mortar (1:3) to Architect detail and approval.	201	SM		
F	Prepare the ground by digging, manure the soil, supply, plant and maintain suitable approved grass including watering as directed until well established.	308	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>GROUND FLOOR.</u></p> <p><u>COLLECTION</u></p> <p>BROUGHT FORWARD FROM PAGE 03</p> <p>BROUGHT FORWARD FROM PAGE 04</p> <p>BROUGHT FORWARD FROM PAGE 05</p> <p>BROUGHT FORWARD FROM PAGE 06</p> <p>BROUGHT FORWARD FROM PAGE 07</p> <p>BROUGHT FORWARD FROM PAGE 08</p> <p>BROUGHT FORWARD FROM PAGE 09</p>				
	TOTAL FOR GROUND FLOOR CARRIED TO SUMMARY.				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p style="text-align: center;"><u>FIRST FLOOR</u></p> <p><u>The following work is to be carried out in First Floor.</u></p> <p><u>DEMOLITION.</u></p> <p><u>CARPARK.</u></p> <p>A Carefully chisel and strip the car park of existing 3 layers of tarmack overall approximately average 100mm thick and, cart away debris from the site as directed repair and prepare the floor surface to receive New paving block (measured separately).</p> <p>B Cut groove into parapet walling and make good after tacking in "Vandex water proofing membrane skirting (measured separately).</p> <p>C Provide labour and materials and prepare areas around fulbora water outlets to receive Vandex water proofing (measured separately).</p> <p><u>Splash area.</u></p> <p>D Carefully demolish the existing 3800mm x 1900mm splash area complete with 200mm thick masonry wall, sink, water tap with and including other plumbing pipe work, drainage fittings, and accessories and cart away debris from the site as directed and make good the concrete floor, wall surfaces, and necessary pipe plugging.</p>	2152	SM		
		142	LM.		
		7	NO.		
		1	Item		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>WALL.</u>				
A	Carefully demolish the existing 200mm thick wall to create room for more car park, cart away debris from site as directed, repair and make good the concrete floor surface ready to receive new finish.	24	SM		
	<u>The following in NEW WORKS:</u>				
	<u>The following in WATER PROOFING TO CAR PARK to be executed by an approved registered water proofing Subcontractor:</u>				
B	Prepare and apply "Vandex super" or other equal and approved water proofing laid and installed strictly to manufacturer's instructions ready to receive epoxy screed (measured separately) with Anti leak guarantee certificate of not less than 10years (measured nett - allow for side and end laps of minimum 150mm).	2,152	SM		
C	Ditto 450mm girth "Vandex super" skirting including tacking into groove and creating fillet water proof junction at bottom of skirting.	142	LM.		
D	Extra over "Vandex super" for 450mm girth water channel treatment.	70	LM.		
E	Extra over "Vandex super" for 300mm diameter fulbora outlet treatment.	7	NO.		
F	Prepare and apply three coats of external quality paint work to exposed surfaces of "Vandex super" skirting 200 - 300mm girth.	36	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>CARPARK EPOXY SCREED FINISH.</u>				
A	Prepare "Vandex super" water proof surface (measured separately) and apply epoxy screed (minimum) 6mm thick as Ivory 318/20 or other equal and approved applied in accordance with manufacturer's instructions to the satisfaction of the Architect.	2152	SM		
B	60 x 200mm High epoxy skirtings to match ditto.	142	LM.		
	<u>COLUMN CLADDING.</u>				
C	Scrub, make rough and prepare existing column to receive stone cladding and supply and fix 25mm thick smooth, machine cut mazeras stone cladding in 200mm and 100mm high in alternating course pattern to approval of the Architect.	302	SM		
D	Carefully prepare the existing column (within the parking area) and supply and fix 1100mm high steel protective edging comprising of 50 x 50 x 3mm mild steel angle edge fitted to all the four edges to details including plugging, fishtailing morticing and making good finishes.	28	NO.		
E	Carefully wire brush existing bush hammed aggregate finished column including air pressure cleaning and water wash to approval of the Architect.	1152	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>EXISTING CONCRETE LIFT SHAFT</u>				
	<u>EXTERNAL PAINTING AND DECORATIONS as before described.</u>				
A	Scrub external surfaces to existing concrete lift shaft walls to remove loosely adhering paint work, prepare surface and apply two coats emulsion paint to shaft (measured through flutting folds) to satisfaction of the Architect.	207	SM		
	<u>WALL CLADDING.</u>				
B	Scrub, make rough and prepare the existing 1050mm high parapet walling to receive stone cladding and supply and fix 25mm thick smooth, machine cut mazeras stone cladding in 200mm and 100mm alternating course pattern to approval of the Architect.	586	SM		
	<u>PRECAST CONCRETE COPING.</u>				
C	Scrub, make rough and prepare the existing 200mm thick wall to receive coping and supply and fix 250 x 50mm thick precast concrete coping, twice throated and weathered and laid and jointed in cement and sand (1:3) mortar to the to satisfaction of the Architect.	493	LM.		
	<u>CARPARK CEILING.</u>				
D	Supply and fix suspended 600 x 600mm Hunter Douglas or other equal and approved acoustic ceilings including frame rigid system and approved plugged RHS suspension system: measured over light fittings; including all cutting and trimming around light fitting, columns etc and allowing for and including	2102	SM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	<u>TREATMENT TO EXISTING BEAMS.</u>				
	Wire brush existing aggregate finished beams and air pressure clean and water wash and leave clean to satisfaction of the Architect.	191	SM		
	TOTAL CARRIED TO COLLECTION				
	<u>FIRST FLOOR.</u>				
	<u>COLLECTION.</u>				
	BROUGHT FORWARD FROM PAGE 11				
	BROUGHT FORWARD FROM PAGE 12				
	BROUGHT FORWARD FROM PAGE 13				
	BROUGHT FORWARD FROM PAGE 14				
	BROUGHT FORWARD FROM ABOVE.				
	TOTAL FOR FIRST FLOOR CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>SECOND FLOOR.</u></p> <p><u>The following work is to be carried out in second floor CBK Headquarters.</u></p> <p><u>DEMOLITIONS.</u></p> <p><u>STRAMIT BOARD PARTITIONING</u></p> <p>A Carefully demolish the existing stramit board partitions with and including timber stand frame work and cart away debris from site as directed and make good disturbed floor and wall finishes to match.</p> <p>385 SM</p> <p><u>GLASS PANELS TO STRAMIT BOARD PARTITIONS.</u></p> <p>B Carefully remove the existing 4mm glass panels within the partitions with and including glazing beads and cart away from the site as directed.</p> <p>190 SM</p> <p><u>DOORS TO STRAMIT BOARD PARTITIONS.</u></p> <p><u>Carefully dismantle the following mahogany veneered flush doors with and including its framing, ironmongery and cart away from the site as directed.</u></p> <p>C Doors size 850mm x 2560mm high.</p> <p>22 NO.</p> <p>D Doors size 820mm x 2000mm high.</p> <p>3 NO.</p>				
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>ELECTRICAL INSTALLATION AND FITTINGS</u>				
A	Carefully dismantle including provision of attendance to specialist and remove of all existing ceiling fixed light fittings including 4ft fluorescent tubes, conduits, cables and any other existing electrical accessories and prepare power outlet and wiring to receive new (measured else where) and cart away debris from site as directed.	138	NO.		
	<u>MECHANICAL VENTILATION OUTLET</u>				
B	Carefully dismantle including provision of attendance to specialist and remove all the existing ceiling mounted mechanical ventilation outlets including conduits cables and any other associated accessories and prepare power outlets and wiring to receive new installation (Measured else where) and cart away debris from site as directed.	20	NO.		
	<u>Carefully remove and cart away from site the following old office furniture as directed in readiness for new workstation furniture (measured else where).</u>				
C	Wooden office lockers overall size 1780 x 420 x 970 high in 2 divisions with 4No. Equal compartments.	45	NO.		
D	Office wooden desk overall size 1830 x 970 x 760mm high with 6NO equal 1 drawers.	73	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Ditto overall size 1220 x 770 x 760mm high ditto.	8	NO.		
B	Executive wooden desk overall size 2000 x 1020 x 760mm high.	12	NO.		
C	Circular wooden conference table 1200mm diameter.	5	NO.		
D	Conference wooden table overall size 3640 x 2420 x 750mm high with curved edges.	1	NO.		
E	Ditto overall size 2200 x 1070 x 750mm high.	1	NO.		
F	Assorted executive chairs	200	NO.		
G	Wooden counter overall size 1980 x 920 x 1000mm high.	1	NO.		
H	Steel safes overall size 540 x 800 x 1560mm high.	2	NO.		
I	Ditto overall size 920 x 460 x 1820mm high.	4	NO.		
J	Ditto overall size 620 x 460 x 1320mm high.	31	NO.		
K	Ditto overall size 460 x 920 x 1320mm high.	20	NO.		
L	Ditto overall size 460 x 920 x 2140mm high.	1	NO.		
	<u>FLOOR FINISHES</u>				
M	Carefully hack off and remove the existing PVC floor finishes complete with and including all existing cement sand screed and skirtings, repair, prepare and level the existing surfaces ready to receive new floor finish (measured separately), and cart away the debris from the site as directed.	1253	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Carefully hack off and remove the existing polished brick floor tiles complete with and including existing cement sand and screed all the skirtings, repair, prepare and level the existing surface ready to receive new floor finish (measured separately) and cart away the debris from the site as directed. <u>EXISTING CONCRETE LIFT SHAFT.</u> <u>EXTERANL PAINTING AND DECORATIONS as before described.</u>	77	SM		
B	Scrub external surfaces to existing concrete lift shaft walls to remove loosely adhering paint work, prepare the surface and apply two coats emulsion paint to the shaft (measured through flutting folds) to satisfaction of the Architect. <u>HAND RAILINGS.</u>	114	SM		
C	Carefully remove the existing galvanized mild steel hand railing morticed in concrete complete with, intermediate railings, and ballusters and cart away debris from the site as directed and repair and prepare concrete surface ready to receive new railings (measured separately). <u>CEILING</u>	38	LM.		
D	Carefully remove the existing acoustic suspended ceilings with and including all the ceiling suspension grid system and ceiling hungers as necessary and cart away debris from the site as directed and repair concrete soffits to receive new ceiling system (measured separately) . <u>EXISTING ALLUMINIUM FRAMED GLAZED WINDOWS.</u>	1253	SM		
E	Carefully remove the existing Alluminium framed windows with and including 4mm glasses panels, all the aluminium framing, ironmongery and cart away as directed.	368	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>THE FOLLOWING IN NEW WORKS.</u>				
	<u>FLOOR FINISHES.</u>				
A	Supply and fix granito floor tiles size 600 x 600 x 10mm thick laid on and including cement sand (1:4) screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	1253	SM		
B	10 x 150mm High skirtings to match.	184	LM.		
C	Supply and fix granite floor tile size 300 x 600 x 10mm thick laid on and including cement sand (1:4)screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	77	SM		
D	10 x 150mm High skirtings to match.	76	LM.		
	<u>Carpet.</u>				
E	Ex - Minster heavy duty carpet of approved coloured to Architects specification laid on to the to floor finishes (measured separately) complete with hersian underlay and gripers to Manufacturers installation specifications and to approval of the Architect.	126	SM		
	<u>The following in 3No. typical Signage Unit to Architect details.</u>				
	<u>Veneer finished MDF Board colour to Architect approval.</u>				
E	12mm Thick veneer MDF board fixed onto wall including necessary plugging and priming backs before fixing.	33	SM		
F	25 Thick MDF board to division partitions and shelvings.	134	SM		
G	40 x 40mm Selected cypress bearers and frames.	225	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	150 x 25mm Thick moulded and coved mahogany skirting, fixed all round to the MDF board.	31	LM.		
B	25mm Thick machine cut, and polished sand stone cladding fixed onto the MDF boards (measured separately) in recessed vertical and horizontal joints in coloured cement and sand (1:3) mortar.	16	SM		
C	65 x 25mm Thick MDF board moulded coping with 10mm half round bullnosed edging to approval.	9	LM.		
D	Selected, 100mm thick (average) smooth river stone to approved samples randomly arranged on the flat MDF board surfaces and bedded in coloured cement (1:3) mortar to satisfaction of the Architect.	5	SM		
	<u>PAINTING AND DECORATION as before described:-</u>				
E	Knot, prime, stop and spray paint three coats clear varnish paint to MDF board.	167	SM		
F	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	40	LM.		
	<u>The following in 3No typical tea serving area to Architect's details.</u>				
	<u>Veneers MDF board colour to Architect's approval.</u>				
G	12mm Thick veneer MDF fixed onto wall including all necessary plugging and priming backs before fixing.	43	SM		
H	25mm Thick veneer MDF to division, partition and shelving.	387	SM		
I	40 x 40mm Selected Cypress bearers and frames.	343	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Drawer size 600 x 900 x 300mm deep overall constructed of 25 x 300mm MDF board front, 25 x 900mm sides, 25 x 300mm back, 6mm thick plywood properly housed and glued together including two 30 x 15mm drawer runners fixed to MDF board and forming grooves to the sides of the runner including brass plated approved pull handle (colour of veneer to Architects approval).	24	NO.		
B	25mm Thick door size 700 x 600mm high constructed from veneer finished MDF board hardwood lipped on all edges to match and complete with brass plated piano hinges and pull handles.	24	NO		
C	25mm thick granite top with 10mm half round bullnosed edgings to approved samples.	6	SM		
D	150 x 25mm thick moulded mahogany skirting, coved on one side fixed to the MDF boards.	40	LM.		
E	25mm Thick machine cut, polished sand stone strips fixed on to the MDF boards to the Architect's details as before described.	16	SM		
	<u>PAINTING AND DECORATIONS as before described:-</u>				
F	Knot, prime stop and spray paint three coats of clear varnish paint to MDF board.	330	SM		
G	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	40	LM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>COLOURED POWDER COATED DOUBLE GLAZED ACCOUSTIC ALLUMINIUM WINDOWS.</u></p> <p>A Supply, assemble and fix purpose made standard power coated Alluminium for double glazed windows as Booth or other equal and approved to match existing works complete with all necessary ironmongery, fixing lugs to jambs complete with and including standard hinges catches, bolts, locks handle, stays and fasteners and including two layers of 6mm glazing to match the existing with 20mm Accoustic space in between to Architects details and approval .</p> <p>368 SM</p> <p><u>FRAMELESS GLASS PARTITIONS.</u></p> <p>B Supply and fix frameless glass partitions in 10mm thick laminated glass 3000mm high sand blasted 300mm vertical bands films and fixed to block work or concrete and including necessary fixing accessories and plugging (measured overall all through door openings) and make good finish after testing and leave in perfect working order.</p> <p>250 SM</p> <p>C <u>Extra over</u> frameless glass partitions for 10mm toughened frameless glass door size 900 x 2400mm high including fixing and all necessary ironmongery.</p> <p>13 NO.</p>				
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>POWDER COATED, ALLUMINIUM FRAME GLASS PARTITIONS as before described.</u>				
A	Supply and fix 1500mm high, powder coated, alluminium glazed partitions and screens, comprising 100 x 50mm, alluminium top rail, bottom rail, complete with alluminium glazing beads and including 6mm glass fixed in accordance with manufacturer's instruction and including making good finishes to the satisfaction of the Architect.	7	SM		
	<u>MAHOGANY PARTITIONS</u>				
B	25mm Thick mahogany partitions with and including all the necessary framing, plugging, beaters to Architects satisfaction.	672	SM		
	<u>The following in Executive Acoustic padding.</u>				
C	50 x 25mm Wrot mahogany bearers frame plugged to walls including plugging labour and materials and making good finishes to satisfaction of the Architect.	143	LM.		
D	50mm Thick approved acoustic styropor.	115	SM		
E	Acoustic executive leather cover complete with stiffening buttons to match fixed to styropor (measured separately) and specifications of Acoustic leather material to be as per samples attached and as confirmed with Architect and fixed to Architects satisfaction.	115	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
F	50 x 25mm Moulded and laboured wrot mahogany beading to approved pattern.	143	LM.		
G	Knot, prime and stop and prepare and apply three coat of polyurethane varnish to mahogany beading n.e. 100mm girth.	143	LM		
H	150 x 25mm Thick moulded and laboured mahogany cornice fixed all around to acoustic padding.	48	LM.		
	<u>Stone Cladding.</u>				
F	25mm Thick machine cut, and polished sand stone cladding fixed on to Mahogany partitions (measured separately) in recessed vertical and horizontal joints in coloured cement and sand (1:3) mortar.	48	LM.		
	<u>INTERNAL COLUMN TREATMENT (WITHIN OFFICES).</u>				
G	125 x 25mm Thick solid mahogany T&G cladding, 1500mm high, including the necessary dowelling and plugging to approval.	33	SM		
H	Knot, prime, stop and spray paint three coats of clear polyurethane lacquer to T&G wood surfaces.	33	SM		
I	Carefully scrub to remove loosely adhering paint work prepare and apply two coats silk vinyl emulsion paint to the remaining existing columns heights to satisfaction.	33	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>COLUMN ALONG INTERNAL ATRIUM CORRIDOR.</u>				
A	Make rough and prepare the existing column to receive stone cladding and supply and fix 25mm thick smooth, machine cut sandstone cladding laid and jointed in 200mm and 100mm alternating courses and keyed to pattern in recessed vertical and horizontal joints in coloured cement and sand mortar (1:3) to satisfaction of the Architect to approvals.	48	SM		
	<u>PARAPET WALL ALONG THE CORRIDOR.</u>				
	<u>Cladding.</u>				
B	Make rough and prepare the existing 1050mm high	41	SM		
	<u>PRECAST CONCRETE COPING</u>				
C	Make rough and prepare existing wall to receive coping and supply and fix 250 x 50mm Thick precast concrete coping twice throated and weathered and laid on the walls in cement and sand mortar (1:3) to satisfaction of the Architect.	39	LM		
	<u>THE FOLLOWING IN HANDRAILS.</u>				
D	Supply and fix 400mm High railings constructed of 50mm diameter stainless steel handrails, 20mm diameter stainless steel vertical ballusters and including 3No 20mm diameter stainless steel intermediate rails including morticing and grouting to top of masonry parapet wall at 1000mm centers all to Architect details and approval.	39	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>CEILING FINISHES.</u>				
A	Carefully scrub to remove loosely adhering paint works, clean, prepare and apply three coats plastic emulsion paint to existing soffits of concrete ceiling along the corridors to the satisfaction of the Architect.	86	SM		
B	Supply and fix Suspended 600 x 600mm Armstrong Tatra or other equal and approved acoustic ceilings including frame rigid system and approved plugged suspension system: measured over light fittings; including all cutting and trimming around light fitting, columns etc and allowing for and including trap doors to specifications of the Architect.	1253	SM		
	<u>GYPSUM CEILING BULK HEAD.</u>				
C	12mm Thick Gypsum board ceiling moulded and laboured bulk head with and including all necessary framing and plugging, to Architects specifications.	126	SM		
	<u>PRECAST CONCRETE FINS.</u>				
D	Carefully scrub to remove loosely adhering paintwork clean, prepare and apply two coats emulsion paint to existing concrete fins size 50 x 500 x 3000mm long (measured in areas).	1488	SM		
	<u>CONCRETE BEAMS AT VOID AREA.</u>				
E	Carefully scrubs to remove loosely adhering paintwork clean, prepare and apply mermoran or other equal end approved texture finish, to existing external beams to satisfaction of the Architect	112	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>NEW VIBRATED REINFORCED CONCRETE (GRADE 25) IN CONSTRAINED SPACE TO:-</u>				
A	New 200mm thick slab to new goods lift lobby.	9	SM		
B	Sawn formwork ditto to soffits of slab as before.	9	SM		
C	Assorted high tensile ditto reinforcement bar as before.	350	KG		
D	Extra over labour and materials in preparatory works and making good finishes in connection with construction of new goods lift lobby.	1	ITEM		
E	Granite floor tiles size 300 x 600 x 10mm thick laid on and including cement sand (1:4) backing and pointed in white cement to satisfaction of the Architect.	9	SM		
F	20 x 150mm Thick Skirtings to match.	7	LM.		
	<u>TREATMENT TO EXISTING EXTERNAL COLUMNS AND BEAMS.</u>				
G	Wire brush existing bush hammered aggregate finished column, air pressure cleaned and water wash and leave clean to satisfaction of the Architect.	465	SM		
H	Ditto to Beams.	191	SM		
	<u>CLADDING TO EXISTING COLUMNS</u>				
I	Make rough, prepare the existing column and supply and fix 25mm thick smooth, machine cut sand stone cladding in 200mm and 100mm alternating courses to approvals as before described.	65	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>WALL PAINTING</u>				
A	Scrub, to remove loosely adhering paintwork, clean, prepare and apply two coats emulsion paint to existing wall surfaces as before described.	136	SM		
	<u>DOORS.</u>				
B	50mm Thick solid mahogany door size 900 x 2400mm high comprising 125 x 50mm T&G match boarding panels in 200mm stiles top and bottom frames and glass vision glass opening (glass measured separately) to Architect detail.	29	NO.		
C	Ditto size 800 x 2400mm high ditto.	3	NO.		
	<u>THE FOLLOWING IN WROT MAHOGANY FRAMES AND FINISHINGS.</u>				
D	100 x 50mm Rebated door frames in two labors plugged.	182	LM.		
E	20 x 40mm Architraves with two labours.	182	LM.		
F	20mm Diameter Quadrant beading with one labour.	182	LM.		
	<u>Supply and fix the following ironmongery to timber doors with matching screws.</u>				
G	100mm Brass hinges.	48	PRS.		
H	Three lever 'Union' mortise door lock complete with furniture.	32	NO.		
I	38mm Rubber door stop as 'Union' rawl bolted.	32	NO.		
J	150mm Alluminium barrel bolt.	32	NO.		
K	150mm Pull handle.	32	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>SECOND FLOOR.</u></p> <p>BROUGHT FORWARD FROM PAGE 16</p> <p>BROUGHT FORWARD FROM PAGE 17</p> <p>BROUGHT FORWARD FROM PAGE 18</p> <p>BROUGHT FORWARD FROM PAGE 19</p> <p>BROUGHT FORWARD FROM PAGE 20</p> <p>BROUGHT FORWARD FROM PAGE 21</p> <p>BROUGHT FORWARD FROM PAGE 22</p> <p>BROUGHT FORWARD FROM PAGE 23</p> <p>BROUGHT FORWARD FROM PAGE 24</p>				
	CARRIED FORWARD				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	BROUGHT FORWARD				
	BROUGHT FORWARD FROM PAGE 25				
	BROUGHT FORWARD FROM PAGE 26				
	BROUGHT FORWARD FROM PAGE 27				
	BROUGHT FORWARD FROM PAGE 28				
	BROUGHT FORWARD FROM PAGE 29				
	BROUGHT FORWARD FROM PAGE 30				
	TOTAL FOR SECOND FLOOR CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>THIRD FLOOR.</u></p> <p><u>The following work is to be carried out in third floor.</u></p> <p><u>DEMOLITIONS.</u></p> <p><u>STRAMIT BOARD PARTITIONING</u></p> <p>A Carefully demolish the existing stramit board partitions with and including timber stand frame work and cart away debris from site as directed and make good disturbed floor and wall finishes to match.</p> <p>208 SM</p> <p><u>GLASS PANELS TO STRAMIT BOARD PARTITIONS.</u></p> <p>B Carefully remove the existing 4mm glass panels within the partitions with and including glazing beads and cart away from the site as directed.</p> <p>37 SM</p> <p><u>DOORS TO STRAMIT BOARD PARTITIONS.</u></p> <p><u>Carefully dismantle the following mahogany veneered flush doors with and including its framing, ironmongery and cart away from the site as directed.</u></p> <p>C Doors size 850mm x 2560mm high.</p> <p>2 NO.</p> <p>D Doors size 820mm x 2560mm high.</p> <p>1 NO.</p> <p>E Door size 800 x 2560mm high.</p> <p>1 NO.</p>				
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>ELECTRICAL INSTALLATION AND FITTINGS.</u>				
A	Carefully dismantle including provision of attendance to specialist and remove all existing ceiling fixed light fittings including 4ft fluorescent tubes, conduits, cables and any other existing electrical accessories and prepare power outlet and wiring to receive new (measured else where) and cart away debris from site as directed.	29	NO.		
	<u>MECHANICAL VENTILATION OUTLET</u>				
B	Carefully dismantle including provision of attendance to specialist and remove of all the existing ceiling mounted mechanical ventilation outlets including conduits cables and any other associated accessories and prepare power outlets and wiring to receive new installation (Measured else where) and cart away debris from site as directed.	9	NO.		
	<u>Carefully remove and cart away from site the following old office furniture as directed in readiness for new workstation furniture (measured else where).</u>				
C	Wooden office lockers overall size 1780 x 420 x 970 high in 2 divisions with 4No. Equal compartments.	4	NO.		
D	Office wooden desk overall size 1800 x 420 x 960mm high with 6NO equal 1 drawers.	3	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Executive wooden desk overall size 2000 x 1020 x 760mm high.	23	NO.		
B	Assorted executive chairs.	29	NO.		
C	Ditto overall size 620 x 460 x 132mm high.	11	NO.		
	<u>FLOOR FINISHES</u>				
D	Carefully hack off and remove the existing PVC floor finishes complete with and including all existing cement sand screed and skirtings, repair, prepare and level the existing surfaces ready to receive new floor finish (measured separately), and cart away the debris from the site as directed.	536	SM		
E	Carefully hack off and remove the existing polished brick floor tiles complete with and including existing cement sand and screed all the skirtings, repair, prepare and level the existing surface ready to receive new floor finish (measured separately) and cart away the debris from the site as directed.	77	SM		
	<u>EXISTING CONCRETE LIFT SHAFT.</u>				
	<u>EXTERNAL PAINTING AND DECORATIONS as before described.</u>				
F	Scrub external surfaces to existing concrete lift shaft walls to remove loosely adhering paint work, prepare the surface and apply two coats emulsion paint to the shaft (measured through flutting folds) to satisfaction of the Architect.	114	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>HAND RAILINGS.</u>				
A	Carefully remove the existing galvanised mild steel hand railing morticed in concrete complete with, intermediate railings, and ballusters and cart away debris from the site as directed and repair and prepare concrete surface ready to receive new railings (measured separately).	38	LM.		
	<u>CEILING</u>				
B	Carefully remove the existing acoustic suspended ceilings with and including all the ceiling suspension grid system and ceiling hangers as necessary and cart away debris from the site as directed and repair concrete soffits to receive new ceiling system (measured separately) .	536	SM		
	<u>THE FOLLOWING IN NEW WORKS.</u>				
	<u>FLOOR FINISHES.</u>				
C	Supply and fix granito floor tiles size 600 x 600 x 10mm thick laid on and including cement sand (1:4) screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	536	SM		
D	10 x 150mm High skirtings to match.	128	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Supply and fix granite floor tile size 300 x 600 x 10mm thick laid on and including cement sand (1:4)screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	77	SM		
B	10 x 150mm High skirtings to match.	76	LM.		
	<u>The following in 2No. typical Signage Unit to Architect details.</u>				
	<u>Veneers finished MDF Board colour to Architect approval.</u>				
C	12mm Thick veneer MDF board fixed onto wall including necessary plugging and priming backs before fixing.	21	SM		
D	25 Thick MDF board to division partitions and shelvings.	87	SM		
E	40 x 40mm Selected cypress bearers and frames.	172	LM.		
F	150 x 25mm Thick moulded and coved mahogany skirting, fixed all round to the MDF board.	20	LM.		
G	25mm Thick machine cut, and polished sand stone cladding fixed onto the MDF boards (measured separately) in recessed vertical and horizontal joints in coloured cement and sand (1:3) mortar.	10	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	65 x 25mm Thick MDF board moulded coping with 10mm half round bullnosed edging to approval.	6	LM.		
B	Selected, 100mm thick (average) smooth river stone to approved samples randomly arranged on the flat MDF board surfaces and bedded in coloured cement (1:3) mortar to satisfaction of the Architect.	3	SM		
	<u>PAINTING AND DECORATION as before described:-</u>				
C	Knot, prime, stop and spray paint three coats clear varnish paint to MDF board.	109	SM		
D	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	26	LM.		
	<u>The following in 2No typical tea serving area to Architect's details.</u>				
	<u>Veneer MDF board colour to Architect's approval.</u>				
E	12mm Thick veneer MDF fixed onto wall including all necessary plugging and priming backs before fixing.	21	SM		
F	25mm Thick veneer MDF to division, partition and shelving.	194	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	40 x 40mm Selected cypress bearers and frames.	172	LM.		
B	Drawer size 600 x 900 x 300mm deep overall constructed of 25 x 300mm MDF board front, 25 x 900mm sides, 25 x 300mm back, 6mm thick plywood properly housed and glued together including two 30 x 15mm drawer runners fixed to MDF board and forming grooves to the sides of the runner including brass plated approved pull handle (colour of veneer to Architects approval).	12	NO.		
C	25mm Thick door size 700 x 600mm high constructed from veneer finished MDF board hardwood lipped on all edges to match and complete with brass plated piano hinges and pull handles.	12	NO		
D	25mm thick granite top with 10mm half round bullnosed edgings to approved samples.	3	SM		
E	150 x 25mm thick moulded mahogany skirting, coved on one side fixed to the MDF boards.	20	LM.		
F	25mm Thick machine cut, polished sand stone strips fixed on to the MDF board to the Architect's details as before described.	8	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>WINDOW CLEANING.</u>				
A	Supply labour and materials to wash and clean the existing windows including any repairs, oiling, testing and leaving it in perfect working order to satisfaction of the Architect.	544	SM		
	<u>PAINTING AND DECORATIONS as before described:-</u>				
B	Knot, prime stop and spray paint three coats of clear varnish paint to gypsum board.	215	SM		
C	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	20	LM		
	<u>FRAMELESS GLASS PARTITIONS.</u>				
D	Supply and fix frameless glass partitions in 10mm thick laminated glass 3000mm high sand blasted 300mm vertical bands films and fixed to block work or concrete and including necessary fixing accessories and plugging (measured overall all through door openings) and make good finish after testing and leave in perfect working order.	181	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	<u>Extra over</u> frameless glass partition for 10mm toughened frameless glass door size 900 x 2400mm high including fixing and all necessary ironmongery.	9	NO.		
	<u>POWDER COATED, ALUMINIUM FRAME GLASS PARTITIONS as before described.</u>				
B	Supply and fix 1500mm high, powder coated, alluminium glazed partitions and screens, comprising 100 x 50mm, alluminium top rail, bottom rail, complete with alluminium glazing beads and including 6mm glass fixed in accordance with manufacturer's instruction and including making good finishes to the satisfaction of the Architect.	58	SM		
	<u>The following in composite gypsum board partitions to architect's detail.</u>				
C	12mm Thick gypsum boards with and including 10 x 5mm deep grooves pattern.	17	SM		
D	50 x 75mm Selected cypress framing.	223	LM.		
E	6mm thick laminated clear glass panels sand blasted 300mm vertical band films in glass beading (measured separately) all to Architect's details.	46	SM		
F	25 x 40mm Mahogany glazing beads.	94	LM.		
G	20 x 150mm high coved mahogany skirting to the partition to match.	21	LM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>INTERNAL COLUMN TREATMENT (WITHIN OFFICES).</u>				
A	125 x 25mm Thick solid mahogany T&G cladding, 1500mm high, including the necessary dowelling to approval.	11	SM		
B	Knot, prime, stop and spray paint three coats of clear polyphone lacquer to T&G wood surfaces.	11	SM		
C	Carefully scrub to remove loosely adhering paint work prepare and apply two coats silk vinyl emulsion paint to the remaining existing columns heights to satisfaction.	11	SM		
	<u>COLUMN ALONG INTERNAL ATRIUM CORRIDOR.</u>				
D	Make rough and prepare the existing column to receive stone cladding and supply and fix 25mm thick smooth, machine cut sandstone cladding laid and jointed in 200mm and 100mm alternating courses and keyed to pattern in recessed vertical and horizontal joints in coloured cement and sand mortar (1:3) to satisfaction of the Architect to approvals.	48	SM		
	<u>PARAPET WALL ALONG THE CORRIDOR.</u>				
	<u>Cladding.</u>				
E	Make rough and prepare the existing 1050mm high walling, to receive stone cladding and supply and fix with 25mm thick smooth, machine cut sandstone in 200mm and 100mm alternating courses to approvals as before described.	41	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>PRECAST CONCRETE COPING</u>				
A	Make rough and prepare existing wall to receive coping and supply and fix 250 x 50mm Thick precast concrete coping twice throated and weathered and laid on the walls in cement and sand mortar (1:3) to satisfaction of the Architect.	39	LM		
	<u>THE FOLLOWING IN HANDRAILS.</u>				
B	Supply and fix 400mm High railings constructed of 50mm diameter stainless steel handrails, 20mm diameter stainless steel vertical ballusters and including 3No 20mm diameter stainless steel intermediate rails including morticing and grouting to top of masonry parapet wall at 1000mm centers all to Architect details.	39	LM.		
	<u>CEILING FINISHES.</u>				
C	Carefully scrub to remove loosely adhering paint works clean, prepare and apply three coats plastic emulsion paint to existing soffits of concrete ceiling along the corridor to the satisfaction of the Architect.	86	SM		
D	Supply and fix Suspended 600 x 600mm Armstrong Tatra or other equal and approved acoustic ceilings including frame grid system and approved plugged suspension system: measured over light fittings; including all cutting and trimming around light fitting, columns etc and allowing for and including trap doors to specifications of the Architect.	536	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>PRECAST CONCRETE FINS.</u>				
A	Carefully scrub to remove loosely adhering paintwork clean, prepare and apply two coats emulsion paint to existing concrete fins size 50 x 500 x 3000mm long (measured in areas).	1488	SM		
	<u>CONCRETE BEAMS TO VOID AREAS.</u>				
B	Carefully scrubs to remove loosely adhering paintwork clean, prepare and apply mermoran or other equal end approved texture finish, to existing external beams to satisfaction of the Architect	112	SM		
	<u>NEW VIBRATED REINFORCED CONCRETE (GRADE 25) IN CONSTRAINED SPACE TO:-</u>				
C	New 200mm thick slab to new goods lift lobby.	9	SM		
D	Sawn formwork ditto to soffits of slab ditto as before.	9	SM		
E	Assorted high tensile ditto reinforcement bar as before.	350	KG		
F	Extra over labour and materials in preparatory works and making good finishes in connection with construction of new goods lift lobby.	1	ITEM		
G	Granite floor tiles size 300 x 600 x 10mm thick laid on and including cement sand (1:4) backing and pointed in white cement to satisfaction of the Architect.	9	SM		
H	20 x 150mm Thick Skirtings to match.	7	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>TREATMENT TO EXISTING EXTERNAL COLUMNS AND BEAMS.</u>				
A	Wire brush existing bush hammered aggregate finished column, air pressure cleaned and water wash and leave clean to satisfaction of the Architect.	465	SM		
B	Ditto beams.	191	SM		
	<u>CLADDING TO EXISTING COLUMNS</u>				
C	Make rough, prepare the existing column and supply and fix 25mm thick smooth, machine cut sand stone cladding in 200mm and 100mm alternating courses to approvals as before described.	65	SM		
	<u>WALL PAINTING</u>				
D	Scrub, to remove loosely adhering paintwork, clean, prepare and apply two coats emulsion paint to existing wall surfaces as before described.	68	SM		
	<u>DOORS.</u>				
E	50mm Thick solid mahogany door size 900 x 2400mm high comprising 125 x 50mm T&G match boarding panels in 200mm stiles top and bottom frames and glass vision glass opening (glass measured separately) to Architect detail.	2	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>FRAMELESS GLASS DOOR.</u>				
A	10mm Thick toughened frameless glass double door in two equal leaves of size 900 x 2400mm high with and including all the necessary including the floor action ironmongery and fixing accessories tested and left in perfect working order to satisfaction of the Architect (Ironmongery to approval of the Architect.	3	NO.		
	<u>THE FOLLOWING IN WROT MAHOGANY FRAMES AND FINISHINGS.</u>				
B	100 x 50mm Rebated door frames in two labours plugged.	11	LM.		
C	20 x 40mm Architraves with two labours.	11	LM.		
D	20mm Diameter Quadrant beading with one labour.	11	LM.		
	<u>GLAZING.</u>				
E	4mm Thick clear sheet glass and glazing to wood with beading (in pane 1.00 - 1.50SM).	2	SM		
F	Plastic weathering apron round the glass edges.	12	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>Supply and fix the following ironmongery to timber doors with matching screws.</u>				
A	100mm Brass hinges.	3	PRS.		
B	Three lever 'Union' mortise door lock complete with furniture.	2	NO.		
C	38mm Rubber door stop as 'Union' rawl bolted.	2	NO.		
D	150mm Alluminium barrel bolt.	2	NO.		
E	150mm Pull handle.	2	NO.		
F	Over head door closer as "Yale" specifications to approval of the Architect.	2	No.		
G	Security deadlock as 'Yale' ditto.	2	NO.		
	<u>Knot, prime, stop and spray paint apply three coat clear matt wood varnish to timber surfaces as before described.</u>				
H	General door surfaces internally and externally (measured overall).	13	SM		
I	General surfaces of gypsum boards.	34	SM		
J	Ditto to architraves n.e 100mm girth.	22	LM.		
K	Ditto to frames over 100mm but not exceeding 200mm girth.	43	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>THIRD FLOOR</u> <u>COLLECTION</u> BROUGHT FORWARD FROM PAGE 33 BROUGHT FORWARD FROM PAGE 34 BROUGHT FORWARD FROM PAGE 35 BROUGHT FORWARD FROM PAGE 36 BROUGHT FORWARD FROM PAGE 37 BROUGHT FORWARD FROM PAGE 38 BROUGHT FORWARD FROM PAGE 39 BROUGHT FORWARD FROM PAGE 40 BROUGHT FORWARD FROM PAGE 41 BROUGHT FORWARD FROM PAGE 42 BROUGHT FORWARD FROM PAGE 43 BROUGHT FORWARD FROM PAGE 44 BROUGHT FORWARD FROM PAGE 45 BROUGHT FORWARD FROM PAGE 46 BROUGHT FORWARD FROM PAGE 47				
	TOTAL FOR THIRD FLOOR CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>FOURTH FLOOR.</u></p> <p><u>DEMOLITIONS.</u></p> <p><u>The following work is to be carried out in fourth floor.</u></p> <p><u>DEMOLITIONS.</u></p> <p><u>STRAMIT BOARD PARTITIONING</u></p>				
A	Carefully demolish the existing stramit board partitions with and including timber stand frame work and cart away debris from site as directed and make good disturbed floor and wall finishes to match.	167	SM		
	<u>GLASS PANELS TO STRAMIT BOARD PARTITIONS.</u>				
B	Carefully remove the existing 4mm glass panels within the partitions with and including glazing beads and cart away from the site as directed.	88	SM		
	<u>DOORS TO STRAMIT BOARD PARTITIONS.</u>				
	<u>Carefully dismantle the following mahogany veneered flush doors with and including its framing, ironmongery and cart away from the site as directed.</u>				
C	Doors size 850mm x 2560mm high.	6	NO.		
D	Doors size 820mm x 2000mm high.	1	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>ELECTRICAL INSTALLATION AND FITTINGS</u>				
A	Carefully dismantle including provision of attendance to specialist and remove of all existing ceiling fixed light fittings including 4ft fluorescent tubes, conduits, cables and any other existing electrical accessories and prepare power outlet and wiring to receive new (measured else where) and cart away debris from site as directed.	74	NO.		
	<u>MECHANICAL VENTILATION OUTLET</u>				
B	Carefully dismantle including provision of attendance to specialist and remove of all the existing ceiling mounted mechanical ventilation outlets including conduits cables and any other associated accessories and prepare power outlets and wiring to receive new installation (Measured else where) and cart away debris from site as directed.	10	NO.		
	<u>Carefully remove and cart away from site the following old office furniture as directed in readiness for new workstation furniture (measured else where).</u>				
C	Wooden office lockers overall size 1780 x 420 x 970 high in 2 divisions with 4No. Equal compartments.	3	NO.		
D	Office wooden desk overall size 1830 x 970 x 920mm high with 6NO equal 1 drawers.	47	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Executive wooden desk overall size 2000 x 1020 x 760mm high.	5	NO.		
B	Ditto overall size 1800 x 420 x 960mm high.	70	NO.		
C	Circular wooden conference table 1200mm diameter.	1	NO.		
D	Conference wooden table overall size 3650 x 1200 x 800mm high with curved edges.	1	NO.		
E	Ditto overall size 2200 x 1070 x 750mm high.	1	NO.		
F	Assorted executive chairs	136	NO.		
G	Wooden shelves overall size 1530 x 360 x 1200mm high in 6mm equal compartments and front part in gloss panes.	2	NO.		
H	Steel safes overall size 520 x 760 x 1430mm high.	2	NO.		
I	Ditto overall size 520 x 760 x 1550mm high.	2	NO.		
J	Ditto overall size 620 x 460 x 1320mm high.	12	NO.		
K	Ditto overall size 460 x 920 x 1320mm high.	6	NO.		
L	Ditto overall size 460 x 920 x 2140mm high.	1	NO.		
	<u>FLOOR FINISHES</u>				
M	Carefully hack off and remove the existing PVC floor finishes complete with and including all existing cement sand screed and skirtings, repair, prepare and level the existing surfaces ready to receive new floor finish (measured separately), and cart away the debris from the site as directed.	876	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Carefully hack off and remove the existing polished brick floor tiles complete with and including existing cement sand and screed all the skirtings, repair, prepare and level the existing surface ready to receive new floor finish (measured separately) and cart away the debris from the site as directed.	77	SM		
	<u>EXISTING LIFT SHAFT.</u>				
	<u>EXTERNAL PAINTING AND DECORATIONS as before described.</u>				
B	Scrub external surfaces to existing concrete lift shaft walls to remove loosely adhering paint work, prepare the surface and apply two coats emulsion paint to the existing lift shaft (measured through flutting folds) to satisfaction of the Architect.	114	SM		
	<u>HAND RAILINGS.</u>				
C	Carefully remove the existing galvanized mild steel hand railing morticed in concrete complete with, intermediate railings, and ballusters and cart away debris from the site as directed and repair and prepare concrete surface ready to receive new railings (measured separately).	38	LM.		
	<u>CEILING</u>				
D	Carefully remove the existing acoustic suspended ceilings with and including all the ceiling suspension grid system and ceiling hungers as necessary and cart away debris from the site as directed and repair concrete soffits to receive new ceiling system (measured separately) .	876	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>THE FOLLOWING IN NEW WORKS.</u>				
	<u>FLOOR FINISHES.</u>				
A	Supply and fix granito floor tiles size 600 x 600 x 10mm thick laid on and including cement sand (1:4) screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	876	SM		
B	10 x 150mm High skirtings to match.	207	LM.		
C	Supply and fix granite floor tile size 300 x 600 x 10mm thick laid on and including cement sand (1:4)screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	77	SM		
D	10 x 150mm High skirtings to match.	76	LM.		
	<u>The following in 3No. typical Signage Unit to Architect details.</u>				
	<u>Veneer finished gypsum Board colour to Architect approval.</u>				
E	12mm Thick veneer MDF board fixed onto wall including necessary plugging and priming backs before fixing.	33	SM		
F	25 Thick MDF board to division partitions and shelvings.	131	SM		
G	40 x 40mm Selected cypress bearers and frames.	258	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	150 x 25mm Thick moulded and coved mahogany skirting, fixed all round to the MDF board.	30	LM.		
B	25mm Thick machine cut, and polished sand stone cladding fixed onto the MDF boards (measured separately) in recessed vertical and horizontal joints in coloured cement and sand (1:3) mortar.	15	SM		
C	65 x 25mm Thick MDF board moulded coping with 10mm half round bullnosed edging to approval.	8	LM.		
D	Selected, 100mm thick (average) smooth river stone to approved samples randomly arranged on the flat MDF board surfaces and bedded in coloured cement (1:3) mortar to satisfaction of the Architect.	4	SM		
	<u>PAINTING AND DECORATION as before described:-</u>				
E	Knot, prime, stop and spray paint three coats clear varnish paint to MDF board.	164	SM		
F	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	39	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>The following in 3No typical tea serving area to Architect's details.</u></p> <p><u>Vineer MDF board colour to Architect's approval.</u></p>				
A	12mm Thick vineer MDF fixed onto wall including all necessary plugging and priming backs before fixing.	33	SM		
B	25mm Thick vineer MDF to division, partition and shelving.	291	SM		
C	40 x 40mm Selected cypress bearers and frames.	258	LM.		
D	Drawer size 600 x 900 x 300mm deep overall constructed of 25 x 300mm MDF board front, 25 x 900mm sides, 25 x 300mm back, 6mm thick plywood properly housed and glued together including two 30 x 15mm drawer runners fixed to MDF board and forming groves to the sides of the runner including brass plated approved pull handle (colour of vineer to Architects approval).	18	NO.		
E	25mm Thick door size 700 x 600mm high constructed from veneer finished MDF board hardwood lipped on all edges to match and complete with brass plated piano hinges and pull handles.	18	NO		
F	25mm thick granite top with 10mm half round bullnosed edgings to approved samples.	5	SM		
G	150 x 25mm thick moulded mahogany skirting, coved on one side fixed to the MDF boards.	30	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	25mm Thick machine cut, polished sand stone strips fixed on to the MDF board to the Architect's details as before described.	12	SM		
	<u>WINDOW CLEANING.</u>				
B	Supply labour and materials to wash and clean the existing windows including all repairs oiling testing and leaving it in perfect working order to the satisfaction of the Architect.	544	SM		
	<u>PAINTING AND DECORATIONS as before described:-</u>				
C	Knot, prime stop and spray paint three coats of clear varnish paint to gypsum board.	324	SM		
D	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	30	LM		
	<u>FRAMELESS GLASS PARTITIONS.</u>				
E	Supply and fix frameless glass partitions in 10mm thick laminated glass 3000mm high sand blasted 300mm vertical bands films and fixed to block work or concrete and including necessary fixing accessories and plugging (measured overall all through door openings) and make good finish after testing and leave in perfect working order.	315	SM		
F	<u>Extra over</u> frameless glass partition for 10mm toughened frameless glass door size 900 x 2400mm high including fixing and all necessary ironmongery.	11	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>POWDER COATED, ALUMINIUM FRAME GLASS PARTITIONS as before described.</u>				
A	Supply and fix 1500mm high, powder coated, alluminium glazed partitions and screens, comprising 100 x 50mm, alluminium top rail, bottom rail, complete with alluminium glazing, beads and including 6mm glass fixed in accordance with manufacturer's instruction and including making good finishes to the satisfaction of the Architect.	213	SM		
	<u>The following in composite gypsum board partitions to architect's detail.</u>				
B	12mm Thick gypsum boards with and including 10 x 5mm deep grooves pattern.	32	SM		
C	50 x 75mm Selected cypress framing.	422	LM.		
D	6mm thick laminated clear glass panels sand blasted 300mm vertical band films in glass beading (measured separately) all to Architect's details.	87	SM		
E	25 x 40mm Mahogany glazing beads.	177	LM.		
F	20 x 150mm high coved mahogany skirting to the partition to match.	40	LM		
	<u>INTERNAL COLUMN TREATMENT (WITHIN OFFICES).</u>				
G	125 x 25mm Thick solid mahogany T&G cladding, 1500mm high, including the necessary dowelling to approval.	33	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Knot, prime, stop and spray paint three coats of clear polyurethane lacquer to T&G wood surfaces.	33	SM		
B	Carefully scrub to remove loosely adhering paint work prepare and apply two coats silk vinyl emulsion paint to the remaining existing columns heights to satisfaction.	33	SM		
	<u>COLUMN ALONG INTERNAL ATRIUM CORRIDOR.</u>				
C	Make rough and prepare the existing column to receive stone cladding and supply and fix 25mm thick smooth, machine cut sandstone cladding laid and jointed in 200mm and 100mm alternating courses and keyed to pattern in recessed vertical and horizontal joints in coloured cement and sand mortar (1:3) to satisfaction of the Architect to approvals.	48	SM		
	<u>PARAPET WALL ALONG THE CORRIDOR.</u>				
	<u>Cladding.</u>				
D	Make rough and prepare the existing 1050mm high walling to receive stone cladding, and supply and fix with 25mm thick smooth, machine cut sandstone in 200mm and 100mm alternating courses to approvals as before described.	41	SM		
	<u>PRECAST CONCRETE COPING</u>				
E	Make rough and prepare existing wall to receive coping and supply and fix 250 x 50mm Thick precast concrete coping twice throated and weathered and laid on the walls in cement and sand mortar (1:3) to satisfaction of the Architect.	39	LM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>THE FOLLOWING IN HANDRAILS.</u>				
A	Supply and fix 400mm High railings comprising of 50mm diameter stainless steel vertical handrails, 20mm diameter stainless steel ballusters and including 3No 20mm diameter stainless steel intermediate rails including morticing and grouting top of masonry parapet wall at 1000mm centers, all to Architect details.	39	LM.		
	<u>CEILING FINISHES.</u>				
B	Carefully scrub to remove loosely adhering paint works, clean, prepare and apply three coats plastic emulsion paint to existing soffits of concrete ceiling along the corridors to the satisfaction of the Architect.	86	SM		
C	Supply and fix Suspended 600 x 600mm Armstrong Tatra or other equal and approved acoustic ceilings including frame rigid system and approved plugged suspension system: measured over light fittings; including all cutting and trimming around light fitting, columns etc and allowing for and including trap doors to specifications of the Architect.	876	SM		
	<u>PRECAST CONCRETE FINS.</u>				
D	Carefully scrub to remove loosely adhering paintwork clean, prepare and apply two coats emulsion paint to existing concrete fins size 50 x 500 x 3000mm long (measured in areas).	1488	SM		
	<u>VENT BLOCKS.</u>				
E	Carefully scrub the surfaces of the existing vent block to remove loosely adhering paint work, prepare and apply two coats emulsion paint to vent surfaces, measured flat overall both sides (Allow for painting inside the vents) [verification on the site necessary].	36	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>CONCRETE BEAMS FINISHES TO VOID AREAS.</u>				
A	Carefully scrubs to remove loosely adhering paintwork clean, prepare and apply Mermoran or other equal end approved texture finish, to existing external beams to satisfaction of the Architect	112	SM		
	<u>NEW VIBRATED REINFORCED CONCRETE (GRADE 25) IN CONSTRAINED SPACE TO:-</u>				
B	New 200mm thick slab to new goods lift lobby.	9	SM		
C	Sawn formwork ditto to soffits of slab as before.	9	SM		
D	Assorted high tensile ditto reinforcement bar as before.	350	KG		
E	Extra over labour and materials in preparatory works and making good finishes in connection with construction of the new goods lift lobby.	1	ITEM		
F	Granite floor tiles size 300 x 600 x 10mm thick laid on and including cement sand (1:4) backing and pointed in white cement to satisfaction of the Architect.	9	SM		
G	20 x 150mm Thick Skirtings to match.	7	LM.		
	<u>TREATMENT TO EXISTING EXTERNAL COLUMNS AND BEAMS.</u>				
H	Wire brush existing bush hammered aggregate finished column to be and air pressure cleaned and water wash and leave clean to satisfaction of the Architect.	465	SM		
I	Ditto Beams.	191	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>CLADDING TO EXISTING COLUMNS</u>				
A	Make rough, prepare the existing column and supply and fix 25mm thick smooth, machine cut sand stone cladding in 200mm and 100mm alternating courses to approvals as before described.	65	SM		
	<u>WALL PAINTING</u>				
B	Scrub, to remove loosely adhering paintwork, clean, prepare and apply two coats emulsion paint to existing wall surfaces as before described.	68	SM		
	<u>DOORS.</u>				
C	50mm Thick solid mahogany door size 900 x 2400mm high comprising 125 x 50mm T&G match boarding panels in 200mm stiles top and bottom frames and glass vision glass opening (glass measured separately) to Architect detail.	3	NO.		
	<u>FRAMELESS GLASS DOOR.</u>				
D	10mm Thick toughened frameless glass double door in two equal leaves of size 900 x 2400mm high with and including all the necessary ironmongery including floor action ironmongery and fixing accessories tested and left in perfect working order to satisfaction of the Architect (Ironmongery to approval of the Architect).	3	NO.		
	<u>THE FOLLOWING IN WROT MAHOGANY FRAMES AND FINISHINGS.</u>				
E	100 x 50mm Rebated door frames in two labours plugged.	17	LM.		
F	20 x 40mm Architraves with two labours.	17	LM.		
G	20mm Diameter Quadrant beading with one labour.	17	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>GLAZING.</u>				
A	4mm Thick clear sheet glass and glazing to wood with beading (in pane 1.00 - 1.50SM).	3	SM		
B	Plastic weathering apron round the glass edges.	12	LM.		
	<u>Supply and fix the following ironmongery to timber doors with matching screws.</u>				
C	100mm Brass hinges.	45	PRS.		
D	Three lever 'Union' mortise door lock complete with furniture.	3	NO.		
E	38mm Rubber door stop as 'Union' rawl bolted.	3	NO.		
F	150mm Alluminium barrel bolt.	3	NO.		
G	150mm Pull handle.	3	NO.		
H	Over head door closer as "Yale" specifications to approval of the Architect.	3	No.		
I	Security deadlock as 'Yale' ditto.	3	NO.		
	<u>Knot, prime, stop and spray paint three coat clear matt wood varnish to timber surfaces as before described.</u>				
J	General door surfaces internally and externally (measured overall).	7	SM		
K	General surfaces of gypsum boards.	64	SM		
L	Ditto to architraves n.e 100mm girth.	34	LM.		
M	Ditto to frames over 100mm but not exceeding 200mm girth.	74	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>FOURTH FLOOR</u> <u>COLLECTION</u> BROUGHT FORWARD FROM PAGE 49 BROUGHT FORWARD FROM PAGE 50 BROUGHT FORWARD FROM PAGE 51 BROUGHT FORWARD FROM PAGE 52 BROUGHT FORWARD FROM PAGE 53 BROUGHT FORWARD FROM PAGE 54 BROUGHT FORWARD FROM PAGE 55 BROUGHT FORWARD FROM PAGE 56 BROUGHT FORWARD FROM PAGE 57 BROUGHT FORWARD FROM PAGE 58 BROUGHT FORWARD FROM PAGE 59 BROUGHT FORWARD FROM PAGE 60 BROUGHT FORWARD FROM PAGE 61 BROUGHT FORWARD FROM PAGE 62				
	TOTAL FOR FOURTH FLOOR CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>FIFTH FLOOR.</u></p> <p><u>The following work is to be carried out in fifth floor.</u></p> <p><u>DEMOLITIONS.</u></p> <p><u>STRAMIT BOARD PARTITIONING</u></p> <p>A Carefully demolish the existing stramit board partitions with and including timber stand frame work and cart away debris from site as directed and make good disturbed floor and wall finishes to match.</p> <p>260 SM</p> <p><u>GLASS PANELS TO STRAMIT BOARD PARTITIONS.</u></p> <p>B Carefully remove the existing 4mm glass panels within the partitions with and including glazing beads and cart away from the site as directed.</p> <p>230 SM</p> <p><u>DOORS TO STRAMIT BOARD PARTITIONS.</u></p> <p><u>Carefully dismantle the following mahogany veneered flush doors with and including its framing, ironmongery and cart away from the site as directed.</u></p> <p>C Doors size 850mm x 2560mm high.</p> <p>22 NO.</p> <p>D Doors size 820mm x 2000mm high.</p> <p>2 NO.</p>				
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>ELECTRICAL INSTALLATION AND FITTINGS</u>				
A	Carefully dismantle including provision of attendance to specialist and remove all existing ceiling fixed light fittings including 4ft fluorescent tubes, conduits, cables and any other existing electrical accessories and prepare power outlet and wiring to receive new (measured else where) and cart away debris from site as directed.	188	NO.		
	<u>MECHANICAL VENTILATION OUTLET</u>				
B	Carefully dismantle including provision of attendance to specialist and remove all the existing ceiling mounted mechanical ventilation outlets including conduits cables and any other associated accessories and prepare power outlets and wiring to receive new installation (Measured else where) and cart away debris from site as directed.	16	NO.		
	<u>Carefully remove and cart away from site the following old office furniture as directed in readiness for new workstation furniture (measured else where).</u>				
C	Wooden office lockers overall size 1780 x 420 x 970 high in 2 divisions with 4No. Equal compartments.	142	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Executive wooden desk overall size 2000 x 1020 x 760mm high.	6	NO.		
B	Ditto overall size 1800 x 420 x 960mm high.	104	NO.		
C	Circular wooden conference table 1200mm diameter.	3	NO.		
D	Conference wooden table overall size 3650 x 1200 x 800mm high with curved edges.	5	NO.		
E	Assorted executive chairs	200	NO.		
F	Ditto overall size 620 x 460 x 1320 x 1320mm high.	5	NO.		
G	Steel safes overall size 540 x 800 x 1560mm high.	3	NO.		
H	Ditto overall size 920 x 460 x 1820mm high.	2	NO.		
	<u>FLOOR FINISHES</u>				
J	Carefully hack off and remove the existing PVC floor finishes complete with and including all existing cement sand screed and skirtings, repair, prepare and level the existing surfaces ready to receive new floor finish (measured separately), and cart away the debris from the site as directed.	956	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Carefully hack off and remove the existing polished brick floor tiles complete with and including existing cement sand and screed all the skirtings, repair, prepare and level the existing surface ready to receive new floor finish (measured separately) and cart away the debris from the site as directed.	77	SM		
	<u>EXISTING CONCRETE LIFT SHAFT.</u>				
	<u>EXTERNAL PAINTING AND DECORATIONS as before described</u>				
B	Scrub external surfaces to existing concrete lift shaft walls to remove loosely adhering paint work, prepare the surface and apply two coats emulsion paint to the shaft (measured through flutting folds) to satisfaction of the Architect.	114	SM		
	<u>HAND RAILINGS.</u>				
C	Carefully remove the existing galvanized mild steel hand railing morticed in concrete complete with, intermediate railings, and ballusters and cart away debris from the site as directed and repair and prepare concrete surface ready to receive new railings (measured separately).	38	LM.		
	<u>CEILING</u>				
D	Carefully remove the existing acoustic suspended ceilings with and including all the ceiling suspension grid system and ceiling hangers as necessary and cart away debris from the site as directed and repair concrete soffits to receive new ceiling system (measured separately) .	956	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>THE FOLLOWING IN NEW WORKS.</u>				
	<u>FLOOR FINISHES.</u>				
A	Supply and fix granito floor tiles size 600 x 600 x 10mm thick laid on and including cement sand (1:4) screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	1092	SM		
B	10 x 150mm High skirtings to match.	195	LM.		
C	Supply and fix granite floor tile size 300 x 600 x 10mm thick laid on and including cement sand (1:4)screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	77	SM		
D	10 x 150mm High skirtings to match.	76	LM.		
	<u>The following in 4No. typical Signage Unit to Architect details.</u>				
	<u>Veneer finished MDF Board colour to Architect approval.</u>				
E	12mm Thick veneer MDF board fixed onto wall including necessary plugging and priming backs before fixing.	43	SM		
F	25 Thick MDF board to division partitions and shelvings.	174	SM		
G	40 x 40mm Selected cypress bearers and frames.	343	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	150 x 25mm Thick moulded and coved mahogany skirting, fixed all round to the MDF board.	40	LM.		
B	25mm Thick machine cut, and polished sand stone cladding fixed onto the MDF boards (measured separately) in recessed vertical and horizontal joint in coloured cement and sand (1:3) mortar.	20	SM		
C	65 x 25mm Thick MDF board moulded coping with 10mm half round bullnosed edging to approval.	11	LM.		
D	Selected, 100mm thick (average) smooth river stone to approved samples randomly arranged on the flat MDF board surfaces and bedded in coloured cement (1:3) mortar to satisfaction of the Architect.	6	SM		
	<u>PAINTING AND DECORATION as before described:-</u>				
E	Knot, prime, stop and spray paint three coats clear varnish paint to MDF board.	217	SM		
F	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	51	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>The following in 4No typical tea serving area and service counter to Architect's details.</u></p> <p><u>Vineer MDF board colour to Architect's approval.</u></p>				
A	12mm Thick vineer MDF fixed onto wall including all necessary plugging and priming backs before fixing.	77	SM		
B	25mm Thick vineer MDF to division, partition and shelving.	387	SM		
C	40 x 40mm Selected cypress bearers and frames.	343	LM.		
D	Drawer size 600 x 900 x 300mm deep overall constructed of 25 x 300mm MDF board front, 25 x 900mm sides, 25 x 300mm back, 6mm thick plywood properly housed and glued together including two 30 x 15mm drawer runners fixed to MDF board and forming grooves to the sides of the runner including brass plated approved pull handle (colour of vineer to Architects approval).	24	NO.		
E	25mm Thick door size 700 x 600mm high constructed from veneer finished MDF board hardwood lipped on all edges to match and complete with brass plated piano hinges and pull handles.	24	NO		
F	25mm thick granite top with 10mm half round bullnosed edgings to approved samples.	14	SM		
G	150 x 25mm thick moulded mahogany skirting, coved on one side fixed to the MDF boards.	40	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	25mm Thick machine cut, polished sand stone strips fixed on to the MDF board to the Architect's details as before described.	16	SM		
	<u>WINDOW CLEANING.</u>				
B	Supply labour and materials to wash and clean the existing windows including any repairs, oiling, testing windows and leaving it in perfect working order to satisfaction of the Architect.	544	SM		
	<u>PAINTING AND DECORATIONS as before described:-</u>				
C	Knot, prime stop and spray paint three coats of clear varnish paint to gypsum board.	464	SM		
D	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	40	LM		
	<u>FRAMELESS GLASS PARTITIONS.</u>				
E	Supply and fix frameless glass partitions in 10mm thick laminated glass 3000mm high sand blasted 300mm vertical bands films and fixed to block work or concrete and including necessary fixing accessories and plugging (measured overall all through door openings) and make good finish after testing and leave in perfect working order.	303	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	<u>Extra over</u> frameless glass partition for 10mm toughened frameless glass door size 900 x 2400mm high including fixing and all necessary ironmongery.	17	NO.		
	<u>POWDER COATED, ALUMINIUM FRAME GLASS PARTITIONS as before described.</u>				
B	Supply and fix 1500mm high, powder coated, alluminium glazed partitions and screens, comprising 100 x 50mm, alluminium top rail, bottom rail, complete with alluminium glazing beads and including 6mm glass fixed in accordance with manufacturer's instruction and including making good finishes to the satisfaction of the Architect.	390	SM		
	<u>The following in composite gypsum board partitions to architect's detail.</u>				
C	12mm Thick boards with and including 10 x 5mm deep grooves pattern.	86	SM		
D	50 x 75mm Selected cypress framing.	1120	SM		
E	6mm thick laminated clear glass panels sand blasted 300mm vertical band films in glass beading (measured separately) all to Architect's details.	230	SM		
F	25 x 40mm Mahogany glazing beads.	471	LM.		
G	20 x 150mm high coved mahogany skirting to the partition to match.	105	LM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>INTERNAL COLUMN TREATMENT (WITHIN OFFICES).</u>				
A	125 x 25mm Thick solid mahogany T&G cladding, 1500mm high, including the necessary dowelling to approval.	54	SM		
B	Knot, prime, stop and spray paint three coats of clear polyurethane lacquer to T&G wood surfaces.	54	SM		
C	Carefully scrub to remove loosely adhering paint work prepare and apply two coats silk vinyl emulsion paint to the remaining existing columns heights to satisfaction.	54	SM		
	<u>COLUMN ALONG INTERNAL ATRIUM CORRIDOR.</u>				
D	Make rough and prepare the existing column to receive stone cladding and supply and fix 25mm thick smooth, machine cut sandstone cladding laid and jointed in 200mm and 100mm alternating courses and keyed to pattern in recessed vertical and horizontal joints in coloured cement and sand mortar (1:3) to satisfaction of the Architect to approvals.	48	SM		
	<u>PARAPET WALL ALONG THE CORRIDOR.</u>				
	<u>Cladding.</u>				
E	Make rough and prepare the existing 1050mm high walling, to received stone cladding and supply and fix with 25mm thick smooth, machine cut sandstone in 200mm and 100mm alternating courses to approvals as before described.	41	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>PRECAST CONCRETE COPING</u>				
A	Make rough and prepare existing wall to receive coping and supply and fix 250 x 50mm Thick precast concrete coping twice throated and weathered and laid on the walls in cement and sand mortar (1:3) to satisfaction of the Architect.	39	LM		
	<u>THE FOLLOWING IN HANDRAILS.</u>				
B	Supply and fix 400mm High railings constructed of 50mm diameter stainless steel handrails, 20mm diameter stainless steel vertical ballusters and including 3No 20mm diameter stainless steel intermediate rails including morticing and grouting to top of masonry parapet wall at 1000mm centers all to Architect details.	39	LM.		
	<u>CEILING FINISHES.</u>				
C	Carefully scrub to remove loosely adhering paint works, clean, prepare and apply three coats plastic emulsion paint to existing soffits of concrete ceiling along the corridors to the satisfaction of the Architect.	86	SM		
D	Supply and fix Suspended 600 x 600mm Armstrong Tatra or other equal and approved acoustic ceilings including frame rigid system and approved plugged suspension system: measured over light fittings; including all cutting and trimming around light fitting, columns etc and allowing for and including trap doors to specifications of the Architect.	956	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>PRECAST CONCRETE FINS.</u>				
A	Carefully scrub to remove loosely adhering paintwork clean, prepare and apply two coats emulsion paint to existing concrete fins size 50 x 500 x 3000mm long (measured in areas)	1488	SM		
	<u>VENT BLOCKS.</u>				
B	Carefully scrub the surfaces of the existing vent block to remove loosely adhering paint work. Prepare and apply two coats emulsion paint to vent surfaces, measured flat overall both side (Allow for painting inside the vents) [verification on the site necessary].	36	SM.		
	<u>CONCRETE BEAMS TO VOID AREAS.</u>				
C	Carefully scrubs to remove loosely adhering paintwork clean, prepare and apply Mermoran or other equal end approved texture finish, to existing external beams to satisfaction of the Architect	112	SM		
	<u>NEW VIBRATED REINFORCED CONCRETE (GRADE 25) IN CONSTRAINED SPACE TO:-</u>				
D	New 200mm thick slab to new goods lift lobby.	9	SM		
E	Sawn formwork ditto to soffits of slab as before.	9	SM		
F	Assorted high tensile ditto reinforcement bar as before.	350	KG		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Extra over labour and materials in preparatory works and making good finishes in connection with construction of new goods lift lobby.	1	ITEM		
B	Granite floor tiles size 300 x 600 x 10mm thick laid on and including cement sand (1:4) backing and pointed in white cement to satisfaction of the Architect.	9	SM		
C	20 x 150mm Thick Skirtings to match.	7	LM.		
	<u>TREATMENT TO EXISTING EXTERNAL COLUMNS BEAMS.</u>				
A	Wire brush existing bush hammered aggregate finished column, air pressure cleaned and water wash and leave clean to satisfaction of the Architect.	465	SM		
B	Ditto Beams.	191	SM		
	<u>CLADDING TO EXISTING COLUMNS</u>				
D	Make rough, prepare the existing column and supply and fix 25mm thick smooth, machine cut sand stone cladding in 200mm and 100mm alternating courses to approvals as before described.	65	SM		
	<u>WALL PAINTING</u>				
E	Scrub, to remove loosely paintwork, clean, prepare and apply two coats emulsion paint to existing wall surfaces as before described.	68	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>DOORS</u>				
A	50mm Thick solid mahogany door size 900 x 2400mm high comprising 125 x 50mm T&G match boarding panels in 200mm stiles top and bottom frames and glass vision glass opening (glass measured separately) to Architect detail.	2	NO.		
	<u>FRAMELESS GLASS DOOR.</u>				
B	10mm Thick toughened frameless glass double door in two equal leaves of size 900 x 2400mm high with and including all the necessary ironmongery including floor action ironmongery and fixing accessories tested and left in perfect working order to satisfaction of the Architect (Ironmongery to approval of the Architect).	6	NO.		
	<u>THE FOLLOWING IN WROT MAHOGANY FRAMES AND FINISHINGS.</u>				
C	100 x 50mm Rebated door frames in two labours plugged.	11	LM.		
D	20 x 40mm Architraves with two labours.	11	LM.		
E	20mm Diameter Quadrant beading with one labour.	11	LM.		
	<u>GLAZING</u>				
F	4mm Thick clear sheet glass and glazing to wood with beading (in pane 1.00 - 1.50SM).	2	SM		
G	Plastic weathering apron round the glass edges.	12	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>Supply and fix the following ironmongery to timber doors with matching screws.</u>				
A	100mm Brass hinges.	3	PRS.		
B	Three lever 'Union' mortise door lock complete with furniture.	2	NO.		
C	38mm Rubber door stop as 'Union' rawl bolted.	2	NO.		
D	150mm Alluminium barrel bolt.	2	NO.		
E	150mm Pull handle.	6	NO.		
F	Over head door closer as "Yale" specifications to approval of the Architect.	6	No.		
G	Security deadlock as 'Yale' ditto.	6	NO.		
	<u>Knot, prime, stop and spray paint three coat clear matt wood varnish to timber surfaces as before described.</u>				
H	General door surfaces internally and externally (measured overall).	4	SM		
I	General surfaces of gypsum board.	172	SM		
J	Ditto to architraves n.e 100mm girth.	22	LM.		
K	Ditto to frames over 100mm but not exceeding 200mm girth.	127	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>FIFTH FLOOR .</u> <u>COLLECTION</u> BROUGHT FORWARD FROM PAGE 64 BROUGHT FORWARD FROM PAGE 65 BROUGHT FORWARD FROM PAGE 66 BROUGHT FORWARD FROM PAGE 67 BROUGHT FORWARD FROM PAGE 68 BROUGHT FORWARD FROM PAGE 69 BROUGHT FORWARD FROM PAGE 70 BROUGHT FORWARD FROM PAGE 71 BROUGHT FORWARD FROM PAGE 72 BROUGHT FORWARD FROM PAGE 73 BROUGHT FORWARD FROM PAGE 74 BROUGHT FORWARD FROM PAGE 75 BROUGHT FORWARD FROM PAGE 76 BROUGHT FORWARD FROM PAGE 77 BROUGHT FORWARD FROM PAGE 78				
	TOTAL FOR FIFTH FLOOR CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>SIXTH FLOOR.</u></p> <p><u>THE FOLLOWING WORK IS TO BE CARRIED OUT IN SIXTH FLOOR.</u></p> <p><u>FLOOR FINISHES</u></p> <p>A Carefully hack off and remove the existing PVC floor finishes complete with and including all existing cement sand screed and skirtings, repair, prepare and level the existing surfaces ready to receive new floor finish (measured separately), and cart away the debris from the site as directed.</p> <p>1295 SM</p> <p>B Carefully hack off and remove the existing polished brick floor tiles complete with and including existing cement sand and screed all the skirtings, repair, prepare and level the existing surface ready to receive new floor finish (measured separately) and cart away the debris from the site as directed.</p> <p>77 SM</p> <p><u>EXISTING CONCRETE LIFT SHAFT.</u></p> <p><u>EXTERNAL PAINTING AND DECORATIONS as before described.</u></p> <p>C Scrub external surfaces to existing concrete lift shaft walls to remove loosely adhering paint work, prepare the surface and apply two coats emulsion paint to the shaft (measured through flutting folds) to satisfaction of the Architect.</p> <p>152 SM</p> <p><u>HAND RAILINGS.</u></p> <p>D Carefully remove the existing galvanized mild steel hand railing morticed in concrete complete with, intermediate railings, and ballusters and cart away debris from the site as directed and repair and prepare concrete surface ready to receive new railings (measured separately).</p> <p>38 LM.</p>				
	TOTAL CARRIED COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>CEILING</u>				
A	Carefully remove the existing acoustic suspended ceilings with and including all the ceiling suspension grid system and ceiling hangers as necessary and cart away debris from the site as directed and repair concrete soffits to receive new ceiling system (measured separately) .	1295	SM		
	<u>THE FOLLOWING IN NEW WORKS.</u>				
	<u>FLOOR FINISHES.</u>				
B	Supply and fix granito floor tiles size 600 x 600 x 10mm thick laid on and including cement sand (1:4) screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	1295	SM		
C	10 x 150mm High skirtings to match.	190	LM.		
D	Supply and fix granite floor tile size 300 x 600 x 10mm thick laid on and including cement sand (1:4)screed backing in approved adhesive mastic and pointing in coloured cement mortar to match to the satisfaction of the Architect.	77	SM		
E	10 x 150mm High skirtings to match.	76	LM.		
	<u>The following in 4No. typical Signage Unit to Architect details.</u>				
	<u>Veneer finished MDF Board colour to Architect approval.</u>				
F	12mm Thick veneer MDF board fixed onto wall including necessary plugging and priming backs before fixing.	43	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	25 Thick MDF board to division partitions and shelvings.	174	SM		
B	40 x 40mm Selected cypress bearers and frames.	343	LM.		
C	150 x 25mm Thick moulded and coved mahogany skirting, fixed all round to the MDF board.	40	LM.		
D	25mm Thick machine cut, and polished sand stone cladding fixed onto the MDF boards (measured separately) in recessed vertical and horizontal joints in coloured cement and sand (1:3) mortar.	20	SM		
E	65 x 25mm Thick MDF board moulding coping with 10mm half round bullnosed edging to approval.	11	LM.		
F	Selected, 100mm thick (average) smooth river stone to approved samples randomly arranged on the flat MDF board surfaces and bedded in coloured cement (1:3) mortar to satisfaction of the Architect.	6	SM		
	<u>PAINTING AND DECORATION as before described:-</u>				
G	Knot, prime, stop and spray paint three coats clear varnish paint to MDF board.	217	SM		
H	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	51	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>The following in 4No typical tea serving area to Architect's details.</u></p> <p><u>Vineer MDF board colour to Architect's approval.</u></p>				
A	12mm Thick vineer MDF fixed onto wall including all necessary plugging and priming backs before fixing.	43	SM		
B	25mm Thick vineer MDF to division, partition and shelving.	387	SM		
C	40 x 40mm Selected cypress bearers and frames.	343	LM.		
D	Drawer size 600 x 900 x 300mm deep overall constructed of 25 x 300mm MDF board front, 25 x 900mm sides, 25 x 300mm back, 6mm thick plywood properly housed and glued together including two 30 x 15mm drawer runners fixed to MDF board and forming groves to the sides of the runner including brass plated approved pull handle (colour of vineer to Architects approval).	24	NO.		
E	25mm Thick door size 700 x 600mm high constructed from veneer finished MDF board hardwood lipped on all edges to match and complete with brass plated piano hinges and pull handles.	24	NO		
F	25mm thick granite top with 10mm half round bullnosed edgings to approved samples.	6	SM		
G	150 x 25mm thick moulded mahogany skirting, coved on one side fixed to the MDF boards.	40	LM.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	25mm Thick machine cut, polished sand stone strips fixed on to the MDF board to the Architect's details as before described.	16	SM		
	<u>WINDOW CLEANING.</u>				
B	Supply labour and materials to wash and clean the existing windows including any repairs oiling testing and leaving it in perfect working order to satisfaction of the Architect.	544	SM		
	<u>PAINTING AND DECORATIONS as before described:-</u>				
C	Knot, prime stop and spray paint three coats of clear varnish paint to MDF board.	430	SM		
D	Ditto and apply three coats of gloss oil paint to wood surfaces not exceeding 100mm girth.	40	LM		
	<u>FRAMELESS GLASS PARTITIONS.</u>				
E	Supply and fix frameless glass partitions in 10mm thick laminated glass 3000mm high sand blasted 300mm vertical bands films and fixed to block work or concrete and including necessary fixing accessories and plugging (measured overall all through door openings) and make good finish after testing and leave in perfect working order.	165	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	<u>Extra over</u> frameless glass partition for 10mm toughened frameless glass door size 900 x 2400mm high including fixing and all necessary ironmongery.	5	NO.		
	<u>POWDER COATED, ALUMINIUM FRAME GLASS PARTITIONS as before described.</u>				
B	Supply and fix 1500mm high, powder coated, alluminium glazed partitions and screens, comprising 100 x 50mm, alluminium top rail, bottom rail, complete with alluminium glazing beads and including 6mm glass fixed in accordance with manufacturer's instruction and including making good finishes to the satisfaction of the Architect.	203	SM		
	<u>The following in composite gypsum board partitions to architect's detail.</u>				
C	12mm Thick gypsum boards, with and including 10 x 5mm deep grooves pattern.	8	SM		
D	50 x 75mm Selected cypress faming	103	LM.		
E	6mm thick laminated clear glass panels sand blasted 300mm vertical band films in glass beading (measured separately) all to Architect's details.	21	SM		
F	25 x 40mm mahogany glazing beads.	43	LM.		
G	20 x 150mm high coved mahogany skirting to the partition to match.	10	LM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>INTERNAL COLUMN TREATMENT (WITHIN OFFICES).</u>				
A	125 x 25mm Thick solid mahogany T&G cladding, 1500mm high, including the necessary dowelling and plugging to approval of the Architect.	33	SM		
B	Knot, prime, stop and spray paint three coats of clear polyurethane lacquer to T&G wood surfaces.	333	SM		
C	Carefully scrub to remove loosely adhering paint work prepare and apply two coats silk vinyl emulsion paint to the remaining existing columns heights to satisfaction of the Architect.	33	SM		
	<u>COLUMN ALONG INTERNAL ATRIUM CORRIDOR.</u>				
D	Make rough and prepare the existing column to receive stone cladding and supply and fix 25mm thick smooth, machine cut sandstone cladding laid and jointed in 200mm and 100mm alternating courses and keyed to pattern in recessed vertical and horizontal joints in coloured cement and sand mortar (1:3) to satisfaction of the Architect to approvals.	48	SM		
	<u>PARAPET WALL ALONG THE CORRIDOR.</u>				
	<u>Cladding.</u>				
E	Make rough and prepare the existing 1050mm high walling, to receive stone cladding and supply and fix with 25mm thick smooth, machine cut sandstone in 200mm and 100mm alternating courses to approvals as before described.	41	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>PRECAST CONCRETE COPING</u>				
A	Make rough and prepare existing wall to receive coping and supply and fix 250 x 50mm Thick precast concrete coping twice throated and weathered and laid on the walls in cement and sand mortar (1:3) to satisfaction of the Architect.	39	LM		
	<u>THE FOLLOWING IN HANDRAILS.</u>				
B	Supply and fix 400mm High railings constructed of 50mm diameter stainless steel handrails, 20mm diameter stainless steel vertical ballusters and including 3No 20mm diameter stainless steel intermediate rails including morticing and grouting top of masonay parapet wall at 1000mm centers, all to Architect details.	39	LM.		
	<u>PARAPET WALLING ON THE ROOF.</u>				
	<u>PRECAST CONCRETE COPING.</u>				
C	Make rough and prepare the surface of the walling to receive coping and supply and fix 250mm x 50mm thick precect concrete coping twice and throated and laid on the walls in cement and sand mortar (1:3) to satisfaction of Architect as before described.	264	LM.		
	<u>CEILING FINISHES.</u>				
D	Carefully scrub to remove loosely adhering paint works, clean, prepare and apply three coats plastic emulsion paint to existing soffits of concrete ceiling along the corridors to the satisfaction of the Architect.	86	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Supply and fix Suspended 600 x 600mm Armstrong Tatra or other equal and approved acoustic ceilings including frame rigid system and approved plugged suspension system: measured over light fittings; including all cutting and trimming around light fitting, columns etc and allowing for and including trap doors to specifications of the Architect.	1294	SM		
	<u>PRECAST CONCRETE FINS.</u>				
B	Carefully scrub to remove loosely adhering paintwork clean, prepare and apply two coats emulsion paint to existing concrete fins size 50 x 500 x 3000mm long (measured in areas).	1488	SM		
	<u>VENT BLOCKS.</u>				
C	Carefully scrub the surface of the existing vent blocks to remove loosely adhering paint work prepare and apply two coats emulsion paint to vent surfaces, measured flat overall both sides (Allow for painting inside the vents) [verification on the site necessary].	36	SM		
	<u>CONCRETE BEAMS FINISHES.</u>				
D	Carefully scrubs remove loosely adhering paintwork clean, prepare and apply mermoran or other equal end approved texture finish, to existing external beams to satisfaction of the Architect	112	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>NEW VIBRATED REINFORCED CONCRETE (GRADE 25) IN CONSTRAINED SPACE TO:-</u>				
A	New 200mm thick slab to new goods lift lobby.	9	SM		
B	Sawn formwork ditto to soffits of slab as before.	9	SM		
C	Assorted high tensile ditto reinforcement bar as before.	350	KG		
D	Extra over labour and materials in preparatory works and making good finishes in connection with construction of new goods lift lobby.	1	ITEM		
E	Granite floor tiles size 300 x 600 x 10mm thick laid on and including cement sand (1:4) backing and pointed in white cement to satisfaction of the Architect.	9	SM		
F	20 x 150mm Thick Skirtings to match.	7	LM.		
	<u>NEW WALLING IN CHANGING ROOMS.</u>				
G	200mm Thick natural stone wall bedded and jointed in cement and sand (1:4) mortar.	146	SM		
H	Prepare and apply two coats emulsion paint to the wall surfaces as before described.	146	SM		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>TREATMENT TO EXISTING EXTERNAL COLUMNS AND BEAMS</u>				
A	Wire brush existing bush hammered aggregate finished column air pressure cleaned and water wash and leave clean to satisfaction of the Architect.	465	SM		
B	Ditto to Beams.	191	SM		
	<u>CLADDING TO EXISTING COLUMNS</u>				
C	Make rough, prepare the existing column and supply and fix 25mm thick smooth, machine cut sand stone cladding in 200mm and 100mm alternating courses to approvals as before described.	65	SM		
	<u>WALL PAINTING</u>				
D	Scrub, to remove loosely adhering paintwork, clean, prepare and apply two coats emulsion paint to existing wall surfaces as before described.	136	SM		
	<u>DOORS.</u>				
E	50mm Thick solid mahogany door size 900 x 2400mm high comprising 125 x 50mm T&G match boarding panels in 200mm stiles top and bottom frames and glass vision glass opening (glass measured separately) to Architect detail.	1	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>FRAMELESS GLASS DOOR.</u>				
A	10mm Thick toughened frameless glass double door in two equal leaves of size 900 x 2400mm high with and including all the necessary ironmongery including floor action ironmongery and fixing accessories rested and left in perfect working order to satisfaction of the Architect (Ironmongery to approval of the Architect).	2	NO.		
	<u>THE FOLLOWING IN WROT MAHOGANY FRAMES AND FINISHINGS.</u>				
B	100 x 50mm Rebated door frames in two labours plugged.	6	LM.		
C	20 x 40mm Architraves with two labours.	6	LM.		
D	20mm Diameter Quadrant beading with one labour.	6	LM.		
	<u>GLAZING.</u>				
E	4mm Thick clear sheet glass and glazing to wood with beading (in pane 1.00 - 1.50SM).	2	SM		
F	Plastic weathering apron round the glass edges.	6	LM.		
	<u>Supply and fix the following ironmongery to timber doors with matching screws.</u>				
G	100mm Brass hinges.	1.5	PRS.		
H	Three lever 'Union' mortise door lock complete with furniture.	1	NO.		
I	38mm Rubber door stop as 'Union' rawl bolted.	1	NO.		
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<p><u>SIXTH FLOOR</u></p> <p><u>COLLECTION</u></p> <p>BROUGHT FORWARD FROM PAGE 80</p> <p>BROUGHT FORWARD FROM PAGE 81</p> <p>BROUGHT FORWARD FROM PAGE 82</p> <p>BROUGHT FORWARD FROM PAGE 83</p> <p>BROUGHT FORWARD FROM PAGE 84</p> <p>BROUGHT FORWARD FROM PAGE 85</p> <p>BROUGHT FORWARD FROM PAGE 86</p> <p>BROUGHT FORWARD FROM PAGE 87</p> <p>BROUGHT FORWARD FROM PAGE 88</p> <p>BROUGHT FORWARD FROM PAGE 89</p> <p>BROUGHT FORWARD FROM PAGE 90</p> <p>BROUGHT FORWARD FROM PAGE 91</p> <p>BROUGHT FORWARD FROM PAGE 92</p>				
	TOTAL FOR SIXTH FLOOR CARRIED TO SUMMARY				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>BILL NO. 05</u>				
	<u>SUMMARY</u>				
1	TOTAL FOR BASEMENT BROUGHT FORWARD FROM PAGE 02				
2	TOTAL FOR GROUND FLOOR BROUGHT FORWARD FROM PAGE 10				
3	TOTAL FOR FIRST FLOOR BROUGHT FORWARD FROM PAGE 15				
4	TOTAL FOR SECOND FLOOR BROUGHT FORWARD FROM PAGE 32				
5	TOTAL FOR THIRD FLOOR BROUGHT FORWARD FROM PAGE 48				
6	TOTAL FOR FOURTH FLOOR BROUGHT FORWARD FROM PAGE 63				
7	TOTAL FOR FIFTH FLOOR BROUGHT FORWARD FROM PAGE 79				
8	TOTAL FOR SIXTH FLOOR BROUGHT FORWARD FROM PAGE 93				
	SUBTOTAL NO. 01				
9	<u>LESS:</u> CREDIT ON DEMOLISHED AND CARTED AWAY RE - CYCLEABLE MATERIALS				
	TOTAL AMOUNT OF BUILDERS WORK CARRIED TO MAIN SUMMARY BUILDERS WORK				

BILL NO. 06
PC AND PROVISIONAL SUMS

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>BILL NO. 06</u>				
	<u>PRIME COST AND PROVISIONAL SUMS.</u>				
A	Include the Prime Cost Sum of Kenya Shillings One hundred eighteen million, seven hundred forty two thousand, four hundred (Kshs. 118,742,400.00) only for ELECTRICAL INSTALLATIONS to be executed complete by Nominated Subcontractor.				118,742,400.00
B	Add for Profit				
C	Add for Attendance				
D	Include the Prime Cost Sum of Kenya Shillings Thirty eight million, five hundred eighty seven thousand, five hundred (Kshs. 38,587,500.00) only for UNINTERRUPTABLE POWER SUPPLY (UPS) EQUIPMENT INSTALLATIONS to be executed complete by Nominated Subcontractor.				38,587,500.00
E	Add for Profit				
F	Add for Attendance				
G	Include the Prime Cost Sum of Kenya Shillings Thirty one million, five hundred thousand, (Kshs.31,500,000.00) only for SAFETY INSTALLATIONS to be executed complete by Nominated Subcontractor.				31,500,000.00
H	Add for Profit				
I	Add for Attendance				
J	Include the Prime Cost Sum of Kenya Shillings Thirty million, one hundred eighty seven thousand, five hundred (Kshs.30,187,500.00) only for PABX EQUIPMENT INSTALLATIONS to be executed complete by Nominated Subcontractor.				30,187,500.00
K	Add for Profit				
L	Add for Attendance				
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Include the Prime Cost Sum of Kenya Shillings Thirty eight million, eight hundred fifty thousand (Kshs. 38,850,000.00) only for STRUCTURED CABLING INSTALLATIONS to be executed complete by Nominated Subcontractor.				38,850,000.00
B	Add for Profit				
C	Add for Attendance				
D	Include the Prime Cost Sum of Kenya Shillings Twenty seven million, three hundred thousand (Kshs. 27,300,000.00) only for AUDIO/VISUAL EQUIPMENT INSTALLATION to be executed complete by Nominated Subcontractor.				27,300,000.00
E	Add for Profit				
F	Add for Attendance				
G	Include the Prime Cost Sum of Kenya Shillings Sixteen million, eight hundred thousand (Kshs. 16,800,000.00) only for REPLACEMENT OF 1NO. PASSENGER LIFT AND SUPPLY AND INSTALLATIONS OF 1NO. NEW GOODS LIFT to be executed complete by Nominated Subcontractor.				16,800,000.00
H	Add for Profit				
I	Add for Attendance				
TOTAL CARRIED TO COLLECTION					

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Include the Prime Cost Sum of Kenya Shillings Seven million, five hundred and seven thousand, five hundred (Kshs. 7,507,500.00) only for PLUMBING AND DRAINAGE INSTALLATIONS to be executed complete by Nominated Subcontractor.				7,507,500.00
B	Add for Profit				
C	Add for Attendance				
D	Include the Prime Cost Sum of Kenya Shillings Forty nine million, eight hundred seventy five thousand, five hundred (Kshs. 49,875,500.00) only for AIR CONDITIONING & MECHANICAL VENTILATION INSTALLATION to be executed complete by Nominated Subcontractor.				49,875,500.00
E	Add for Profit				
F	Add for Attendance				
TOTAL CARRIED TO COLLECTION					

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
A	Include the Prime Cost Sum of Kenya Shillings One hundred ninety two million, seven hundred thousand (Kshs. 192,700,000.00) only for FURNITURE SUPPLIES to Main Building to be executed complete by Nominated Subcontractor.				192,700,000.00
B	Add for Profit				
C	Add for Attendance				
D	Include the Prime Cost Sum of Kenya Shillings Twenty six million, three hundred thousand (Kshs. 26,300,000.00) only for STAFF CLINIC FURNITURE AT MARSHALLS HOUSE.				26,300,000.00
E	Add for Profit				
F	Add for Attendance				
	<u>CURTAIN AND DRAPING P.C. SUM.</u>				
G	Include the Prime Cost Sum of Kenya Shillings Seven million (Kshs. 7,000,000.00) only CURTAINS AND DRAPINGS INSTALLATIONS to designated offices to be executed complete by Nominated Subcontractor.				7,000,000.00
H	Add for Profit				
I	Add for Attendance				
	<u>SIGNAGE AND DIRECTORY P.C. SUMS</u>				
J	Include the Prime Cost Sum of Kenya Shillings Three million (Kshs. 3,000,000.00) only SIGNAGE AND DIRECTORY installations at designated locations within building to be executed complete by a Nominated Subcontractor.				3,000,000.00
K	Add for Profit				
L	Add for Attendance				
	<u>ARTWORK ITEMS P.C. SUMS.</u>				
M	Include the Prime Cost Sum of Kenya Shillings Six million, six hundred thousand (Kshs. 6,600,000.00) only installed complete by a Nominated Subcontractor.				6,600,000.00
N	Add for Profit				
O	Add for Attendance				
	TOTAL CARRIED TO COLLECTION				

ITEM	DESCRIPTION	QTY	UNIT	RATE	SHS
	<u>PROVISIONAL SUMS.</u>				
A	Include the Provisional Sum of Kenya shillings Eight million three hundred thousand (Kshs. 8,300,000.00) only for ADDITIONAL BUILDERS WORK IN CONNECTION WITH TRANSFORMER, LIFTS, AND SERVICES.		SUM		8,300,000.00
B	Include the Provisional Sum of Kenya Shillings Forty million (Kshs. 40,000,000.00) only for ALUCO BOND ROOF FASCIA TREATMENT.		SUM		40,000,000.00
C	Include the Provisional Sum of Kenya Shillings Sixty five million eight hundred thousand (Kshs. 65,800,000.00) only for REFURBISHMENT TO STAFF CLINIC AT MARSHALLS HOUSE				65,800,000.00
	TOTAL CARRIED TO COLLECTION				
	<u>COLLECTION</u>				
	<u>PRIME COST AND PROVISIONAL SUMS.</u>				
	BROUGHT FORWARD FROM PAGE 01				
	BROUGHT FORWARD FROM PAGE 02				
	BROUGHT FORWARD FROM PAGE 03				
	BROUGHT FORWARD FROM PAGE 04				
	BROUGHT FORWARD FROM ABOVE.				
	TOTAL FOR PRIME COST AND PROVISIONAL SUMS CARRIED TO SUMMARY				

BILL NO. 07
DAYWORKS

TEM	DESCRIPTION	KSHS
A	<p style="text-align: center;"><u>BILL NO. 07</u></p> <p style="text-align: center;"><u>DAYWORKS.</u></p> <p><u>DAYWORKS PREAMBLES</u></p> <p>Dayworks shall be varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment in addition to payment for associated materials and plant in accordance with Clause GCC 1.1(M).</p> <p>The PROJECT MANAGER may, if in his opinion it is necessary or desirable, order in writing that any additional or substituted work shall be executed on a day work basis. The Contractor shall then be paid for such work in accordance with Day work rates and percentage additions as inserted hereafter in these Bills of Quantities.</p> <p>The Contractor shall furnish to the PROJECT MANAGER all receipts or vouchers as may be necessary to prove the amounts paid and before ordering materials shall submit to the PROJECT MANAGER quotations for the same for his approval.</p> <p>In respect of all work executed on a daywork basis the Contractor shall, during the continuance of such work, deliver each day to the PROJECT MANAGER a list in duplicate of the names, occupation and time of all workers employed on such work and a statement also in duplicate showing the description and quantity of all materials and plant used thereon or therefore (other than plant which is included in the percentage addition on per amount of wages). One copy of each list and statement will, if correct or when agreed, be signed by the PROJECT MANAGER or Project Manager's Representatives and returned to the Contractor. At the end of each month the Contractor shall deliver to the PROJECT MANAGER a priced statement of the labour, material and plant (except as aforesaid) used and the Contractor shall not be entitled to any payment unless such lists and statements have been fully and punctually rendered. Provided always that if the PROJECT MANAGER shall consider statement by the Contractor in accordance with the foregoing provision was impracticable, he shall nevertheless be entitled to authorise payment for such work either as daywork (on being satisfied as to such value thereof as he shall consider fair and reasonable) in conjunction with the Quantity Surveyor.</p> <p>The Contractor shall price all items of plant, materials and labour listed in the day works bill of quantities</p> <p>a. Plant</p> <p>Should the Contractor's proposed plant not include one of the scheduled items he shall either:-</p> <ol style="list-style-type: none"> i. Insert a rate that covers all costs associated with hiring the item of plant based on a minimum hire period of 8 hours per day. or ii. Insert a rate for any similar type of plant available to the Contractor which has a capacity greater than that detailed in the Bills of Quantities. <p>Measurement and payment will be made for the category of plant instructed by the Engineer whether or not the Contractor carries out the Dayworks with an item of plant with a larger capacity.</p>	
	TOTAL CARRIED TO COLLECTION	

TEM	DESCRIPTION	KSHS
	<p>b Labour</p> <p>In the Bills of Quantities labour is categorized by ranges of hourly rates (or equivalent hourly rates). The hourly rates refer to those set out in the current agreement between the Kenya Association of Building and Civil Engineering Contractors', Joint Building Council and the Kenya Building Construction, Civil Engineering and Allied Trades Worker's Union.</p> <p>The hourly rates entered by the Contractor for each category shall apply throughout the duration of the Contract notwithstanding the fact that the Contractor may elect to pay more than the minimum laid down in the Agreement, or that the rates laid down in the Agreement are increased or decreased during the course of the Contract.</p>	

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p align="center"><u>BILL NO. 07</u></p> <p align="center"><u>DAYWORKS</u></p> <p><u>IN ACCORDANCE CLAUSE NO.29 OF</u> <u>CONDITIONS OF CONTRACT</u></p> <p><u>(ALL PROVISIONAL)</u></p> <p>Note: Payment shall only be made on Dayworks as described overleaf and as authorized in writing by the Project Manager and in accordance with Schedule of Basic Rates quoted by the Contractor in the Dayworks Bills of Quantities.</p> <p><u>LABOUR</u></p> <p>A. Labourer</p> <p>B. Ganger</p> <p>C. Skilled tradesman</p> <p>D. Headman</p> <p>E. Light plant operator</p> <p>F. Heavy plant operator</p> <p><u>Add:</u></p> <p>G. To the basic nett rates of labour used for work carried out on day works, an addition ofper cent which is to include for task work and incentive schemes, tools, standing scaffolding, supervision, insurance, transport, profit overheads and any other necessary emoluments. (Sum of Item A to F multiplied by per cent).</p> <p>TOTAL CARRIED TO COLLECTION</p> <p align="center">Page DW/03</p>				
		17	Hrs		
		17	Hrs.		
		17	Hrs.		
		17	Hrs.		
		17	Hrs.		
		17	Hrs.		
			Item		

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>DAYWORKS (Cont'd.)</u>				
	<u>MATERIALS</u>				
	Where materials are supplied which are not mentioned in the list hereunder then payment of such materials shall be based only on the approved invoice cost for materials as specifically authorized by the Project Manager.				
A.	Cement	5	Ton		
B.	Sand (fine aggregate)	10	Ton		
C.	Course aggregate (graded 20 mm)	20	Ton		
D.	Murram	21	Ton		
E.	Hardcore	21	Ton		
F.	Steel reinforcement	1	Ton		
G.	Sawn timber (podocarpus)	1	CM		
H.	Wrot timber(cypress in various sections)	1	CM		
	Wrot hardwood timber (in various section).				
I.	12 mm Plywood for shuttering	12	SM		
J.	Paint, gloss	10	Litres		
K.	Paint, matt	10	Litres		
L.	Paint, emulsion (Internal or External)	10	Litre		
M.	4 mm Sheet glass (O.G.Q.) (net).	3	SM		
N.	6 mm Sheet glass (O.G.Q)(net).	3	SM		
	<u>Add</u>				
O.	The basic nett cost of materials used cost of materials used for work carried out on day works, an addition of per cent which is to include for unloading and storing as necessary, the use of hand plant, and tools, machines etc. available on site, profit and overheads and any other necessary emoluments. (Sum of A to N multiplied byper cent).		Item		
	TOTAL CARRIED TO COLLECTION				
	Page DW/04				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>DAYWORKS (Cont'd)</u>				
	<u>PLANT AND EQUIPMENT.</u>				
A.	Portable compressor with 2 breakers or equivalent	5	Hrs.		
B.	Dumper truck (750 kg)	8	Hrs.		
C.	Lorry, five tonne tipper	8	Hrs.		
D.	Lorry, seven tonne tipper	8	Hrs.		
E.	Concrete mixer (14/10) complete for weight batch mixing	8	Hrs.		
F.	Concrete vibrator	8	Hrs.		
G.	Drum floor sander	8	Hrs.		
H.	Centrifugal pump complete with hose and ancillary equipment	5	Hrs.		
I.	Bucket hoist	8	Hrs.		
J.	Tower crane	9	Hrs.		
K.	Cat DGC bull dozer with ripper	9	Hrs.		
L.	Shovel	9	Hrs.		
M.	10 to 12 Tonne roller	8	Hrs.		
N.	Power Generator	9	Hrs.		
O.	Bitumen layer	9	Hrs.		
	<u>Add</u>				
P.	To the basic nett rate of plant used for work carried out on dayworks, an addition ofper cent which is to include for driver and/or attendant, fuel and consumable stores, supervision, insurance, road licence, profit overheads and any other necessary emoluments. Sum of A to O multiplied by per cent		Item		
	TOTAL CARRIED TO COLLECTION				
	Page DW/05				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>DAYWORKS</u>				
	<u>ALL PROVISIONAL</u>				
	<u>COLLECTION</u>				
	BROUGHT FORWARD FROM PAGE 01				
	BROUGHT FORWARD FROM PAGE 02				
	BROUGHT FORWARD FROM PAGE 03				
	BROUGHT FORWARD FROM PAGE 04				
	BROUGHT FORWARD FROM PAGE 05				
	BROUGHT FORWARD FROM PAGE 06				
	TOTAL FOR DAYWORKS CARRIED TO MAIN SUMMARY OF BUILDERS WORK		KSHS		
	Page DW/06				

BILL NO. 08 STAFF CLINIC REFURBISHMENT

Staff Clinic Refurbishment is a **RATES ONLY ITEM**.

It is MANDATORY to fill rates for this section.

The Rates only Bill of Quantities for Builders Work is immediately after the Main Summary.

NOTE: Because this is a Rates Only item, there is no amount carried to Main Summary.

BILL NO. 08 STAFF CLINIC REFURBISHMENT

Staff Clinic Refurbishment is a **RATES ONLY ITEM**.

It is MANDATORY to fill rates for this section.

The Rates only Bill of Quantities for Builders Work is immediately after the Main Summary.

NOTE: Because this is a Rates Only item, there is no amount carried to Main Summary.

**MAIN SUMMARY
BUILDERS WORKS
(MAIN CONTRACTOR)**

**PROPOSED OFFICE MODERNIZATION AND CREATION OF WORK - STATIONS, PHASE III PROJECT FOR CENTRAL
BANK OF KENYA, HEADQUARTER, NAIROBI.**

ITEM	DESCRIPTION	KSHS	USE ONLY
<u>MAIN SUMMARY</u>			
1	BIDDING DOCUMENT FOR PROCUREMENT OF WORK.		
2	SPECIFICATIONS, PREAMBLES AND LISTS OF DRAWINGS.		
3	PARTICULAR PRELIMINARIES.		
4	GENERAL PRELIMINARIES.		
5	BUILDERS WORK.		
6	PRIME COST AND PROVISIONAL SUMS.		
7	DAYWORKS.		
8	STAFF CLINIC REFURBISHMENT	RATES ONLY ITEM	
9	SUBTOTAL NO. 01		
10	ADD: CONTINGENCY 7.5%		
11	SUBTOTAL NO. 02		
12	ADD: VAT 16%		
	TOTAL CARRIED TO FORM OF TENDER.		
CONTRACTOR'S ADDRESS: SIGNATURE AND OFFICIAL STAMP: DATE: WITNESS NAME: DESCRIPTION/OCCUPATION: SIGNATURE: DATE:			

ITEM	DESCRIPTION	QTY	UNIT	RATE
	<p><u>STAFF CLINIC THIRD AND FOURTH FLOOR MARSHALLS</u></p> <p><u>THE FOLLOWING IS TO BE EXECUTED AT THE THIRD AND FOURTH FLOOR OF MARSHALLS HOUSE CBK STAFF CLINIC AND THE CONTRACTOR IS TO PRICE ACCORDINGLY NOTING THE DISTANCE BETWEEN CBK HEADQUARTERS AND THE CBK STAFF CLINIC.</u></p> <p><u>DEMOLITIONS.</u></p> <p><u>VENEERED MDF BOARD PARTITIONING.</u></p> <p>A Carefully demolish the existing veneered MDF board partitions with and including timber frame work and cart away the debris from the site as directed and make good the floor, ceiling and wall surfaces where disturbed.</p> <p>740 SM</p> <p><u>GLASS PANELS TO VENEERED MDF BOARD PARTITIONS.</u></p> <p>B Carefully dismantle and remove existing 4mm glass panels within the partitions with and including glazing beads and cart away from the site as directed.</p> <p>60 SM</p> <p><u>DOORS TO VENEERED MDF BOARD PARTITIONS.</u></p> <p><u>Carefully dismantle and remove take the following veneered flush doors with and including its framing, ironmongery and cart away from the site as directed.</u></p> <p>C Doors size 900mm x 2100mm high.</p> <p>32 NO.</p> <p>D Ditto double door size 1800 x 2250 high ditto.</p> <p>3 NO.</p>			

ITEM	DESCRIPTION	QTY	UNIT	RATE
	<u>ELECTRICAL INSTALLATION AND FITTINGS.</u>			
A	Carefully dismantle including provision of attendance to specialist and remove all existing ceiling recessed lighting fittings size 1500 x 600mm complete with reflector fillings and 4ft fluorescent light fittings, conducting cabling and any other existing electrical accessories to be cart away from the site as directed and prepare slab soffits to receive new electrical installation (measured separately) as before described.	87	NO.	
	<u>Provide labour and material and carefully handle and cart away from the site the following office old furniture as described before.</u>			
B	Office desk overall size 1320 x 730 x 730mm high with 6NO equal 1 drawers.	57	NO.	
C	Ditto overall size 780 x 1540 x 730mm high ditto.	33	NO.	
D	Assorted executive chairs	95	NO.	
E	Steel safes overall size 540 x 500 x 1560mm high.	13	NO.	
F	Ditto overall size 920 x 460 x 1820mm high.	5	NO.	
	<u>FLOOR FINISHES.</u>			
G	Hack off and remove the existing PVC floor finishes complete with and including cement and sand screed backing and including all skirtings, prepare and level the surfaces ready to receive new floor finish (measured separately), cart away the debris from the site as directed.	1002	SM	
H	Ditto ceramic floor finish ditto.	50	SM	

ITEM	DESCRIPTION	QTY	UNIT	RATE
	<u>LOUVRED GLASS.</u>			
A	Carefully remove the existing louvred glass windows overall size approximately 1200 x 1200mm high with and including all the framing, ironmongery and cart away as directed.	100	NO.	
	<u>CERAMIC WALL TILES.</u>			
B	Carefully remove the existing ceramic wall ties in wash rooms with and including cement sand grouting and cart way all the debris and leave the concrete wall surfaces ready to receive new ceramic tiles (m/s).	149	SM.	
	<u>CEILING FINISHES.</u>			
C	Carefully remove the existing hardboard ceilings within the walkway/corridor with and including all the ceiling branderings, cornices and all timber framings as necessary and cart away all the debris from site as directed and repair and make good concrete slab soffits to receive new ceiling (measured separately).	100	SM	
D	Prepare the surfaces of the existing R.C. slab soffits to remove loosely adhering paint and leave ready to receive new coats of paints (m.s).	1035	SM	

ITEM	DESCRIPTION	QTY	UNIT	RATE
	<u>THE FOLLOWING IN NEW WORKS</u>			
	<u>FLOOR FINISHES.</u>			
A	Supply and fix granito floor tiles size 300 x 300 x 25mm thick laid on and including cement sand (1:4) backing in approved adhesive mastic and pointing in coloured cement to match to the satisfaction of the Architect.	1002	SM	
B	100 x 50mm Thick skirting to match.	183	LM.	
C	Supply and fix 300 x 300 x 10mm Non - slip ceramic tiles to wash rooms, sluice and changing rooms	64	SM	
D	150mm High ceramic skirting to match.	23	LM.	
	<u>INTERNAL COLUMN TREATMENT (WITHIN OFFICES).</u>			
E	125 X 25mm Thick solid mahogany T&G cladding, 900mm high, including the necessary dowelling and plugging to approval.	30	SM	
F	Knot, Prime, stop and spray paint three coats of clear polyurethane lacquer to T&G wood surfaces.	30	SM	
G	Carefully scrub to remove loosely adhering paint work prepare and apply two coats silk vinyl emulsion paint to the remaining existing columns heights to satisfaction.	68	SM	
	<u>MAZERAS STONE CLADDING.</u>			
H	Prepare the surfaces by scrubbing off adhering paint and clad wall with and including 50mm strip mazer as stone to 3000mm height.	92	SM	

ITEM	DESCRIPTION	QTY	UNIT	RATE
	<p><u>COLOURED POWDER COATED ALLUMINIUM WINDOWS.</u></p> <p><u>Supply assemble and fix the following purpose made standard power coated Alluminium windows as Booth or other equal and approved to match existing works complete with all necessary ironmongery and priming with red oxide and fixing lugs to jambs complete with and including standard hinges, catches, bolts, locks, handle stays and fasteners to match all to the Architect details.</u></p>			
A	Window overall size 1200 x 1200mm high to Architect's details.	100	NO.	
	<p><u>The following in 1NO. Typical tea serving area to Architect details.</u></p> <p><u>Veneers MDF board colour to Architect's approval.</u></p>			
B	12mm Thick veneer MDF fixed onto wall including all necessary plugged and priming backs before fixing.	28	SM	
C	25mm Thick veneer MDF to division, partition and shelving.	245	SM	
D	40 x 40mm Selected Cypress bearers and frames.	218	LM.	
E	Drawer size 600 x 900 x 300mm deep overall constructed of 25 x 300mm MDF board front, 25 x 900mm sides, 25 x 300mm back, 6mm thick plywood properly housed and glued together including two 30 x 15mm drawer runners fixed to MDF board and brass plated approved pull handle (colour of veneer to Architects approval).	16	NO.	

ITEM	DESCRIPTION	QTY	UNIT	RATE
A	25mm Thick door size 700 x 600mm high constructed from veneer finished MDF board hardwood lipped on all edges to match and complete with brass plated piano hinges and pull handles.	16	NO.	
B	25mm Thick granite top with 10mm half round bullnosed edgings to approved samples.	5	SM	
C	150 x 25mm Thick moulded mahogany skirting, coved on one side fixed to the MDF boards.	27	LM.	
D	25mm Thick machine cut, polished sand stone strips fixed on to the MDF boards to the Architect's details as before described.	11	SM	
	<u>CERAMIC GLAZED WALL TILES AS SAJ OR OTHER EQUAL AND APPROVED.</u>			
E	150 x 150mm Thick tiling fixed to washroom, sluice and changing rooms walls with approved adhesive and pointed in white cement.	187	SM	
	<u>The following in composite gypsum board partition to Architect's details.</u>			
	<u>GYPSUM BOARD PARTITONS.</u>			
F	12mm Thick veneered gypsum board with and including 10 x 5mm deep groves pattern to Architect approval.	483	SM	
G	50 x 75mm Selected cypress framing.	1383	LM.	
	<u>GLASS PANELS.</u>			
H	6mm Thick laminated clear glass panels sand blasted 300mm	95	SM.	
I	25 x 40mm mahogany glazing beading.	342	LM.	
J	150 x 25mm Thick moulded mahogany skirting, coved on one side fixed to the gypsum boards.	170	LM.	

ITEM	DESCRIPTION	QTY	UNIT	RATE
	<u>FRAMELESS GLASS PARTITIONS.</u>			
A	Supply and fix frameless glass partitions in 8mm thick laminated glass 3000mm high sand blasted 300mm vertical bands films and fixed to block work or concrete and including necessary fixing accessories and plugging (measured overall all through door openings) and make good finish after testing and leave in perfect working order.	318	SM	
B	Ditto 1800mm high ditto.	57	SM	
C	<u>Extra over</u> frameless glass partition for 10mm toughened frameless glass door size 800 x 1800mm high including fixing and all necessary ironmongery.	8	NO.	
D	Ditto size 900 x 2400mm high ditto.	23	NO.	
E	Ditto double door size 1500 x 2400mm high ditto.	1	NO.	
	<u>CEILING FINISHES.</u>			
F	Supply and fix 12mm thick Gypsum board ceiling including hardwood framing, brandering and cornices measured over light fittings; including all cutting and trimming around light fittings, columns etc and allowing for and including trap doors to specifications.	297	SM	
G	Clean, prepare and apply three coats of plastic emulsion paint to existing soffits of concrete ceiling.	935	SM	

ITEM	DESCRIPTION	QTY	UNIT	RATE
	<u>DOORS.</u>			
	<u>T&G DOORS.</u>			
A	50mm Thick solid mahogany door size 800 x 2400mm high comprising 125 x 50mm T&G match boarding panels in 200mm stiles, top and bottom frames as before described.	10	NO.	
B	Ditto size 900 x 2400mm high ditto.	24	NO.	
C	Ditto double door size 1200 x 2400mm high in two equal opening leaves.	1	NO.	
D	Ditto double door size 1500 x 2400mm high ditto.	4	NO.	
E	Ditto double door size 1800 x 2400mm high ditto.	1	NO.	
	<u>ACCESS CONTROLLED T&G DOORS.</u>			
F	50mm Solid mahogany door size 900 x 2400mm high comprising 125 x 50mm T&G match boarding panels in 200mm stiles, top and bottom frames as before described.	2	NO.	
G	Ditto double door size 1200 x 2400mm high in two equal opening leaves.	2	NO.	
H	Ditto double door size 1800 x 2400mm high ditto.	1	NO.	
	<u>THE FOLLOWING IN MAHOGANY FRAMES AND FINISHES.</u>			
I	100 x 50mm Rebated door frames in two labours plugged.	268	LM.	
J	20 x 40mm Architraves with two labours.	268	LM.	
K	20mm Diameter Quadrant beading with one labour.	268	LM.	

ITEM	DESCRIPTION	QTY	UNIT	RATE
	<u>Supply and fix the following ironmongery to timber doors with matching screws.</u>			
A	100mm Brass hinges.	67.5	PRS.	
B	Three lever 'Union' mortise door lock complete with furniture.	54	NO.	
C	38mm Rubber door stop as 'Union' rawl bolted.	54	NO.	
D	150mm Alluminium barrel bolt.	54	NO.	
E	150mm Pull handle.	54	NO.	
F	Overhead door closer as "Yale" specifications to approval of the Architect.	54	No.	
G	Security deadlock as 'Yale'	54	NO.	
	<u>Knot, prime, stop and spray paint three coat clear matt wood varnish to timber surfaces as before described.</u>			
H	General door surfaces internally and externally (measured overall).	215	SM	
I	General surfaces of gypsum boards.	780	SM	
J	Ditto to architraves n.e 100mm girth.	268	LM.	
K	Ditto to frames over 100mm but not exceeding 200mm girth.	536	LM.	