

**BILL OF QUANTITIES**

**CONTRACT PRELIMINARIES**

**AND**

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**GENERAL CONDITIONS**

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## CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

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## SECTION C

### CONTRACT PRELIMINARIES AND GENERAL CONDITIONS

#### 1.01 Examination of Tender Documents

The tenderer is required to check the number of pages of this document and should he find any missing or indistinct, he must inform the Engineer at once and have the same rectified.

All tenderers shall be deemed to have carefully examined the following:

- a) Work detailed in the Specification and in the Contract Drawings.
- b) The Republic of Kenya Document "General Conditions of Contract for Electrical and Mechanical Works".
- c) Other documents to which reference is made.

He shall also be deemed to have included for any expenditure which may be incurred in conforming with the above items (a), (b), (c) and observe this expense as being attached to the contract placed for the whole or any part of the work.

The tenderer shall ensure that all ambiguities, doubts or obscure points of detail, are clarified with the Engineer before submission of his tender, as no claims for alleged deficiencies in the information given shall be considered after this date.

#### 1.02 Discrepancies

The contractor shall include all work either shown on the Contract Drawings or detailed in the specification. No claim or extra cost shall be considered for works which has been shown on the drawings or in the specification alone.

Should the drawing and the specification appear to conflict, the contractor shall query the points at the time of tendering and satisfy himself that he has included for the work intended, as no claim for extra payment on this account shall be considered after the contract is awarded.

#### 1.03 Conditions of Contract Agreement

The contractor shall be required to enter into a contract with the Employer.

1.04 **Payment**

Payment will be made through certificates to the Contractor. All payments will be less retention as specified in the Contract.

1.05 **Definition of Terms**

Throughout these contract documents units of measurements, terms and expressions are abbreviated and wherever used hereinafter and in all other documents they shall be interpreted as follows:

- i) **Contractor:** The term “**Contractor**” shall mean the firm or company appointed to carry out the Lift Installation works and shall include his or their heir, executors, assigns, administrators, successors, and duly appointed representatives.
- ii) **Contract Works:** The term “**contract Works**” shall mean all or any portion of the work, materials and articles, whether the same are being manufactured or prepared, which are to be used in the execution of this contract and whether the same may be on site or not.
- iii) **Contract Drawings:** The term “**Contract Drawings**” shall mean those drawings required or referred to herein and forming part of the Bills of Quantities.
- iv) **Working Drawings:** The term “**Working Drawings**” shall mean those drawings required to be prepared by the contractor as hereinafter described.
- v) **Record Drawings:** The term “**Record Drawings**” shall mean those drawings required to be prepared by the contractor showing “as installed” and other records for the contract Works.
- vi) **Abbreviations:**

**CM** shall mean **Cubic Metre**

**SM** shall mean **Square Metre**

**LM** shall mean **Linear Metre**

**LS** shall mean **Lump Sum**

**mm** shall mean **Millimetres**

**No.** shall mean **Number**

**Kg.** shall mean **Kilogramme**

**KEBS** shall mean **Kenya Bureau of Standards**

**BS** shall mean. **Current standard British Standard Specification published by the British Standard Institution, 2 Park Street, London W1, England**

“**Ditto**” shall mean the whole of the preceding description in which it occurs. Where it occurs in description of succeeding item it shall mean the same as in the first description of the series in which it occurs except as qualified in the description concerned. Where it occurs in brackets it shall mean the whole of the preceding description which is contained within the appropriate brackets.

1.06 **Site Location**

The site of the Contract Works is situated at **Electricity House, New Station Road – Kisumu**. The tenderer is recommended to visit the site and shall be deemed to have satisfied himself with regard to access, possible conditions, the risk of injury or damage to property on/or adjacent to the site, and the conditions under which the contract Works shall have to be carried out and no claims for extras will be considered on account of lack of knowledge in this respect.

1.07 **Duration of Contract**

The Contractor shall be required to phase his work in accordance with the works programme (or its revision). The programme is to be agreed with the Project Manager.

1.08 **Scope of Contract Works**

The contractor shall supply, deliver, unload, hoist, fix, test, commission and hand-over in satisfactory working order the complete installations specified hereinafter and/or as shown on the Contract Drawings attached hereto, including the provision of labour, transport and plant for unloading material and storage, and handling into position and fixing, also the supply of ladders, scaffolding the other mechanical devices to plant, installation, painting, testing, setting to work, the removal from site from time to time of all superfluous material and rubbish caused by the works.

The contractor shall supply all accessories, whether of items or equipment supplied but to be fixed and commissioned under this contract.

1.09 **Extent of the contractor's Duties**

At the commencement of the works, the contractor shall investigate and report to the Engineer if all materials and equipment to be used in the work and not specified as supplied by the others are available locally. If these materials and equipment are not available locally, the contractor shall at this stage place orders for the materials in question and copy the orders to the Engineer. Failure to do so shall in no way relieve the contractor from supplying the specified materials and equipment in time.

Materials supplied by others for installation and/or connection by  
The contractor shall be carefully examined in the presence of the Supplier before installation and connection. Any defects noted shall immediately be reported to the Engineer.

The contractor shall be responsible for verifying all dimensions relative to his work by actual measurements taken on site.

The contractor shall mark accurately on one set of drawings and indicate all alterations and/or modifications carried out to the designed system during the construction period. This information must be made available on site for inspection by the Engineer.

1.10 **Execution of the Works**

The works shall be carried out strictly in accordance with:

- a) All relevant Kenya Bureau of Standards Specifications.
- b) All relevant British Standard Specifications and Codes of Practice (hereinafter referred to as B.S. and C.P. respectively).
- c) This Specification.
- d) The Contract Drawings.
- e) The Bye-laws of the County Governments.



- f) The Engineer's Instructions.
- g) KPLC Codes of Practice and Safety Health Requirements

The Contract Drawings and Specifications to be read and construed together.

1.11 **Validity of Tender**

The tender shall remain valid for acceptance within 180 days from the final date of submission of the tender, and this has to be confirmed by signing the Tender Bond. The tenderer shall be exempted from this Bond if the tender was previously withdrawn in writing to the Employer before the official opening.

1.12 **Firm – Price contract**

Unless specifically stated in the documents or the invitation to tender, this is a firm-price Contract and the contractor must allow in his tender for the increase in the cost of labour and/or materials during the duration of the contract. No claims will be allowed for increased costs arising from the fluctuations in duties and/or day to day currency fluctuations. The contractor will be deemed to have allowed in his tender for any increase in the cost of materials which may arise as a result of currency fluctuation during the contract period.

1.13 **Variation**

No alteration to the contract Works shall be carried out until receipt by the contractor of written instructions from the Project Manager.

Any variation from the contract price in respect of any extra work, alteration or omission requested or sanctioned by the project manager shall be agreed and confirmed in writing at the same time such variations are decided and shall not affect the validity of the Contract. Schedule of Unit Rates shall be used to assess the value of such variations. No allowance shall be made for loss of profit on omitted works.

Where the Project Manager requires additional work to be performed, the contractor, if he considers it necessary, will give notice within seven ( 7 ) days to the Project Manager of the length of time he (the contractor) requires over and above that allotted for completion of the contract.

If the contractor fails to give such notice he will be deemed responsible for the claims arising from the delay occasioned by reason of such extension of time.

1.14 **Prime Cost and Provisional Sums**

A specialist Contractor may be nominated by the Project Manager to supply and/or install any equipment covered by the Prime Cost or Provisional Sums contained within the Contract documents.

The work covered by Prime Cost and Provisional Sums may or may not be carried out at the discretion of the Project Manager.

The whole or any part of these sums utilised by the contractor shall be deducted from the value of the contract price when calculating the final account.

1.15 **Bond**

The tenderer must submit with his tender the name of one Surety who must be an established Bank or as may be described in the ITT who will be willing to be bound to the Employer for an amount of Kenya Shillings 150,000.00

1.16 **Government Legislation and Regulations**

The contractor's attention is called to the provision of the Factory Act 1972 and subsequent amendments and revisions, and allowance must be made in his tender for compliance therewith, in so far as they are applicable.

The contractor must also make himself acquainted with current legislation and any Government regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc.

The contractor shall allow for providing holidays and transport for work people, and for complying with Legislation, Regulations and Union Agreements.

1.17 **Import Duty and Value Added Tax**

The contractor will be required to pay full Import Duty and Value Added Tax on all items of equipment, fittings and plant, whether imported or locally manufactured. The tenderer shall make full allowance in his tender for all such taxes.

1.18 **Insurance Company Fees**

Attention is drawn to the tenderers to allow for all necessary fees, where known, that may be payable in respect of any fees imposed by Insurance Companies or statutory authorities for testing or inspection.

No allowance shall be made to the contractor with respect to fees should these have been omitted by the tenderer due to his negligence in this respect.

1.19 **Provision of Services by the Contractor**

Contractor shall make the following facilities available for his use:

- a) Attendance and the carrying out of all work affecting the structure of the building which may be necessary, including all chasing, cutting away and making good brickwork, all plugging for fixing, fittings, machinery, fan ducting, etc., and all drilling and tapping of steel work. Any purpose made fixing brackets shall not constitute Builder's Work and shall be provided and installed by the contractor unless stated hereinafter otherwise.
- b) The provision of temporary water, lighting and power: All these services utilised shall be paid for by the Contractor
- c) Fixing of anchorage and pipe supports in the shuttering, anchorage with fully dimensioned drawings detailing the exact locations.
- d)
  - i) Provision of scaffolding, cranes, etc. but only in so far as it is required for the Contract Works
  - ii) Any specialist scaffolding, cranes, etc. to be used by any Contractor for his own exclusive use shall be paid for by the Contractor.

1.20 **Suppliers**

The contractor shall submit names of any supplier for the materials to be incorporated, to the Engineer for approval. The information regarding the names of the suppliers may be submitted at different times, as may be convenient, but no sources of supply will be changed without prior approval.

Each supplier must be willing to admit the Engineer or his representative to his premises during working hours for the purpose of examining or obtaining samples of the materials in question.

1.21 **Samples and Materials Generally**

The contractor shall, when required, provide for approval at no extra cost, samples of all materials to be incorporated in the works. Such samples, when approved, shall be retained by the Engineer and shall form the standard for all such materials incorporated.

1.22 **Administrative Procedure and Contractual Responsibility**

The Contractor is entirely responsible to the Employer for the whole of the works including any Contract Works and shall deal direct with the Employer or Engineer.

1.23 **Bills of Quantities**

The Bills of Quantities have been prepared in accordance with the standard method of measurement of Building Works for East Africa, first Edition, Metric, 1970. All the Quantities are based on the Contract Drawings and are provisional and they shall not be held to gauge or to limit the amount or description of the work to be executed by the contractor but the value thereof shall be deducted from the Contract Sum and the value of the work ordered by the Engineer and executed thereunder shall be measured and valued by the Engineer in accordance with the conditions of the contract.

All work liable to adjustment under this contract shall be left uncovered for a reasonable time to allow measurements needed for such adjustment to be taken by the Quantity Surveyor or Engineer. Immediately the work is ready for measuring the Contractor shall give notice to the Quantity Surveyor or Engineer to carry out measurements before covering up. If the contractor shall make default in these respects he shall, if the Project Manager so directs, uncover the work to enable the necessary measurements to be taken and afterwards reinstate at his own expense.

1.24 **Contractor's Office in Kenya**

The contractor shall maintain (after first establishing if necessary) in Kenya an office staffed with competent manager and such supporting technical and clerical staff as necessary to control and coordinate the execution and completion of the contract Works.

The Manager and his staff shall be empowered by the contractor to represent him at meetings and in discussions with the Employer, the Engineer and other parties who may be concerned and any liaison with the contractor's Head Office on matters relating to the design, execution and completion of the contract Works shall be effected through his office in Kenya.

It shall be the contractor's responsibility to procure work permits, entry permits, licenses, registration, etc., in respect of all expatriate staff.

The Contractor shall prepare a substantial proportion of his Working Drawings at his office in Kenya. No reasons for delays in the preparation or submission for approval or otherwise of such drawings or proposals will be accepted on the grounds that the contractor's Head Office is remote from his office in Nairobi or the site of the contract Works or otherwise.

1.25 **Builder's Work**

All chasing, cutting away and making good will be done by the Contractor. The contractor shall also mark out in and be responsible for accuracy of the size and position of all holes and chases required.

The contractor shall drill and plug holes in floors, walls, ceiling and roof for securing services and equipment requiring screw or bolt fixings.

The contractor shall also provide and install any purpose made fixing brackets.

1.26 **Structural Provision for the Works**

Preliminary major structural provision has been made for the contract works based on outline information ascertained during the preparation of the Specification.

The preliminary major structural provision made will be deemed as adequate unless the contractor stated otherwise when submitting his tender.

Any major structural provision or alteration to major structural provisions required by the Contractor shall be shown on Working Drawings to be submitted to the Engineer within 30 days of being appointed.

No requests for alterations to preliminary major structural provisions will be approved except where they are considered unavoidable by the Engineer. In no case will they be approved if building work is so far advanced as to cause additional costs or delays in the work of the contractor.

### **1.27 Position of Services, Plant, Equipment, Fittings and Apparatus**

The Contract Drawings give a general indication of the intended layout. The position of the equipment and apparatus, and also the exact routes of the ducts, main and distribution pipework shall be confirmed before installation is commenced. The exact sitting of appliances, pipework, etc., may vary from that indicated.

The routes of services and positions of apparatus shall be determined by the approved dimensions detailed in the Working Drawings or on site by the Engineer in consultation with the contractor .

Services throughout the ducts shall be arranged to allow maximum access along the ducts and the services shall be readily accessible for maintenance. Any work which has to be re-done due to negligence in this respect shall be the contractor's responsibility.

The contractor shall be deemed to have allowed in his contract sum for locating terminal points of services (e.g. lighting, switches, socket outlets, lighting points, control switches, thermostats and other initiating devices, taps, stop cocks) in positions plus or minus 1.2m horizontally and vertically from the locations shown on Contract Drawings. Within these limits no variations in the Contract Sum will be made unless the work has already been executed in accordance with previously approved Working Drawings and with the approval of the Engineer.

### **1.28 Checking of Work**

The Contractor shall satisfy himself to the correctness of the connections he makes to all items of equipment supplied under the contract agreement and equipment supplied under other contracts before it is put into operation. Details of operation, working pressures, temperatures, voltages, phases, power rating, etc., shall be confirmed to others and confirmation received before the system is first operated.

### **1.29 Setting to Work and Regulating System**

The contractor shall carry out such tests of the contract Works as required by British Standard Specifications, or equal and approved codes as specified hereinafter and as customary.

No testing or commissioning shall be undertaken except in the presence of and to the satisfaction of the Engineer unless otherwise stated by him (Contractor's own preliminary and proving tests excepted).

It will be deemed that the contractor has included in the contract Sum for the costs of all fuel, power, water and the like, for testing and commissioning as required as part of the contract Works. He shall submit for approval to the Engineer a suitable programme for testing and commissioning. The Engineer and Employer shall be given ample warning in writing, as to the date on which testing and commissioning will take place.

The contractor shall commission the contract Works and provide attendance during the commissioning of all services, plant and apparatus connected under the contract Agreement or other Contract Agreements, related to the project.

Each system shall be properly balanced, graded and regulated to ensure that correct distribution is achieved and where existing installations are affected, the Contractor shall also regulate these systems to ensure that their performance is maintained.

The proving of any system of plant or equipment as to compliance with the Specification shall not be approved by the Engineer, except at his discretion, until tests have been carried out under operating conditions pertaining to the most onerous conditions specified except where the time taken to obtain such conditions is unreasonable or exceeds 12 months after practical completion of the contract Works.

1.30 **Identification of Plant Components**

The contractor shall supply and fix identification labels to all plant, starters, switches and items of control equipment including valves, with white traffolyte or equal labels engraved in red lettering denoting its name, function and section controlled. The labels shall be mounted on equipment and in the most convenient positions. Care shall be taken to ensure the labels can be read without difficulty. This requirement shall apply also to major components of items of control equipment.

Details of the lettering of the labels and the method of mounting or supporting shall be forwarded to the Engineer for approval prior to manufacture.

1.31 **Contract Drawings**

The Contract Drawings when read in conjunction with the text of the Specification, have been completed in such detail as was considered necessary to enable competitive tenders to be obtained for the execution and completion of the contract works.

The Contract Drawings are not intended to be Working Drawings and shall not be used unless exceptionally they are released for this purpose.

### 1.32 Working Drawings

The contractor shall prepare such Working Drawings as may be necessary. The Working Drawings shall be complete in such detail not only that the contract Works can be executed on site but also that the Engineer can approve the contractor's proposals, detailed designs and intentions in the execution of the contract Works.

If the contractor requires any further instructions, details, Contract Drawings or information drawings to enable him to prepare his Working Drawings or proposals, the Contractor shall accept at his own cost, the risk that any work, commenced or which he intends to commence at site may be rejected.

The Engineer, in giving his approval to the Working Drawings, will presume that any necessary action has been, or shall be taken by the contractor to ensure that the installations shown on the Working Drawings have been cleared with the Project Manager and any other Contractors whose installations and works might be affected.

If the contractor submits his Working Drawings to the Engineer without first liaising and obtaining clearance for his installations from the Project Manager and other Contractors whose installations and works might be affected, then he shall be liable to pay for any alterations or modification to his own, the Contractor's or other Contractor's installations and works, which are incurred, notwithstanding any technical or other approval received from the Engineer.

Working Drawings to be prepared by the contractor shall include but not be restricted to the following:

- a) Any drawings required by the Contractor, or Engineer to enable structural provisions to be made including Builder's Working Drawings or Schedules and those for the detailing of holes, fixings, foundations, cables and paperwork ducting below or above ground or in or outside or below buildings.
- b) General Arrangement Drawings of all plant, control boards, fittings and apparatus or any part thereof and of installation layout arrangement of such plant and apparatus.
- c) Schematic Layout Drawings of services and of control equipment.
- d) Layout Drawings of all embedded and non-embedded paperwork, ducts and electrical conduits.
- e) Complete circuit drawings of the equipment, together with associated circuit description.
- f) Such other drawings as are called for in the text of the Specification or Schedules or as the Engineer may reasonably require.

Three copies of all Working Drawings shall be submitted to the Engineer for approval. One copy of the Working Drawings submitted to the Engineer for approval shall be returned to the Contractor indicating approval or amendment therein.

Six copies of the approved Working Drawings shall be given to the employer by the contractor for information and distribution to other Contractors carrying out work



associated with or in close proximity to or which might be affected by the contract Works.

Approved Working Drawings shall not be departed from except as may be approved or directed by the Engineer.

Approval by the Engineer of Working Drawings shall neither relieve the contractor of any of his obligations under the contract nor relieve him from correcting any errors found subsequently in the Approved Working Drawings or other Working Drawings and in the contract Works on site or elsewhere associated therewith.

The contractor shall ensure that the Working Drawings are submitted to the Architect for approval at a time not unreasonably close to the date when such approval is required. Late submission of his Working Drawings will not relieve the contractor of his obligation to complete the contract Works within the agreed Contract Period and in a manner that would receive the approval of the Project Manager.

### 1.33 **Record Drawings (As Installed) and Instructions**

During the execution of the contract Works the contractor shall, in a manner approved by the Engineer record on Working or other Drawings at site all information necessary for preparing Record Drawings of the installed contract Works. Marked-up Working or other Drawings and other documents shall be made available to the Engineer as he may require for inspection and checking.

Record Drawings, may, subject to the approval of the Engineer, include approved Working Drawings adjusted as necessary and certified by the contractor as a correct record of the installation of the contract Works.

They shall include but not restricted to the following drawings or information:

- a) Working Drawings amended as necessary but titled "Record Drawings" and certified as a true record of the "As Installed" Contract Works. Subject to the approval of the Engineer such Working Drawings as may be inappropriate may be omitted.
- b) Fully dimensioned drawings of all plant and apparatus.
- c) General arrangement drawings of equipment, other areas containing plant forming part of the Contract Works and the like, indicating the accurate size and location of the plant and apparatus suitability cross-referenced to the drawings mentioned in (b) above and hereinafter.
- d) Routes, types, sizes and arrangement of all pipework and ductwork including dates of installation of underground pipework.
- e) Relay adjustment charts and manuals.
- f) Routes, types, sizes and arrangement of all electric cables, conduits, ducts and wiring including the dates of installation of buried works.
- g) System schematic and trunking diagrams showing all salient information relating to control and instrumentation.
- h) Grading Charts.
- i) Valve schedules and locations suitability cross-referenced.

- j) Wiring and piping diagrams of plant and apparatus.
- k) Schematic diagrams of individual plant, apparatus and switch and control boards. These diagrams to include those peculiar to individual plant or apparatus and also those applicable to system operation as a whole.
- l) Operating Instruction

Schematic and wiring diagrams shall not be manufacturer's multipurpose general issue drawings. They shall be prepared specially for the contract Works and shall contain no spurious or irrelevant information.

Marked-up drawings of the installation of the contract Works shall be kept to date and completed by the date of practical or section completion. Two copies of the Record Drawings of contract Works and two sets of the relay adjustment and grading charts and schematic diagrams on stiff backing shall be provided not later than one month later.

The contractor shall supply for fixing in sub-stations, switch-rooms, boiler houses, plant rooms, pump houses, the office of the Maintenance Engineer and other places, suitable valve and instructions charts, schematic diagrams of instrumentation and of the electrical reticulation as may be requested by the Engineer providing that the charts, diagrams, etc., relate to installations forming part of the Contract Works. All such charts and diagrams shall be of suitable plastic material on a stiff backing and must be approved by the Engineer before final printing.

Notwithstanding the contractor's obligations referred to above, if the contractor fails to produce to the Engineer's approval, either:-

- a) The Marked-up Drawings during the execution of the contract Works or
- b) The Record Drawings, etc., within one month of the Section or Practical Completion

The Engineer shall have these drawings produced by others. The cost of obtaining the necessary information and preparing such drawings, etc., will be recovered from the contractor.

#### 1.34 Maintenance Manual

Upon Practical Completion of the contract Works, the contractor shall furnish the Engineer four copies of a Maintenance Manual relating to the installation forming part of all of the contract Works.

The manual shall be loose-leaf type, International A4 size with stiff covers and cloth bound. It may be in several volumes and shall be sub-divided into sections, each section covering one Engineering service system. It shall have a ready means of reference and a detailed index.

There shall be a separate volume dealing with Air Conditioning and Mechanical Ventilation installation where such installations are included in the Contract Works.

The manual shall contain full operating and maintenance instructions for each item of equipment, plant and apparatus set out in a form dealing systematically with each system. It shall include as may be applicable to the contract Works the following and any other items listed in the text of the Specifications:

- a) System Description.
- b) Plant
- c) Valve Operation
- d) Switch Operation
- e) Procedure of Fault Finding
- f) Emergency Procedures
- g) Lubrication Requirements
- h) Maintenance and Servicing Periods and Procedures
- i) Colour Coding Legend for all Services
- j) Schematic and Wiring Diagrams of Plant and Apparatus
- k) Record Drawings, true to scale, folded to International A4 size
- l) Lists of Primary and Secondary Spares.

The manual is to be specially prepared for the contract Works and manufacturer's standard descriptive literature and plant operating instruction cards will not be accepted for inclusion unless exceptionally approved by the Engineer. The contractor shall, however, affix such cards, if suitable, adjacent to plant and apparatus. One spare set of all such cards shall be furnished to the Engineer.

### 1.35 **Hand-over**

The contract Works shall be considered complete and the Maintenance and Defects Liability Period shall commence only when the contract Works and supporting services have been tested, commissioned and operated to the satisfaction of the Engineer and officially approved and accepted by the Employer, provided always that the handing over of the contract Works shall be coincident with the handing over of the sub- Contract Works.

The procedure to be followed will be as follows:

- a) On the completion of the contract Works to the satisfaction of the Engineer and the Employer, the contractor shall request the Engineer, at site to arrange for handing over.
- b) The Engineer shall arrange a Hand-over Meeting or a series thereof, at site.
- c) The contractor shall arrange with the Engineer and Employer for a complete demonstration of each and every service to be carried out and for instruction to be given to the relevant operation staff and other representatives of the Employer.
- d) In the presence of the Employer and the Engineer, Hand-over will take place, subject to Agreement of the Hand-over Certificates and associated check lists.

### 1.36 **Painting**

It will be deemed that the contractor allowed for all protective and finish painting in the contract Sum for the contract Works, including colour coding of service pipework to the approval of the Engineer. Any special requirements are described in the text of the Specifications.

1.37 **Spares**

The contractor shall supply and deliver such spares suitably protected and boxed to the Engineer's approval as are called for in the Specifications or in the Price Schedules.

1.38 **Testing and Inspection – Manufactured Plant**

The Engineer reserves the right to inspect and test or witness of all manufactured plant equipment and materials.

The right of the Engineer relating to the inspection, examination and testing of plant during manufacture shall be applicable to Insurance companies and inspection authorities so nominated by the Engineer.

The contractor shall give two week's notice to the Engineer of his intention to carry out any inspection or tests and the Engineer or his representative shall be entitled to witness such tests and inspections.

Six copies of all test certificates and performance curves shall be submitted as soon as possible after the completion of such tests, to the Engineer for his approval.

Plant or equipment which is shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the contractor's own risk and should the test certificate not be approved new tests may be ordered by the Engineer at the contractor's expense.

The foregoing provisions relate to tests at manufacturer's works and as appropriate to those carried out at site.

1.39 **Testing and Inspection -Installation**

Allow for testing each section of the contract Works installation as described hereinafter to the satisfaction of the Engineer.

1.40 **Labour Camps**

The contractor shall provide the necessary temporary workshop and mess-room in position to be approved by the Architect.

The work people employed by the contractor shall occupy or be about only that part of the site necessary for the performance of the work and the contractor shall instruct his employees accordingly.

If practicable, W.C. accommodation shall be allocated for the sole use of the contractor's workmen and the contractor will be required to keep the same clean and disinfected, to make good any damage thereto and leave in good condition.

1.41 **Storage of Materials**

Space for storage and provision of any lock-up sheds or stores required will be provided by the contractor

Nominated Contractors are to be made liable for the cost of any storage accommodation provided specially for their use. No materials shall be stored or stacked on suspended slabs without the prior approval of the Project manager.

1.42 **Initial Maintenance**

The contractor shall make routine maintenance once a month during the liability for the Defects Period and shall carry out all necessary adjustments and repairs, cleaning and oiling of moving parts. A monthly report of the inspection and any works done upon the installation shall be supplied to the Engineer.

The contractor shall also provide a 24 -hour break-down service to attend to faults on or malfunctioning of the installation between the routine visits of inspection.

The contractor shall allow in the contract Sum of the initial maintenance, inspection and break-down service and shall provide for all tools, instruments, plant and scaffolding and the transportation thereof, as required for the correct and full execution of these obligations and the provision, use or installation of all materials as oils, greases, sandpaper, etc., or parts which are periodically renewed such as brake linings etc., or parts which are faulty for any reason whatsoever excepting always Acts of God such as storm, tempest, flood, earthquake and civil revolt, acts of war and vandalism.

1.43 **Maintenance and Servicing After Completion of the Initial Maintenance**

The contractor shall, if required, enter into a maintenance and service agreement with the employer for the installation for a period of up to five years from the day following the last day of the liability for Defects Period which offers the same facilities as specified in Clause 1.42 (Initial Maintenance).

The terms of any such agreement shall not be less beneficial to the employer than the terms of Agreements for either similar installation.

The contractor shall submit with his tender for the works, where called upon a firm quotation for the maintenance and service of the installation as specified herein, which shall be based upon the present day costs and may be varied only to take into account increases in material and labour unit rate costs between the time of tendering and the signing of the formal maintenance

and service agreement and which shall remain valid and open for acceptance by the Employer to and including the last day of the fifth complete calendar month following the end of the liability for Defects Period.

1.44 **Trade Names**

Where trade names of manufacturer's catalogue numbers are mentioned in the Specification or the Bills of Quantities, the reference is intended as a guide to the type of article or quality of material required. Alternate brands of equal and approved quality will be acceptable.

1.45 **Water and Electricity for the Works**

These will be made available by the Contractor who shall be liable for the cost of any water or electric current used and for any installation provided for their own use.

1.46 **Protection**

The contractor shall adequately cover up and protect his own work to prevent injury and also to cover up and protect from damage all parts of the building or premises where work is performed by him under the Contract.

1.47 **Defects After Completion**

The defects liability period will be 12 months from the date of completion of the Contract as certified by the Engineer.

1.48 **Damages for Delay**

Liquidated and Ascertained damages as stated in the Contract Agreement will be claimed against the Contractor for any unauthorised delay in completion. The contractor shall be held liable for the whole or a portion of these damages should he cause delay in completion.

1.49 **Clear Away on Completion**

The contractor shall, upon completion of the works, at his own expense, remove and clear away all plant, equipment, rubbish and unused materials, and shall leave the whole of the works in a clean and tidy state, to the satisfaction of the Engineer. On completion, the whole of the works shall be delivered up clean, complete and perfect in every respect to the satisfaction of the Engineer.

1.50 **Final Account**

On completion of the works the contractor shall agree with the Engineer the value of any variations outstanding and as soon as possible thereafter submit to the Engineer his final statement of account showing the total sum claimed sub-divided as follows:

Statement A - detailing the tender amounts less the Prime Cost and Provisional Sums, included therein.

Statement B - detailing all the variation orders issued on the contract.

Statement C - Summarising statement A and B giving the net grand total due to the Contractor for the execution of the Contract.

1.51 **Fair Wages**

The contractor shall in respect of all persons employed anywhere by him in the execution of the contract, in every factory, workshop or place occupied or used by him for execution of the Contract, observe and fulfil the following conditions:

- a) The contractor shall pay rates of the wages and observe hours and conditions of labour not less favourable than those established for the trade or industry in the locality where work is carried out.
- b) In the absence of any rates of wages, hours or conditions of labour so established the contractor shall pay rates and observe hours and conditions of labour are not less favourable than the general level of wages, hours and conditions observed by other employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

1.52 **Supervision**

During the progress of the works, the contractor shall provide and keep constantly available for consultation on site an experienced English - speaking Supervisor and shall provide reasonable office facilities, attendance, etc., for the Supervisor.

In addition, during the whole of the time the works are under construction, the contractor shall maintain on site one experienced foreman or charge-hand and an adequate number of fitters, etc., for the work covered by the Specification. The number of this staff shall not be reduced without the prior written approval of the Project manager or Engineer.

Any instructions given to the Supervisor on site shall be deemed to have been given to the contractor.

One copy of this Specification and one copy of each of the Contract Drawings (latest issue) must be retained on site at all times, and available for reference by the Engineer or contractor.



1.53 **Test Certificates**

The contractor shall provide the Engineer with three copies of all test reports or certificates that are or may be required by this Specification.

1.54 **Labour**

The contractor shall provide skilled and unskilled labour as may be necessary for completion of the contract.

1.55 **Discount to the Employer**

No discount to the Employer will be included in the tender for this installation.

1.56 **Guarantee**

The whole of the work will be guaranteed for a period of 12 months from the date of the Engineer's certification of completion and under such guarantee the contractor shall remedy at his expense all defects in materials and apparatus due to faulty design, construction or workmanship which may develop in that period.

1.57 **Direct Contracts**

Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C Sum in the Bills of Quantities and to pay for the same direct. In any such instance, profit relative to the P.C Sum in the priced Bills of Quantities will be adjusted as deserved for P.C Sum allowed.

1.58 **Attendance Upon the Tradesmen etc**

The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this contract every facility for carrying out their work and also for the use of ordinary scaffolding. The contractor however, shall not be required to erect any special scaffolding for them.

1.59 **Trade Unions**

The contractor shall recognize the freedom of his work people to be members of trade unions.

#### **1.60 Local and other Authorities notices and fees**

The contractor shall comply with and give all notices required by any Regulations, Act or by Law of any Local Authority or of any Public Service, Company or Authority who have any jurisdiction with regard to the works or with those systems the same are or will be connected and he shall pay and indemnify the Government against any fees or charges legally demandable under any regulation or by-law in respect of the works; provided that the said fees and charges if not expressly included in the contract sum or stated by way of provisional sum shall be added to the contract sum.

The contractor before making any variation from the contract drawings or specification necessitated by such compliance shall give the Project Manager written notice specifying and giving the reason for such variation and applying for instructions in reference thereto. If the contractor within seven days of having applied for the same does not receive such instructions, he shall proceed with the works in conforming to the provision regulation or by-law in question and any variation thereby necessitated shall be deemed to be a variation in accordance to the conditions of contract.

#### **1.61 Assignment or subletting**

The contractor shall not without the written consent of the Project Manager assign this contract or sublet any portion of the works, provided that such consent shall not be unreasonably withheld to the prejudice of the contractor.

#### **1.62 Partial Completion**

If the Government shall take over any part or parts works, apparatus, equipment etc. then within seven days from the date on which the Government shall have taken possession of the relevant part, the Project Manager shall issue a Certificate stating his estimate of the approximate total value of the works which shall be the total value of that part and practical completion of the relevant part shall be deemed to have occurred, and the Defects Liability Period in respect of the relevant part be deemed to have commenced on the date Government shall have taken possession thereof.

The contractor shall make good any defects or other faults in the relevant part that had been deemed complete.

The contractor shall reduce the value of insurance by the full value of the relevant part

The contractor shall be paid for the part of works taken possession by the Government

### **1.63 Temporary Works**

Where temporal works shall be deemed necessary, such as Temporary lighting, the contractor shall take precaution to prevent damage to such works.

The contractor shall include for the cost of and make necessary arrangements with the Project Manager for such temporary works. For temporary lighting, electricity shall be metered and paid for by the contractor.

### **1.64 Patent Rights**

The contractor shall fully indemnify the Government of Kenya; against any action, claim or proceeding relating to infringement of any patent or design rights, and pay any royalties which may be payable in respect of any article or any part thereof, which shall have been supplied by the contractor to the Project Manager. In like manner the Government of Kenya shall fully indemnify the contractor against any such action, claim or proceedings for infringement under the works, the design thereof of which shall have been supplied by the Project Manager to the contractor, but this indemnify shall apply to the works only, and any permission or request to manufacture to the order of the Project Manager shall not relieve the contractor from liability should he manufacture for supply to other buyers.

### **1.65 Mobilization and Demobilization**

The contractor shall mobilize labour plant and equipment to site according to his programme and schedule of work He shall ensure optimum presence and utilization of labour, plant and equipment. He should not pay and maintain unnecessary labour force or maintain and service idle plant and equipment. Where necessary he shall demobilize and mobilize the labour, plant and equipment, as he deems fit to ensure optimum progress of the works and this shall be considered to be a continuous process as works progress. He shall make provision for this item in his tender. No claim will be entertained where the contractor has not made any provision for mobilization and demobilization of labour, plant and equipment in the preliminary bills of quantities or elsewhere in this tender.

### **1.66 Extended Preliminaries**

Where it shall be necessary to extend the contract period by the Project manager the contractor shall still ensure availability on site, optimum labour, materials, plant and equipment. The contractor shall make provision for extended preliminaries, should the contract period be extended and this shall be in a form of a percentage of the proportion of the Contract works remaining as at that time of extension. Where called upon in the Appendix to these Preliminaries the Contractor shall insert his percentage per month for extended preliminaries that shall form basis for compensation.

Lack of inserting the percentage shall mean that the contractor has provided for this requirement elsewhere in the Bills of Quantities.

### **1.67 Supervision by Engineer and Site Meetings**

A competent Project Engineer appointed by the Engineer as his representative shall supervise the Contract works. The Project Engineer shall be responsible for issuing all the site instructions in any variations to the works and these shall be delivered through the Contractor with the authority of the Project Manager. Any instructions given verbal shall be confirmed in writing.

The project engineer and (or) the Engineer shall attend management meetings arranged by the Project Manager and for which the Contractor or his representative shall also attend. For the purpose of supervising the project, provisional sums are provided to cover for transport and allowances. The Contractor shall in his tender allow for the provision of management meetings and site inspections, as instructed by the Engineer, and also profit an attendance on these funds. The funds shall be expended according to Project Manager's instructions to the contractor.

### **1.68 Amendment to Scope of Contract Works**

No amendment to scope of Contract works is expected and in case of amendment or modification to scope of work, these shall be communicated to all tenderers in sufficient time before the deadline of the tender submission. However during the contract period and as the works progress the Project Manager may vary the works as per conditions of contract by issuing site instructions.

No claims shall be entertained on account of variation to scope of works either to increase the works (pre-financing) or reduction of works (loss of profit-see clause 1.69)

### **1.69 Contractors Obligation and Employers Obligation**

The Contractor will finance all activities as part of his obligation to this contract. The employer shall pay interim payment for materials and work completed on site as his obligation in this contract, as the works progresses. No claims will be entertained for pre-financing of the project by the Contractor, or for loss of profit (expectation loss) in case of premature termination, reduction or increase of works as the Contractor shall be deemed to have taken adequate measures in programming his works and expenditure and taken necessary financial precaution while executing the works. No interest shall be payable to the Contractor, except as relates to late payment as in the conditions of contract clause 23.3. The contractor shall where called upon, insert his price to compensate for any of the occurrence stated here (premature termination, reduction or increase of works), as a percentage of the contract sum in the Appendix to this section.

**1.70 APPENDIX TO CONTRACT PRELIMINARIES AND GENERAL CONDITIONS**

**1. ADD TO CLAUSE 1.40**

There is no Labour camp.

**2. MODIFY CLAUSE 1.66**

There shall be no additional cost for extended preliminaries

**3. ADD TO CLAUSE 1.17**

Total contract price shall include VAT, and all other taxes applicable at the time of tender.

**SECTION D**  
**GENERAL SPECIFICATIONS**  
**OF**  
**MATERIALS AND WORKS**

*Non*

## GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

- 2.1 General
- 2.2 Standard of Materials
- 2.3 Workmanship
- 2.4 Procurement of Materials
- 2.5 Shop Drawings
- 2.6 Record Drawings
- 2.7 Regulations and Standards
- 2.8 Setting out Works
- 2.9 Testing on Site

## **2.1 GENERAL**

This specification is to be read in conjunction with any other information herein issued with it. Bills of quantities and schedule of unit rates shall be the basis of all additions and omissions during the progress of the works.

## **2.2 STANDARD OF MATERIALS**

Where the material and equipment are specifically described and named in the Specification followed by approved equal, they are so named or described for the purpose of establishing a standard to which the contractor shall adhere.

Should the contractor install any material not specified herein before receiving approval from the proper authorities, the Engineer shall direct the contractor to remove the material in question immediately. The fact that this material has been installed shall have no bearing or influence on the decision by the Engineer.

All materials condemned by the Engineer as not approved for use, are to be removed from the premises and suitable materials delivered and installed in their place at the expense of the Contractor. All materials required for the works shall be from branded manufacturers, and shall be new and the best of the respective kind and shall be of a uniform pattern.

## **2.3 WORKMANSHIP**

The workmanship and method of installation shall conform to the best standard practice. All work shall be performed by a skilled tradesman and to the satisfaction of the Engineer. Helpers shall have qualified supervision.

Any work that does not in the opinion of the Engineer conform to the best standard practice will be removed and reinstated at the contractor's expense.

Permits, Certificates or Licences must be held by all tradesmen for the type of work; in which they are involved where such permits, certificates or licences exist under Government legislation.

## **2.4 PROCUREMENT OF MATERIALS**

The contractor is advised that no assistance can be given in the procurement or allotment of any materials or products to be used in and necessary for the construction and completion of the work.

Contractors are warned that they must make their own arrangements for the supply of materials and/or products specified or required.



## **2.5 RECORD DRAWINGS**

These diagrams and drawings shall show the completed installation including sizes, runs and arrangements of the installation. The drawings shall be to scale not less than 1:50 and shall include plan views and section.

The drawings shall include all the details which may be useful in the operation, maintenance or subsequent modifications or extensions to the installation.

Three sets of diagrams and drawings shall be provided, all to the approval of the Engineer.

One coloured set of line diagrams relating to operating and maintenance instructions shall be framed and, mounted in a suitable location.

## **2.6 REGULATIONS AND STANDARDS**

All work executed by the contractor shall comply with the current edition of the "Regulations" for the Electrical Equipment of Buildings, issued by the Institution of Electrical Engineers, Electric Power Act, Kenya Bureau of Standards (KEBS), Institution of Electrical Engineers (I.E.T) Wiring Regulations, Current recommendation of CCITT and CCIR, and with the Regulations of the Local Electricity Authority and the Communications Authority of Kenya (CAK)

Where the sets of regulations appear to conflict, they shall be clarified with the Engineer.

## **2.7 SETTING OUT WORK**

The contractor, at his own expenses, is to set out works and take all measurements and dimensions required for the erection of his materials on site; making any modifications in details as may be found necessary during the progress of the works, submitting any such modifications or alterations in detail to the Engineer before proceeding and must allow in his tender for all such modifications and for the provision of any such sketches or drawings related thereto.

## **2.9 TESTING ON SITE**

The contractor shall conduct during and at the completion of the installation and, if required, again at the expiration of the maintenance period, tests in accordance with the relevant section of the current edition of the Regulations for the electrical equipment of buildings issued by the I.E.T of Great Britain, the Government Electrical Specifications No. 1 and No.2, Electric Supply Company's By-Laws, Communications Authority of Kenya (CAK) requirements or any other supplementary Regulations as may be produced by the engineer.

Any faults, defects or omissions or faulty workmanship, incorrectly positioned or installed parts of the installation shall be rectified by the contractor at his own expense.

**SECTION E**  
**SCHEDULE OF CONTRACT DRAWINGS**

New

## SCHEDULE OF CONTRACT DRAWINGS

- 1.0 There are no drawings in this contract.
- 2.0 Shaft and lift landing door entrance dimensions have been indicated in the particular specifications **as a guide to the bidder**. However, **bidders shall be required to ascertain dimensions** of the proposed lift shafts, pits, head-rooms, structural openings, cable routes and cable lengths on site if necessary before pricing the Bills of Quantities in this Tender Document.

**SECTION F**  
**GENERAL AND PARTICULAR SPECIFICATIONS**  
**FOR**  
**LIFTS INSTALLATIONS**

*Now*

**A. GENERAL SPECIFICATIONS FOR  
LIFTS INSTALLATIONS**

**1. REGULATIONS**

All Apparatus and materials supplied and work carried out shall comply with the provisions of the following documents:-

- (a) The latest Edition of I.E.T Regulations
- (b) The Kenya Power Co. Ltd SHE, Building Maintenance and other relevant KPLC policies
- (c) The Electric Power Act and the Rules made there under.
- (d) Code EN81 and C.P 407 (1972)
- (e) The requirements of the Chief Inspector of Factories for the Kenya Government, Factories Act Chapter 514 SECTION 30. **The contractor shall avail all the certificates.**
- (f) Any other regulations governing lift and escalator installations in Kenya
- (g) Kenya Bureau of Standards (KEBS) lifts standard KS 2169 – 1

**1. BUILDER'S WORK BY LIFT CONTRACTOR**

**A. Lifts Shaft**

- (i) The dimensions of the lift shafts are dome shaped shaft with flat side length of 2410mm and a depth of 2480mm. It shall be the responsibility of the bidder to verify the dimensions of the lifts shafts before tendering for the works. The Employer/employer's representative will bear neither responsibility nor liability for any approximate dimensions issued – as a guide to the bidder.
- (ii) The lift Contractor shall provide cut-outs for hall buttons, hall position indicators, hall lanterns, shaft ventilations and fire man's switch.  
  
It shall be the responsibility of the lifts Contractor to provide, properly position and fix the hall buttons, hall indicators, hall lanterns, fire man's switches, door frames, sills and architraves.
- (iii) The lift Contractor shall provide the necessary scaffolding for erection of equipment and hoarding to secure the work area from general public and maintain safety of the people and other installations in the building.
- (iv) The lift Contractor shall provide temporary electricity supply for erection and shaft lighting, and thereafter a permanent supply from an appropriate isolator.

**B. Lifts Pits**

The lifts contractor shall provide and fix ladders where such facility may be required as stipulated in BS 5655, and terminal and over travel limit switches.

**C. Lift Motor Room**

The lift Contractor shall provide the following in the lifts motor room:

- (i) Cut-outs for roping, safety gear ropes, selector tapes (where provided) cabling etc. in the lift room floor.
- (ii) Lifting beam in the form of a rolled steel joist if required.
- (iii) General lighting cable ducts and conduits and power and ventilation equipment.

**D. Access**

The lift Contractor shall provide stairway access with lockable doors to the lifts motor room. On the outer side of the door shall be written in red letters:

“DANGERS 415 VOLTS – LIFT MOTOR ROOM – NO  
UNAUTHORISED PERSON ALLOWED INSIDE”

**E. Builder's Work**

The lifts Contractor shall provide for:

- (i) All chasing, shaft ventilation and making good
- (ii) All drilling and plugging of holes in floors, walls, ceiling and roofs for security services, and for equipment requiring screw or bolt fixing.
- (iii) Any purpose made fixing brackets

**2. FIREMAN'S SWITCH FOR THE LIFTS**

A fireman's control switch shall be provided in the down terminal floor, main entrance lobby. The Fireman's switch shall be of the type approved by the Engineer.

Operation of the Fireman's switch shall stop the lift car on the next landing but without opening the car and landing doors and immediately return the lift to the ground floor irrespective of any other calls and park lift with doors open. The car will then become in-operative with the exception of the 'Fireman's Lift' which shall operate in answer to the car buttons until only the fireman's switch is reset. **One lift to be supplied with power and programmed so as to operate also as a goods and fireman's lift.**

**3. EMERGENCY ALARM SYSTEM**

An emergency alarm system and an intercom shall be installed between the car, the motor room (or top floor at the controls for Machine room-less [MRL] lifts), and the reception desk on the ground floor.

The alarm system shall be clearly labeled "Emergency Alarm". On pushing an alarm button, the system should ring simultaneously in the car, motor room (top floor at the controller for MRL lifts) and the reception desk.

The lift Contractor shall carry out the wiring in the lift car and between machine and the reception desk. The power supply for the alarm system shall be derived from a self-recharging unit.

**4. EMERGENCY DOOR KEYS**

It shall be possible to open every lift-landing door by the use of a release key whether or not the lift car is in the landing zone. The key hole shall be unobtrusive and located at high level.

**5. CALL STATION AND OPERATING PANEL BUTTONS**

The call station, distributed between the lifts on each landing, and operating panel buttons shall be micro-motion push button.

**7. INTERFERENCE SUPPRESSION**

The lift motor and auxiliary controls shall be suppressed so as not to interfere with local radio and television reception and closed circuit television or Electro mechanical equipment within the building. The suppression shall be carried out in accordance with B.S. 800 and all suppression devices incorporated shall comply with B.S. 5655.

**8. PROTECTION PADS**

The lifts Contractor shall supply one set of protective quilted cover pads to approval for passenger lift cars.

**9. CAR EMERGENCY LIGHTING**

The lift car shall be provided with an emergency light fitting operating from a self-recharging battery unit. The emergency light will be built in the car-operating panel.

**10. TEST**

Both on completion of his work on the lift and at the end of the guarantee period, the lift Contractor shall carry out all the tests as required and in accordance with B.S 5655 part 7 in the presence of the Engineer and shall provide all the necessary instruments, labour and materials to do so at his cost.

Damage occurring, as a result of these tests will be made good by the Lifts Contractor to the Engineer's satisfaction at his expense.

1No. (one) copy of the test certificate for lift should be forwarded to the Engineer within 4 days of completion of the last test.

**11. LIFT ARD (AUTOMATIC RESCUE DEVICE)**

The lifts should be equipped with an automatic rescue device such that on power failure, the lift should move to the nearest lift floor opening (up or down) and open the lift doors to enable the people to move out of the lift.

## **12. TRAINING**

The tenderer shall provide in his tender for the attachment on site, for training in the maintenance of the lifts, of 2No.technicians during the dismantling, installation, testing and commissioning period.

### **12.0 PROTECTION AGAINST POWER/VOLTAGE FLUCTUATIONS, SURGE AND TRANSIENT CURRENTS**

- 12.1 The lift equipment and all its controls shall be protected against power/ voltage fluctuations, surges and transient currents. The contractor shall provide for and install **all** the necessary equipment for this protection. The protective switchgear shall be verified by the Engineer during the overseas factory inspection.

### **13.0 INITIAL STATUTORY INSPECTION**

- 13.1 The tenderer shall allow in his tender for the initial statutory inspection of the lifts by an Approved Government Lift Inspector during the commissioning of the new lifts, and thereafter for inspection at intervals of six (6) months periodic time during the 12 months defects liability period. One of the inspections shall be done after the expiry of the defects liability period on confirming that all the defects (if any) have been corrected by the lifts contractor.
- 13.2 The employer and the contractor shall, at each inspection, each retain a copy of the lift inspection certificate while the original will be submitted to the Ministry of Labour and Human Resources Development.

### **14.0 INITIAL MAINTENANCE**

- 14.1 The tenderer shall allow in his tender for the initial routine service maintenance of the new lifts once a month during the 12 months defects liability period and shall carry out all necessary adjustments and repairs, cleaning, greasing and oiling of moving parts.
- 14.2 During the initial maintenance of the new lifts, the tenderer shall also allow in his tender for all tools, instruments, plant and scaffolding and the transportation thereof, as required for the correct and full execution of these obligations and the provision, use or installation of all materials or parts which are periodically renewed such as brake linings etc., or parts which are faulty for any reason whatsoever excepting always acts of God such as storm, tempest, flood, earthquake and civil revolt, acts of war and vandalism.
- 14.3 The contractor shall also provide a 24 -hour break-down service to attend to faults on or malfunctioning of the installation between the routine visits of the defects liability period.
- 14.4 A monthly report of any works done upon the installation shall be supplied to the Engineer.



## **15.0 REGISTRATION OF THE NEW LIFTS**

- 15.1 The tenderer shall allow in his tender for the registration of the new lifts with the Ministry of Labour including payments of any fees that may be required. It is the responsibility of the Contractor to avail the registration certificate to the client once the registration has been done.

## **16.0 INTERIOR LIFT CAR FINISHES**

- 16.1 The interior lift car finishes including ceiling, floor, cabin panels, car door, landing door and architraves shall be to the Engineers approval in liaison with the Client. The approval will be within the range of the manufacturers' range of finishes in their brochures. The tenderer **must** therefore allow for this in their bid.

## **17.0 FACTORY INSPECTION**

- 17.1 The employer shall be entitled to have the quantity and quality of the imported lifts materials inspected by four number (4No.) technical KPLC representatives and Ministry of Transport, Infrastructure, Housing, Urban development and Public Works Engineers appointed by the Project Manager.
- 1.1 The said inspection shall be carried out at the factory of manufacture of the lifts materials during normal working hours and the successful tenderer shall give written notice to the Project Manager at the latest thirty (30) calendar days in advance of the date that the lifts materials are ready for inspection.
- 1.2 Travel (including ground, air travel and airport passage taxes) and full board accommodation expenses incurred by the technical staff appointed by the Project Manager, and the employer's representative shall be borne by the contractor. The contractor shall also meet out of pocket expenses for the officers at Government of Kenya and KPLC rates for the duration of the factory inspection. The costs incurred shall be re-imbursed to the contractor from the provisional sum allowed in the Bills of Quantities.
- 1.3 The inspection period shall be at least four (4) working days excluding travelling time.
- 1.4 If as a result of the inspection any of the lift materials are found to be defective, the successful tenderer shall replace the defective materials and determine a new date as when a new inspection shall be performed at the expense of the contractor.
- 1.5 The successful tenderer shall only ship the lift materials after the said factory inspection.

## **18.0 LIFTS MONITORING SYSTEM**

This is to be a software based system with a 32" colour monitor and key board to monitor and control security functions at all times. It shall be located at ground floor – security area. It shall monitor the 2No. lifts.

## **PARTICULAR SPECIFICATIONS**

### **1.0 LOCATION OF SITE**

The site of the proposed works is at **Electricity House, New Station Road – Kisumu.**

### **2.0 DESCRIPTION OF THE WORKS**

The project comprises the supply, installation, testing and commissioning of 2No.modern microprocessor control based lifts including associated builder's and electrical works.

### **3.0 CLIMATE CONDITIONS**

The following climatic conditions apply at the site of the contract work and the equipment, materials and the installations shall be suitable for these conditions.

Altitude	1200M above Sea level
Mean Maximum Temperature	28°C
Mean Minimum Temperature	12°C
Range of Relative Humidity	39%-70%
Longitude (approximately)	36° 05'E
Latitude (approximately)	10°20'S
Salt in the atmosphere	0.02%
Solar radiation, February Mean Max	630 Langleys

Extremely heavy rainfall is experienced at certain periods of the year and the contractor shall be deemed to have taken account of this factor both in his prices and his planning of the execution of the contract works.

### **4.0 GENERAL REQUIREMENTS**

The lift Contractor shall supply, deliver unload, hoist, fix and erect, test and commission all the equipment, plant and materials in accordance with all specifications contained in this document including the Building plans to provide a complete and operable installation. The lift Contractor shall become liable for defects and be responsible for the initial maintenance of the lifts installed all as specified here in.

### **5.0 PARTICULAR REQUIREMENTS**

The tenderer shall provide factory compliance certificates for EN 81 – 20:2014 and EN81 – 50: 2014 to prove compliance with this European code. Failure to provide this shall render the tender non –responsive and hence the bid will not be considered. The tenderer must also provide relevant technical brochures for the lifts being offered and the Manufacturer's Authorization issued to the bidder.

## 6.0 TECHNICAL SPECIFICATION FOR THE LIFTS

### A) 2NO LIFTS (No.'s A-D)

No. of Units	:	<b>Two (2No.)</b>
Load	:	1250Kg (16 persons)
Speed	:	1. 5 m/s
Drive:		AC gearless closed loop digital VVVF (microprocessor controlled)
Control system	:	Electronic. Fully software based microprocessor controlled system
No.of stops	:	2No. lifts: 3 stops (G, 1 and 2 Floor)
Travelling cable	:	Travelling cable to serve interface for fire alarm system, C.C.T.V and Audio System to be installed.
Lift Pit	:	Minimum 3100mm (bidder to confirm on site)
Head room	:	5400mm-(bidder to confirm on site)
Normal Operation	:	<b>The two lifts should be programmed to operate in a duplex system. The system should operate even when one lift is isolated for special duty/service. Additionally, one lift to be built, programmed and supplied with power so as to operate as a fireman's lift. It is also to be configured to operate as a goods lift if need arises</b>
Power requirements	:	415Vac (+/- 6%), 3 phase, at 50Hz Power Factor Not less than 0.9 lagging
Machinery	:	Gearless (Machine room less) to be located in lift shaft.
Travel Height	:	45,135mm (bidder to confirm on site)
Shaft size	:	dome shaped shaft with flat side length of 2410mm (width) and a depth of 2480mm (bidder to confirm on site before tendering for the works)
Structural openings	:	1,070mm (bidder to confirm on site)

#### **Other main facilities**

#### **and functions to be included:**

- Car door operation shall be fully automatic with (infra-red) electronic door sensors
- Car position indicator on every floor
- Door button – re-open
- Voice guidance system (voice synthesizer)
- Emergency power operation and system backing
- Intercom facility – 3 way
- Alarm power unit and bell complete with a maintained back-up power supply
- Safe landing with deviation of not more than 3mm
- Floor position indicator
- Independent service key operation
- Signal floor lantern with sounders or car arrival chimes on all floors
- All the lift call buttons and car operation pannels must have **buttons for the disabled** (Braille for the blind and button for wheel chair users)

	: Remote control car stop (emergency).
	: Cabin ventilation shall be tropicalised high Capacity cylinder type operation.
	: Car extract fan should be powerful, quiet, drought maintained back-up power supply
	: Shall incorporate an Audio Visual car overload device.
	: Shall have forced ventilation key switch.
Code compliance	: The lift shall comply with BS 5655 or European Specification equivalent code EN81-20:2014, EN81-50:2014, and Kenyan Standard KS 2169 -1
<b>Structural Openings:</b>	The lift Contractor shall set the landing doors at 10mm from the finished floor levels so as to get a fall away from the landing to prevent water from <b>flowing down the lift shafts when washing up.</b>
<b>Entrances:</b>	The lifts car shall have automatic high speed power operated 2 panel center opening doors of 900mm wide by 2100mm high
<b>Car door: -</b>	Hairline Stainless steel to Engineer's approval or as selected by client from brochures ( see item 16 pg F-5).
<b>Landing door: -</b>	Hairline Stainless steel to Engineer's approval or as selected by client from brochures ( see item 16 pg F-5)
<b>Landing door architraves: -</b>	<b>Architraves to be granito tiles of a client approved colour with an aluminium strip at the edge, all to the Engineer's approval.</b>
<b>Wall switches: -</b>	All operating switches in the lifts shaft shall be of the totally enclosed drip proof type.
<b>Lighting: -</b>	Indirect Lighting shall be fitted in the car to a level of 150 lux. The fittings shall be fully recessed to prevent damage by tall items and have automatic ON/OFF energy saving features. Emergency car lighting to be incorporated (Ceiling finishes as per clause 16 pg F-5)

*New*

**Car Cabin walls: -**

Hairline Stainless steel to Engineer's approval or as selected by client from brochures ( see item 16 pg F-5).

**Mirror: -**

Three Quarters of height and full width of the car rear Panel for all lifts except for the goods lift.

**Door Operation: -**

Heavy duty variable frequency driven door operators on a frame above the lift car.

Fully adjustable door open and close speeds-  
Micro-processor controlled.

- Intelligent speed adjustments to cope with traffic requirements
- Full curtain electronic infrared 3 dimensional detectors.

- An electro mechanical type tested interlock shall be provided, fitted on the landing door and operated by the door lock cam on the lift car to prevent movement of the lift car until the landing door is both mechanically and electronically locked.

<b>Hand rails: -</b>	Bright brass plating hand rails to be provided on the three panel sides. Additionally, Goods lift to have Brushed stainless steel protective bumper guard strips around the circumference blending with lift car wall colour.
<b>Emergency light: -</b>	Emergency light in the lift cars shall be 6 watts (minimum wattage) complete with a maintained back-up power supply
<b>Signal Hall Lanterns: -</b>	LCD displays and different tones for up and down motions.
<b>Signal fixtures: -</b>	Wide angle view car position indicator unit with high reliable LED technology.
<b>Floor buttons: -</b>	Micro motion with ring illumination Brushed stainless steel plate with Braille indication for both Car and Hall Operating Panels. The Car operating panel to be positioned for easy access by wheel chair users, otherwise allowance should be made for an operation panel for the disabled as well..
<b>Floor: -</b>	Granite tiles, to approval. <b>Goods lift to have high grip stainless steel tread plate not less than 4mm thick.</b>
<b>Car floor position indicators: -</b>	Car position indicators shall be digital LCD type & Buzzers in all floors.
<b>Car direction indicators: -</b>	Car direction indicators shall have polycarbonate Covers and 160° angle view.
<b>Manual operation: -</b>	Provision shall be made for manual raising and Lowering by means of poke less Wheel. This wheel shall be mounted on the drive motor or provided at the controls for the machine-room less lifts.
<b>Guarantee of Spare parts:-</b>	The tenderer must confirm in writing and provide Written commitment from manufacturer, the availability of parts for the make of lift proposed for installation, for a continuous period of at least 10 (Ten) years.

**Painting:**

All parts of the control equipment, switchgear trunking bed plates and closed sections of metal parts which will not be accessible for painting after erection shall be given three coats of paint at the manufacturer's works. All bright surfaces shall be coated with lacquer or other protective coating before leaving the manufacturer's works. Metal works in the lift shaft shall be painted on site with three coats of best quality oil paint. The lifts machine and other machinery located in the lifts motor room shall be painted with three coats of best quality oil paint one coat being applied after erection.

**Construction: -**

In general, the lift car shall be constructed from pressed steel. The method of construction and strength of lift cars, doors and panels shall comply with B.S. 5655. Part 1 1970 and the amendments and in accordance with European code EN 81-20:2014 and EN81-50:2014.

**Base frame:-**

The complete hoisting equipment shall be mounted on a base frame of fabricated steel which when installed shall be insulated from the building structure by means of rubber or other approved sound and vibration isolated material provided and fixed in an approved manner between frame and the supporting beams.

**Facilities for the Disabled:**

Shall comply to EN81

**Communication & Monitoring Equipment wiring:** The lifts shall be fully equipped with an industry standard interface (LON, BACnet etc,) for Building management system interconnection for remote monitoring and control. The lifts shall also have an interface for integration with the facility's access control system.

## INFROMATION TO BE SUPPLIED BY THE TENDERER

### **1: PASSENGER LIFTS (2NO.)**

The tenderer shall fill in the following information pertaining to the lifts offered at the time of tendering:-

- i) Type of Drive Motor .....
- ii) Size of the Drive Motor (KW).....
- iii) Country of Manufacture .....
- iv) Power Factor .....
- v) Voltage (3 Phase) .....
- vi) Starting Current A .....
- vii) Running Current B. ....
- viii) Duration of Starting Current .....
- ix) Lift Capacity ( Kg **and** number of Persons).....
- x) Lift Speed (m/s) .....
- xi) Landing Doors Type .....
- xii) Landing Doors Safety Features.....
- xiii) Dimensions of Lift Car (WxD) .....
- xiv) Shaft size dimensions (WxD) .....
- xv) Dimensions of Landing Doors (WxH) .....
- xvi) Dimensions of Structural (floor landing) openings (WxH) .....

*New*



## Statement of Compliance

- a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.
- b) I confirm I have not made and will not make any payment to any person, who can be perceived as an inducement to win this tender.

Signed: .....*for and on behalf of the Tenderer*

Date: .....

Official Rubber Stamp: .....

**SECTION G**  
**BILLS OF QUANTITIES**

New

## BILLS OF QUANTITIES

### I) PRICING OF PRELIMINARIES ITEMS

Prices will be inserted against item of preliminaries in the Contractor's Bills of Quantities and specification. These Bills are designated as Schedule No.1 in this Section. Where the Contractor fails to insert his price in any item he shall be deemed to have made adequate provision for this on various items in the Bills of Quantities. The preliminaries form part of this contract and together with other Bills of Quantities covers for the costs involved in complying with all the requirements for the proper execution of the whole of the works in the contract.

The Bills of Quantities are divided generally into three sections:

#### (a) Preliminaries – Schedule No.1

Contractor's preliminaries are as per those described in Contract Preliminaries and General Conditions of Contract. The Contractor shall study the conditions and make provision to cover their cost in this Bill. The number of preliminary items to be priced by the Tenderer has been limited to tangible items such as site office, temporary works and others. However the Tenderer is free to include and price any other items he deems necessary taking into consideration conditions he is likely to encounter on site.

#### (b) Installation Items – Other Bills

- (i) The brief description of the items in these Bills of Quantities should in no way modify or supersede the detailed descriptions in the contract Drawings, conditions of contract and specifications.
- (ii) The unit of measurements and observations are as per those described in the tender document

#### (c) Summary

The summary contains tabulation of the separate parts of the Bills of Quantities carried forward with provisional sum, and any prime cost sums included. The Contractor shall insert his totals and enter his grand total tender sum in the space provided below the summary.

**This grand total sum shall be entered in the Form of Tender provided elsewhere in this document.**

## SPECIAL NOTES TO BILLS OF QUANTITIES

1. The Bills of Quantities form part of the contract documents and are to be read in conjunction with the contract drawings and general specifications of materials and works.
2. The prices quoted shall be deemed to include for all obligations under the Contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning and all taxes **including VAT** applicable at the time of tender.
3. All prices omitted from any item, section or part of the Bills of Quantities shall be deemed to have been included to another item, section or part thereof.
4. The brief description of the items given in the Bills of Quantities are for the purpose of establishing a standard to which the Contractor shall adhere. Otherwise alternative brands of **equal** and **approved** quality will be accepted.

Should the Contractor install any material not specified here in before receiving **written approval** from the Project Manager, the Contractor shall remove the material in question and, **at his own cost**, install the proper material.

5. The grand total of prices in the price summary page must be carried forward to the **Form of Tender for the tender to be deemed valid**.
6. Tenderers must provide, together with their submitted tenders, manufacturer's brochures detailing technical literature and specifications of the lift make that they intend to offer. Where the brochure contains different models and sizes of lifts, the bidders **MUST** clearly mark out the model and size of lift they intend to offer by using a 'felt pen'.
7. Tenderers **must** fill all rates and prices in the Bills of Quantities and in the Schedules provided in the Appendices to the Bills of Quantities. **Failure to do so may lead to disqualification.**

**SCHEDULE 1.0 - CONTRACT PRELIMINARIES (Refer to Section C of this Tender Document)**

ITEM	DESCRIPTION	QTY	UNIT	RATE	Amount	
					KSHS.	CTS.
1	Discrepancies clause 1.02					
2	Conditions of contract Agreement clause 1.03					
3	Payments clause 1.04					
4	Site location clause 1.06					
5	Scope of Contract Works clause 1.08					
6	Extent of the Contractor's Duties clause 1.09					
7	Firm price contract clause 1.12					
8	Variation clause 1.13					
9	Prime cost and provisional sum clause 3.14 (insert profit and attendance which is a percentage of expended PC or provisional sum.)					
10	Bond clause 1.15					
11	Government Legislation and Regulations clause 1.16					
12	Import Duty and Value Added Tax clause 1.17 (Note this clause applies for materials supplied only)					
13	Insurance company Fees clause 1.18					
14	Provision of services by the Main contractor clause 1.19					
15	Samples and Materials Generally clause 1.21					
16	Supplies clause 1.20					
17	Bills of Quantities clause 1.23					
SUB-TOTAL CARRIED TO PAGE G/5						

*Handwritten signature*

ITEM	DESCRIPTION	QTY	UNIT	RATE	Amount	
					KSHS.	CTS.
18	Contractor's Office in Kenya clause 1.24					
19	Builder's Work clause 1.25					
20	Setting to work and Regulating system clause 1.29					
21	Identification of plant components clause 1.30					
22	Working Drawings clause 1.32					
23	Record Drawings(As Installed) and Instructions clause 1.33					
24	Maintenance Manual clause 1.34					
25	Hand over clause 1.35					
26	Painting clause 1.36					
27	Testing and Inspection – manufactured plant clause 1.38					
28	Testing and Inspection – Installation clause 3.39					
29	Storage of Materials clause 1.41					
30	Initial Maintenance clause 1.42					
SUB-TOTAL CARRIED TO PAGE G/5						

ITEM	DESCRIPTION	QTY	UNIT	RATE	Amount	
					KSHS	CTS.
31	Local and other Authorities notices and fees clause 1.60					
32	Temporary Works clause 1.63					
33	Patent Rights clause 1.64					
34	Mobilization and Demobilization Clause 1.65					
35	Supervision by engineer and site meetings clause 1.67					
36	Allow for profit and Attendance for the above (item 35)					
37	Amendment to Scope of Contract Works Clause 1.68					
38	Contractor Obligation and Employers Obligation clause 1.69					
Sub-total from above						
Sub-total B/F from Page G/3						
Sub-total B/F from Page G/4						
TOTAL CARRIED FORWARD TO PRICE SUMMARY PAGE G/8						

**PRICE SCHEDULE 2.0 – PRICE FOR 2NO PASSENGER LIFTS**

Item	Description	Amount	
		Kshs.	Cts.
2.1	Price for all imported materials (give break-down on a separate sheet) with <b>one lift made for use as a goods lift/ firemans lift when not carrying passengers.</b>		
2.2	Price for locally purchased materials, installation, testing and commissioning costs (give breakdown on separate sheet).		
2.3	Allow for any associated electrical works including provision of shaft lighting.		
2.4	Allow for 'Making good' all the Builders work associated with the dismantling of the 4No.old lifts and installation of the 4No. new ones.		
2.5	Price for full service maintenance of the 2No.new lifts during the 12 months defects liability period for whole period as described on page F/4 clause 14.0 @ Kshs.....per month.		
2.6	Price for statutory inspection of the 2No.new lifts on commissioning and thereafter two times during the 12 months defects liability period for whole period as described on page F/4 clause 13.0		
2.7	Price for the <b>travelling cables</b> for interfacing fire alarm system, C.C.T.V and Audio system to be installed by others. Include high quality speakers connected to the cable and installed in the lift cars to engineers' approval.		
<b>SUB-TOTAL FOR 2NO PASSENGER LIFTS CARRIED FORWARD TO PRICE SUMMARY PAGE G-8</b>			

*New*



**PRICE SCHEDULE 3.0 - PROVISIONAL SUMS**

Item	Description	Amount	
		Kshs.	Cts.
3.1	Provisional sum for Public Works Technical personnel supervision expenses	200,000	00
3.2	Allow for profit and attendance on item 3.2 above.....%		
3.3	Provisional sum for overseas factory inspection by 4No. technical staff Employer's representative/Public Works engineers as described in clause 17.0 page of Section F	1,200,000	00
3.4	Allow for profit and attendance on item 3.6 above.....%		
3.5	Allow for technical personnel training of 2no. Technicians as described in clause 12 section F (training)	200,000	00
3.6	Sub-total		
3.7	Add 16% VAT for item sub-total above		
<b>SUB-TOTAL FOR PROVISIONAL SUMS CARRIED FORWARD TO PRICE SUMMARY PAGE G-8</b>			

### PRICE SUMMARY

Item	Description	Amount	
		Kshs.	Cts.
1.0	Subtotal for Schedule 1.0 - Preliminaries brought forward from page G/5.		
2.0	Subtotal for Schedule 2.0 - Subtotal for 2No. Passenger Lifts brought forward from page G/6.		
3.0	Subtotal for Schedule 3.0 - Provisional sums from page G/7.		
4.0	Price for 4 sets each of operation and maintenance manuals as described in the specifications.		
5.0	Price for 2 sets each of as installed drawings as described in the specifications.		
6.0	Lift monitoring system - 1 unit for all lifts – see clause 18 section F		
<b>GRAND TOTAL OF PRICES CARRIED FORWARD TO FORM OF TENDER</b>			

Foreign currency, if any, on which the Tender is based .....

Exchange rate applied (*see clause 3.19.2*) .....

Total amount in words: Kenya Shillings .....

Signed by Tenderer .....

P.I.N. ....

VAT Reg. No. ....

Date .....

Official rubber stamp .....

Signed by Witness .....

Name of Witness .....

Address .....

Date .....

*Non*

APPENDIX TO BILLS OF QUANTITIES

APPENDIX 'A'

PRICE BREAKDOWN OF IMPORTED MATERIALS

(ATTACHMENTS ARE ALLOWED IF THE LIST IS LONG)

Item	Description	Unit	Qty	Cost (Kshs.)

Signed By Tenderer

.....

Official Stamp

.....

.....

Date .....

Now

APPENDIX TO BILLS OF QUANTITIES

APPENDIX 'B'  
PRICE BREAKDOWN OF LOCALLY PURCHASED MATERIALS

(ATTACHMENTS ARE ALLOWED IF THE LIST IS LONG)

Item	Description	Unit	Qty	Cost(Kshs.)

Signed By Tenderer

.....

Official Stamp

.....

.....

Date .....

New

**SECTION H**  
**FULL SERVICE MAINTANANCE**  
**DURING 36 MONTHS AFTER DEFECTS LIABILITY PERIOD**  
  
**TO BE TENDERED AFTER INSTALLATION**

*2 Nov*

**SECTION I**  
**TECHNICAL SCHEDULE**  
**OF**  
**ITEMS TO BE SUPPLIED**

*New*

## TECHNICAL SCHEDULE

- 1.0 The technical schedule shall be submitted by tenderers to facilitate and enable the evaluation of the tenders
- 2.0 The filling of this schedule forms part of Technical Evaluation of the tenders, and bidders shall therefore be required to indicate the type/make and country of origin of all the materials and equipments they intend to offer to the employer as they shall have listed in the technical schedule.
- 3.0 Any bid returned with unfilled Technical Schedule shall be considered technically non-responsive, and the bidder may be disqualified.

**TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED**  
(To be completed by the Tenderer)  
**(ATTACHMENTS ARE ALLOWED IF THE LIST IS LONG)**

ITEM	DESCRIPTION	BRAND/MODEL	COUNTRY OF ORIGIN

*Non*





# **COMMISSIONING GUIDE**

## **FOR**

### **ELECTRIC LIFTS**

Issued by:

**CHIEF ENGINEER (ELECTRICAL)**  
**MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING, URBAN**  
**DEVELOPMENT & PUBLIC WORKS**  
**P.O. BOX 41191**  
**NAIROBI.**

*New*

**A. DOCUMENTS REQUIRED**

The following documentation is required for conducting tests

1. Owner's manual
2. Specifications/Bills of Quantities
3. As Built (approved) drawings

**B. SPECIAL NOTES**

NA - means not applicable

NC – means not in compliance (to clarify non compliance give more details  
at the bottom of the corresponding page if necessary).

Fix – means compliance is obtained after fixing.

OK – means in compliance.

Non

**C. CONTRACT DETAILS**

1. CONTRACT NO. ....  
.....
2. COMMENCEMENT DATE .....  
.....
3. COMPLETION DATE .....  
.....
4. SITE IDENTIFICATION .....  
.....
5. NUMBER OF LIFTS .....
6. NAME AND ADDRESS OF CONTRACTOR.....  
.....  
.....  
.....
7. BUILDING .....  
.....

*Now*

**D. LIFTS IDENTIFICATION DETAILS**

LIFT SERIAL NO. ....

LIFT TYPE .....

YEAR OF MANUFACTURE .....

COUNTRY OF MANUFACTURE CAPACITY .....

.....

*New*

**E. DESCRIPTION OF LIFTS INSTALLATION**

1. Length of travel .....
2. No. of levels served (total).....
3. No of landing doors front .....  
Rear .....
4. Rated load .....kg .....persons .....
5. Rated speed .....m/s
6. Mass of counterweight .....kg
7. Mass of Empty car .....kg

*Non*

## F. DRAWING/DOCUMENTS

CONFIRM THAT THE DRAWING OR OTHER DOCUMENTS CONTAIN  
INFORMATION RELATING TO THE FOLLOWING

Item	Details/Remarks
1. Loads and forces imposed on the building	
2. Indication of the shaft enclosure dimensions	
3. Dimensions of pit and headroom	
4. Location of the machinery and access	
5. Access spaces underneath the shaft	
6. Fixation points of guide rails, maximum distance allowed between each brackets	

New

## **G. POWER SUPPLY**

### **1. SPECIFIED**

Power voltage ..... V

Fusing rating ..... A

### **2. ACTUAL AT TIME OF TEST**

Power voltage ..... V

Fusing rating ..... A

## **H. LIST OF USED SAFETY COMPONENTS**

Item	Details/Remarks
1. Device for locking handing door	
2. Device to prevent lift car from falling (safety gear)	
3. Over speed limitation device (speed governor)	
4. Buffers – Energy accumulation, non linear (car)	

*Handwritten signature*

Item	Details/Remarks
5. Buffers – Energy accumulation – non liner (cw)	
6. Energy dissipation (car)	
7. Energy dissipation (cw)	
8. Device to prevent uncontrolled upward movement.	
9. Electric switches containing electronic components	

New



**I.     MACHINERY**

Item	Details/Remarks
1. Confirm that the main switch is in accordance with the specified	
2. Confirm that an electric socket outlet has been provided in the controller.	
3. Confirm that a light has been provided at the controller and operates.	
4. Confirm that the safety signs are inside the MAC and SCP.	
5. Confirm that the electrical emergency operation system functions correctly	
6. Confirm that the emergency release instructions are displayed in the controller cabinet	
7. Confirm that the controller cabinet is fitted with a suitable door Lock.	
8. Confirm that there is a communication device in place and working	
9. Confirm that means of lifting heavy components are available and correctly marked (lifting accessories)	
10. Confirm that the safety chain has been tested to ensure that an earth fault will cause disconnection.	
11. Confirm the installation of the surge protector	

*Now*

## **I. THE SHAFT**

### **CLEARANCES AND RUN BYS**

Check pit/overhead dimensions by reference to approved values of the type – examination certificate.

	<b>TOLERANCES mm</b>	<b>SPECIFIED M</b>	<b>MEASURED (M) DISTANCE</b>	<b>IN COMPLIANCE</b>
Overhead complies with the value of layout (drawing)	0, + 25			
Pit depth complies with value of the layout	0, + 25			
Run-by between counter weight and buffer complies with layout (Drawings)	-25/+25			
Lift travel complies with layout. (Drawings)	-25/+25			

<b>Item</b>	<b>Details/Remarks</b>
1. Confirm that the above dimensions are within the specified tolerance	
2. Confirm that the car buffers are in accordance with what was specified by the manufacturer	
3. Confirm that the Energy accumulation buffers (non-linear type) have been CE marked	
4. Confirm that the cwt buffers are in accordance with the manufactures specification	
5. Confirm that the Energy dissipation buffers(oil type) has been CE marked	

*New*

Item	Details/Remarks
<p>6. Confirm whether Energy accumulation buffers (non-linear type) have been CE marked</p> <p>7. Confirm that the well lighting level above the car roof and the pit is about 50 lux</p> <p>8. Confirm that the lighting level in front of the machine is about 200 lux</p> <p>9. confirm that the terminal light fittings are less than 0.5m from the pit floor and ceiling</p> <p>10. Confirm that the lights can be switched from both the pit and controller</p> <p>11. Confirm that an electrical outlet has been provided in the pit</p> <p>12. Is the designation of the guide rails in accordance with the manufacturer's specification for the car?</p> <p>13. Confirm that the maximum pitch of the rail fixings does not exceed the value indicated on the lay out drawing.</p>	

*Not*

## J. THE CAR

Item	Details/Remarks
1. Confirm that the available floor conforms to that specified	
2. Confirm that the inside of the car is at least 2.0m in height	
3. confirm that where glass panels are used a hand rail is not fixed on the panels	
4. Confirm that the max load and manufacturers name is indicated in the car (i.e. number of persons, load in kg and identification number)	
5. Confirm that the emergency alarm device allows two way verbal communication with a rescue service	
6. Confirm that the lighting in the car gives a minimum of 50lux at floor level and on the controls.	
7. Confirm that the emergency lighting on the car roof Operates correctly.	
8. Confirm that the emergency lighting in the car operates correctly	
9. Confirm that the car overload device operates correctly.	
10. Confirm that the ventilation has been provided in the car.	

*New*

**K. CAR TOP**

Item	Details/Remarks
<ol style="list-style-type: none"><li>1. Confirm that the top has been fitted with controls, stopping devices and socket outlets.</li><li>2. confirm that the car top station operates correctly on:-  Movement Stopping Travel limits Interaction with emergency recall drive</li><li>3. Confirm that the alarm device on the car roof top operates correctly</li><li>4. Confirm that the car roof has one clear area for standing</li><li>5. Confirm that the parking device on the car roof operates correctly mechanically and electronically</li><li>6. Confirm that the stopping devices on the car top have been positioned correctly and provided so that when operated they stop and prevent movement of the car confirm double presence incase of double entrance.</li></ol>	

*Non*

**L. CAR ENTRANCE CLEARANCE**

Item	Details/Remarks
1. Confirm that the running clearance between the door panels and between the panels and uprights, lintels, or sills is less than or equal to 6mm.	
2. Confirm that no recess or projection on the face of the door panels exceeds 3mm.	
3. Confirm the horizontal distance between car and landing door sills is 35mm or less	

**M. LANDING AND CAR DOOR**

Item	Details/Remarks
1. Confirm that the closing force limiter operates if the panel movement is blocked.	
2. Confirm that all protective devices reverse the doors	
3. Confirm that each set of landing doors is capable of being unlocked from outside with an emergency key.	
4. Confirm that the doors can be opened manually within the unlocking zone.	

*Nov*

## N. SUSPENSION CONTROLS BRAKING AND TRACTION

Item	Details/Remarks
<ol style="list-style-type: none"><li>1. Confirm that the correct suspension ropes are supplied.(Check using manufacturer's approved drawings/documents/specifications)</li><li>2. Confirm that the suspension rope terminations are correctly made and secure (washer, safety nut and pin).</li><li>3. Confirm that the suspension rope terminations ensure distribution of load between the rope (spring equalizer).</li><li>4. Confirm that the car stops under emergency conditions when traveling upwards at rated speed in the upper part of the well.</li><li>5. Confirm that the car stops under emergency conditions when traveling downwards at rated speed with 125% rated load in lower part of the well.</li><li>6. Confirm that the car cannot be raised when the counterweight rests on a compressed buffer.</li><li>7. Confirm that the car balance is correct.</li><li>8. Confirm that the leveling and re-leveling circuits operate correctly.</li></ol>	

New

**O. CAR & COUNTERWEIGHT SAFETY GEAR & OVERSPEED PROTECTION**

Item	Details/Remarks
1. Confirm that the safety gear has been CE marked	
2. Confirm that the safety gear stops the car in the downward direction when operated by the governor and engaging at the appropriate speed with load uniformly distributed at 125% of rated load at rated speed or lower for progressive safety.	
3. Confirm that the floor of the lift is horizontal or slopping less than 5% from the horizontal after safety gear operation.	
4. Following the test confirm that no deterioration which could adversely affect normal use of the lift has occurred.	
5. Confirm that the electrical safety device operates correctly.	

*Now*



**P. COUNTER WEIGHT GOVERNOR**

Item	Details/Remark
<ol style="list-style-type: none"><li>1. Confirm that the over speed governor has been CE marked.</li><li>2. Confirm that the electrical safety device on the over speed governor operates correctly.</li><li>3. Confirm that the electrical safety device on tension weight detecting breakage or slack in overspeed governor safety rope operates correctly.</li></ol>	

**Q. ASCENDING CAR PROTECTION**

Item	Details/Remark
<ol style="list-style-type: none"><li>1. Confirm that the protective device has been CE marked</li><li>2. Confirm that the device functions correctly with the car ascending at not less than the rated speed.</li><li>3. Confirm that the electrical safety device on the means of protection operates correctly (Governor Switch).</li></ol>	

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**R. MEASUREMENT OF THE ELECTRICAL SYSTEM**

Item	Details/Remark
<b>R1. <u>PROTECTIVE DEVICES</u></b>  1. Is the motor for the for the lift windings protection operating correctly. (is the motor protected)  2. Is the protection for the door motor winding supplied and operating correctly  3. Is the correct motor run time limiter supplied and operating time correctly set  4. Confirm the that lighting and socket supply is separate from that of the lift machine and that they have their own independent circuits	
<b>S. DOCUMENTATION</b>  1. Confirm that all the specified documentation has been supplied. <ul style="list-style-type: none"><li>• USER MANUALS</li><li>• WIRING DIAGRAMS</li><li>• OPERATION MANUALS</li><li>• STATUROTYPY INSPECTION</li><li>• CERTIFICATES</li><li>• LIFT INSPECTION REPORT BY LICENCED LIFT INSPECTOR</li><li>• HANDING OVER CERTIFICATES</li></ul>	

*Nlem*

**T. SIGNATURE PAGE**

1. PUBLIC WORKS REPRESENTATIVE

NAME .....

DESIGNATION .....

STAMP .....

2. CONTRACTOR. ....

NAME .....

DESIGNATION .....

STAMP .....

3. KENYA POWER REPRESENTATIVE

NAME .....

DESIGNATION .....

STAMP .....

*Man*

