

# APPENDIX I

PART NO."4"

TRADE PREAMBLES

KENYA POWER

*Johnson*

PART NO. 4

TRADE PREAMBLES

1.00 GENERALLY

- .01 Unless otherwise stated the whole of the Main Contract Works shall be carried out in accordance with the Ministry of Works (M.O.W.) General Specifications for Building Works 1976 Edition together with any amendments thereto and all references in this Section are to this document.
- .02 The whole of the Works shall be carried out in accordance with the drawings listed in the Schedule of Drawings appearing in these Bills of Quantities and any further drawings issued in amplification thereof.
- .03 This Section shall be known as the Specification and shall be held to include the Special Notes on Page A1 and the General Preliminaries on B1 – 22 of the M.O.W. General Specifications.
- .04 These Trade Preambles are intended to supplement, amplify or amend the Clauses in the M.O.W. General Specification, or select therefrom specific provisions applicable to this Contract.
- .05 These Trade Preambles shall take precedence over the M.O.W. General Specifications.

2.00 SITE COPY

- .01 The Contractor is instructed to purchase two (2) copies of the above General Specification from the Ministry of Lands, Housing & Urban Development - State Department of Public Works and to retain one copy in the site office at all times.

3.00 APPLICATION

- .01 These Trade Preambles shall apply to all Bill items for Building Works contained in the following Bills of Quantities and to any works instructed by the Project Manager including all works covered by P.C. and Provisional Sums and the rates and Lump Sum tenders for all items shall include for complying in all respects with these Trade Preambles and their provision.

4.00 TERMS

- .01 Where the terms "D.R." occurs in the M.O.W. General Specification this shall be taken to mean the "Project Manager".
- .02 Where the term "Ministry of Works" occurs in the M.O.W. General Specification this shall be taken to mean the "Employer" or the "Project Manager" whichever is the more appropriate.

5.00 MANUFACTURER'S NAME

- .01 Manufacturer's names and catalogue references are given solely as a guide to quality and alternative manufacturers of materials or goods of equivalent quality will be accepted at the discretion of the Project Manager.



PART NO. 4 (Ctd.)TRADE PREAMBLES (Ctd.)6.00 DEMOLITIONS

- .01 The Trade Preambles given in Pages C1 – C5 shall apply where appropriate.
- .02 All such work shall where required by the Contract and authorised by the Project Manager to be carried out with maximum precautions for safety and to avoid or minimise damage or disturbances to the adjacent buildings, areas, **materials** and occupants.
- .03 Every effort shall be made to carry out such work carefully and in such manner and by such means as to ensure the minimum breakage or damage to the works to be so taken down or dismantled and to ensure the **maximum** recovery of materials arising from these operations.
- .04 All materials so recovered from taking down and dismantling shall become the property of the Employer. Unless otherwise directed by the Project Manager, the Contractor shall hand over to the Employer such items immediately they are taken down or dismantled.
- .05 Such materials may only be reused for incorporation in the works by agreement with the Project Manager.
- .06 The Contractor shall allow for erecting, maintaining and later removing all scaffolding, shoring or temporary works in connection with the demolition works, for making good all work disturbed in all trades and for removing all rubbish from the site as the works proceed.
- .07 Supply, erect and maintain during the cutting of openings, etc. all necessary **protection** to the existing premises against damage by weather or other causes.
- .08 Allow for laying the dust as far as possible during the demolition by watering with a hose or other means.
- .09 Tenderers are advised to visit the site to ascertain the nature of demolitions and duntakings to be carried out and to clarify with the Project Managers all matters related to the works.

7.00 EXCAVATIONS AND EARTHWORKS

- .01 The Trade Preambles given in Pages D1-D11 shall apply.
- .02 The surface strip excavation of the vegetable top soil shall be 200mm deep over the whole area of the buildings in accordance with Clause 0725 and the excavated material shall be deposited separately in spoil heaps well away from other excavated material in accordance with Clause 0784.
- .03 Excavations for wall foundations shall be taken down to firm ground to the **approval** of the Project Manager and the bottom well rammed and approved before concreting. The width of the foundation shall comply with Clause 0722 on Page D6.
- .04 The actual depth of the foundation trenches shall be determined on site.



**TRADE PREAMBLES (Ctd.)**

7.00

**EXCAVATIONS AND EARTHWORKS (Ctd.)**

- .05 Insecticide treatment shall be "Termidor" or other equal and approved and shall be carried out in accordance with Clause 0827 and 0859. The bottoms of all excavations shall be **treated** with anti-termite insecticide treatment in accordance with the manufacturer's recommended **instructions**. The Contractor shall provide a Ten-year guarantee for all such treatment from an approved firm.
- .06 Backfilling around foundations is to be carried out with selected excavated or other imported materials in accordance with Clauses 0700 and 0735. The backfilling will be free from clay or vegetable soil and well rammed around foundations.
- .07 Disposal of surplus excavated material shall be in accordance with Clauses 0612 and 0782.
- .08 The vegetable soil from the surface strip is to be spread and levelled on site as **directed** and prepared to receive grass.
- .09 Explosives must not be used without the prior approval of the Project Manager and if authorised must be carried with Clause 0628 as specified.
- .10 Planking and strutting to excavations shall be provided in accordance with Clause 0733 and shall be deemed to be included in the Tender Price and the Tenderer's rate for excavation.
- .11 Disposal of water shall be as specified in Clauses 0770 to 0775.
- .12 Hardcore filling to make up levels under floors shall be in accordance with Clauses 0810 to 0874 and minimum 200mm thick.
- .13 The hardcore filling is to be of clean hard stone broken from 150mm gauge **downwards** well packed rolled and consolidated to the satisfaction of the Project Manager in accordance with Clauses 0185 and 0868 or 0869 as required.
- .14 The hardcore filling is to be blinded with approved stone quarry dust or approved **quality** murrum well watered and rammed and finished smooth to receive concrete flooring, all in accordance with Clause 0871 and approved **chemical** anti-termite treatment applied to surface of **hardcore** to be executed by the Main Contractor as before described under a written ten year **guarantee**.
- .15 One layer 1000 gauge polythene sheeting is to be laid over the area of the hardcore and through the walls in accordance with Clauses 1105 and 1312. Care must be taken to **ensure** that the hardcore bed is perfectly smooth before laying the sheeting. Extent of laps shall be minimum 300mm. Labour forming battering faces shall be allowed for.
- .16 The Ground Floor level is to be decided on site but should be an average of **400mm** above existing ground level.
- .17 The whole site and excavations in **particular** are to be kept free from water and mud by **bailing** or pumping as required.



**TRADE PREAMBLES (Ctd.)**

8.00 **CONCRETE WORK**

- .01 The Trade Preambles given in Pages F1 – F34 shall apply.
- .02 The whole of the concrete work shall be carried out in accordance with the Structural Engineer's drawings and to his satisfaction.
- .03 The Contractor shall use "Guaranteed Strength" concrete in accordance with the Engineer's requirements.
- .04 Concrete test cube will be required and should be prepared in accordance with the procedure laid down in Clause 282 on Page F15.
- .05 Volume batching of sand and aggregate will be permitted in accordance with Clause 1165. The gauge boxes must be manufactured of steel as directed by the Project Manager and must be kept thoroughly clean at all times and in good repair. Failure to do so may result in the Project Manager directing that all measuring will be by weight batching in accordance with Clause 1167.
- .06 Extreme care must be taken in the **storage** of all concreting materials on site in accordance with Clauses 1132 and 1134. No materials which have become contaminated or intermixed in any way will be allowed to be used in the works. Special care is necessary to ensure that no soil become mixed with the aggregates or sand.
- .07 All construction joints shall be formed and treated strictly in accordance with Clauses 1360 to 1369 as directed by the Project Manager.
- .08 "Fair faced" concrete finish, if required, will be as defined in Clause 1415.
- .09 Concrete curing to vertical or inclined surfaces shall be carried out by methods 1 and 3 as described in Clause 1385 and as directed by the Project Manager.
- .10 Generally, wall foundations, floor beds and superstructure concrete work shall be in concrete (1:1½ :3 Class 25/20mm) mix **reinforced** as in the Structural Engineer's drawings.
- .11 Formwork shall be sawn timber of **approved** quality except where fair face finish is required in which case wrot formwork shall be used. The formwork shall be closely laid to **prevent** leakage of the cement and water content of the concrete.
- .12 Steps in concrete foundations where required should be of 225mm depth or its multiple and the overlap along the length must not be less than the width of the foundation. The location of any steps required will be decided on site.
- .13 Fabric reinforcement shall be as indicated on the Engineer's drawings and shall be to B.S. 4483 with minimum 300mm side and end laps. Allowance for laps under partitions shall be allowed for.
- .14 The Tenderer shall allow in his tender price for providing reinforcement to concrete works as indicated in the Structural Engineer's drawings.



**TRADE PREAMBLES (Ctd.)**

8.00 CONCRETEWORK (Ctd.)

- .15 Precast concrete shall be in accordance with the Pages F33 – F34 and in class 20/12mm to Project Manager's details and approval.
- .16 Mild steel reinforcement shall be to B.S. 4499 and high tensile reinforcement to B.S. 4461, all in accordance with the Engineer's **Bending** Schedules.
- .17 Joints in concrete work where shown on the drawings shall be 12mm thick "Flexcell" fibre-board or other approved joint with exposed surfaces sealed with "Plastic" sealant.

9.00 WALLING

- .01 The Trade Preambles given in Pages G1 – G15 shall apply.
- .02 All foundation walling shall be in natural stones.
- .03 Unless otherwise stated, all load **bearing** walling shall be in local natural stone. Internal walling may be in solid concrete block walling complying with the Clauses 2220-2346.
- .04 Vertical d.p.c. is to be provided to **walling** where shown on the drawings or to the Project Manager's and Engineer's instructions.
- .05 If required, louvred block walling shall be in decorative precast concrete louvred blocks to the approval of the Project Manager.
- .06 Substructure walling shall be bedded, jointed and pointed in cement and sand mortar (1:3).
- .07 The mortar to be used for superstructure walling shall be composed of one part cement to one part lime and six parts sand (1:1:6) measured in gauge boxes and thoroughly mixed dry preferably with an approved mechanical mixer or on a clean and approved mixing platform with water added afterwards until all parts are completely incorporated and brought to a proper consistency and used within the hour. No partially or wholly set mortar will be allowed to be re-used or re-mixed. Clauses 2110 to 2136 shall apply.
- .08 All walls 150mm thick and less shall be reinforced with 25mm hoop iron 20 s.w.g. in every alternate course.
- .09 Where walls are built up under **existing** lintels, beams or roof slabs, care shall be taken to ensure that the top course shall be completely filled up with cement mortar and pinning and keying to the underside of existing surfaces shall be done with approved wedging materials well driven in.
- .10 Where applicable, all new walling is to be cut, toothed and bonded into existing walls and any damages or cracked portions of **adjoining** walling shall be made good or replaced with new work.
- .11 Damp proof courses to walls shall be Hessian based bitumen felt or other equal and approved not less than 3.9kg per square metre in one layer and shall be laid and bedded in cement mortar as before described to all walling at ground floor level.





**TRADE PREAMBLES (Ctd.)**

10.00

**ASPHALT WORK AND WATERPROOFING**

- .01 The Trade Preambles given on Pages J1-J4 shall apply.
- .02 All mastic asphalt work shall be carried out by an approved Sub-contractor in accordance with Clause 2881. Any tanking shall be **carried** out in accordance with the manufacturer's printed instructions.
- .03 A One year Guarantee for all asphaltic work shall be provided in accordance with Clause 2888.
- .04 Horizontal and vertical asphalt tanking shall be carried out in accordance with Clause 2888.
- .05 Asphalt tanking shall comply with Clause 2824 and 2941.
- .06 Isolating membranes shall comply with Clauses 2852, 2908 and 2943.
- .07 Internal angles at junctions of horizontal and vertical tankings and turning-in of vertical tanking at top edge shall be carried out in accordance with Clauses 2955 and 2956 respectively.
- .08 Preparation of surfaces to receive tankings shall be carried out in accordance with Clauses 2891, 2894, 2896, 2902 and 2912.
- .09 Internal angles at junctions of horizontal and vertical tankings and turning-in of vertical tanking at top edge shall be carried out in accordance with Clauses 2955 and 2956 respectively.
- .10 Preparation of surfaces to receive **tanking** shall be carried out in accordance with Clauses 2891, 2894, 2896, 2902 and 2912.
- .11 The waterproofing agent to waterproofed cement sand screeds and plasters to **swimming pool** shall be "Sika-1" waterproofing **compound**. The concrete used for the construction of the swimming pool shall be mixed with Sika-Plastocrete – N waterproofing compounds. Both "Sika-1" and "Sika Plastocrete – N" **waterproofing** compounds are available from, several suppliers in Nairobi or other equal and approved compound. The normal rate of application of the "Sika 1" compound is 1 part of "Sika 1" to 10 parts of clean mixing water. The mixing of the "Sika 1" compound and water, cement and sand and the application of the screeds, including the number of coats to be applied shall all be carried out in accordance with the manufacturer's instructions as set out in their latest catalogue. The waterproofing additive shall comply with Clause 7165.
- .12 Construction joints in swimming pool shall have p.v.c. water bars. The water bars shall be fixed in accordance with the manufacturer's **printed** instructions.

*J. B. M. M. M.*

PART NO. 4 (Ctd.)TRADE PREAMBLES (Ctd.)11.00 ROOFING

- .01 The Trade Preambles given in Pages K1-K19 shall apply.
- .02 The roof covering to roofs of sheds, shades, and the like unless otherwise specified in the Bill of quantities shall be 26 gauge pre-painted box profile roof sheeting fixed to mild steel zed purlins using galvanised J-Bolts and plastic washers. The washers and bolts shall comply with Clauses 3223 and 3224 respectively.
- .03 Rainwater down-pipes and fittings shall generally be supplied and fixed in accordance with Clauses 6111-6239.
- .04 All metal flashings, valley gutters and linings shall be of approved gauge pre-painted iron sheet metal made up and fixed in the best approved manner in accordance with Clauses 3620-3696.
- .05 Copings shall be in precast concrete and shall comply with Clauses 1770-1868. The mortar for bedding shall be cement and sand (1:4) and comply with Clauses 210-2136.
- .06 Covering to pitched roofs of public areas and bedroom blocks in hot areas like Mombasa and the like shall be "Harvey Thatch" roof tiles. The tiles and fittings shall comply with Clause 3122. The tiles shall be laid in accordance with the manufacturers printed instructions and to the approval of the Project Manager.
- .07 All verge tile, half tiles and ridge tiles shall be "Harvey Tiles" or other equal and approved tiles to match the roof tiles and shall be laid and fitted in accordance with the manufacturer's printed instructions and to the approval of the Project Manager.
- .08 Softwood tiling battens shall comply with Clause 3102. They shall be fixed to timber rafters in accordance with Clause 3155.
- .09 The polythene underlay shall be 1000 gauge and shall comply with Clause 3115. The underlay shall be laid in accordance with Clause 3152. The nails for fixing underlay shall comply with Clause 3137.
- .10 Matching accessories (ridges, ventilators etc.) shall also be provided to match roof sheets profile.
- .11 Polystyrene or other equal and approved type of filler blocking pieces where applicable shall be provided and secured with adhesive between both flanges of the ridging and the roof sheeting in order to block up the gaps within the corrugations. The Polystyrene shall comply with Clauses 3208.
- .12 All sundry materials for the roofing shall comply with Clauses 3140-3148.





PART NO. 4 (Ctd.)TRADE PREAMBLES (Ctd.)12.00 CARPENTRY

- .01 The Trade Preambles given in Pages L1-L13 shall apply.
- .02 The timber for carpentry work generally is to be Grade H sawn or wrot cypress or podocarpus of approved moisture content in accordance with Section 3720 and shall be treated with preservative and specified in Clause 3728.
- .03 The lower ends of all structural timber members shall be coated with bitumen before building into foundations, walling etc.
- .04 All structural joints shall be to the design and approval of the Structural Engineer and cut ends shall be treated as described in the foregoing before being put together. All joints shall be bound with hoop iron.
- .05 A Certificate of Treatment shall be provided in accordance with Clause 3730.

13.00 JOINERY

- .01 The Trade Preambles given in Pages M1-M21 shall apply.
- .02 Softwood timber where required is to be Select (Prime Grade) wrot cypress of approved moisture content in accordance with Clause 4032 and treated with preservative as above.
- .03 Hardwood timber generally is to be prime grade mahogany of approved moisture content and treated with preservative as above.
- .04 All items of joinery shall have pencil rounded arises for protection against damage and for bedding frames and cills in cement and mortar.
- .05 Holes for plugs shall be formed by using masonry drills and fitting with proprietary plugs of the correct size, cutting holes with hammer and chisel will not be permitted.
- .06 The joinery fittings are to be made up in the best approved manner in accordance with Clauses 3670-4691 and shall be manufactured to the Project Manager's details.
- .07 Samples of each type of joinery fixtures have to be approved by the Project Manager before manufacturing of further items and the Project Manager shall be given Notice of the workshops where these are to be manufactured so that if required these can be inspected during manufacture and before delivery to the site.
- .08 Doors, door frames, fanlight frames, architraves and beads shall be provided in accordance with the Project Manager's Door Schedule.
- .09 Flush doors shall be solid cored faced on both sides with imported plywood and hardwood lipped on all edges and shall comply with Clause 4564 and hung in accordance with Section 4640.
- .10 Glazed panels in doors shall be in accordance with the Project Manager's drawings.




PART NO. 4 (Ctd.)TRADE PREAMBLES (Ctd.)13.00 JOINERY (Ctd.)

- .11 Frames, linings, architraves and beads to flush doors shall be in wrot mahogany and shall comply with Clauses 4512 and 4624.
- .12 All door frames shall be fixed to walls using mild steel cramps.
- .13 Ironmongery for the works shall be fitted and fixed in the best approved manner in accordance with Clauses 4850-4898.
- .14 The fixing of ironmongery will be deemed to include for fixing with matching screws including cutting, sinking, boring morticing and fitting the ironmongery, removing before and refixing after painting and labelling and safe-guarding the keys to each lock.
- .15 All ironmongery shall be tested and be fully operative before the handing over of the works.
- .16 Generally all doors shall have ironmongery as indicated in the Door Schedule.
- .17 Joinery fittings to cupboards, drawers and associated ironmongery shall be provided in accordance with the Project Manager's details.
- .18 All ironmongery, veneer and laminated plastic sheeting shall be selected by or be subject to the approval of the Project Manager.
- .19 Veneered blockboard shall comply with Clauses 4065 and 4067 and shall be fixed in accordance with Sections 4160 and 4400.
- .20 Blockboard shall comply with Clauses 4057 and 4056 and shall be fixed in accordance with Section 4400.
- .21 Laminated plastic sheeting shall be "Formica" or other equal and approved plastic sheeting of an approved colour and texture and shall comply with Clause 4079 and shall be fixed in compliance with Clause 4168 and Section 4400.
- .22 Adhesive generally shall comply with Clauses 092 to 4096, 4162 and 4414.
- .23 Shelves shall be 25mm thick blockboard lipped on exposed edges with hardwood lipping, all in accordance with Clause 467 and shall be fixed to metal bearers in accordance with the Project Manager's drawings.

14.00 METALWORK

- .01 The Trade Preambles given in Pages P1-P11 shall apply.
- .02 All windows shall be purpose made large-pane Z-section steel casement glazed.
- .03 All windows shall be in accordance with the Project Manager's Schedule of Windows.
- .04 All steelwork shall be mild steel to B.S. 4360 Grade 43B and B.S. 449.



**TRADE PREAMBLES (Ctd.)**

14.00 **METALWORK (Ctd.)**

- .05 All steelwork shall be finished with one coat of zinc chromate and two coats of red oxide paint as specified in Clause 5911 prior to erection.
- .06 Steel and aluminium sections shall conform to Section 5530.
- .07 Fasteners and stays for the steel windows shall be of imported quality brass.
- .08 Aluminium frames shall conform to Clause 5917.
- .09 All aluminium sections shall comply with Clauses 5551 and 5553.
- .10 Aluminium sheets and plates shall comply with Clause 5591.
- .11 Fastenings for aluminium sections shall conform to Clauses 5671, 5618 and 5921.
- .12 All window frames shall have permanent vent slots as described with wire mesh mosquito proofing as Clause 5576.
- .13 Welding to aluminium will conform to Clause 5701.
- .14 All welds shall be neatly executed in accordance with Section 5680.
- .15 Bolts, screws, nuts and washers shall match the material of the section being secured and shall comply with Clauses 5622 and 5625. All holes for fixing screws shall be counter-sunk.
- .16 The fixing of metal windows shall include for assembling parts, bedding and pointing in mastic, building in fixing lugs and plugging, fitting and adjusting handles and fasteners on completion.
- .17 Metal window frames shall be bedded in an approved bedding compound in conformity with Clause 935 and shall be neatly pointed all round on completion with approved pointing sealant in compliance with Clause 5937 and left clean to the approval of the Project Manager.
- .18 Plugs shall conform to Clause 5927.

15.00 **STRUCTURAL STEELWORK**

- .01 The Trade Preambles given in Pages N1-N19 shall comply.
- .02 The Project Manager may require all structural steelwork to be carried out by an approved Sub-Contractor in accordance with Clauses 5002 and 5091.
- .03 All steel sections shall be hot rolled to comply with Clauses 5030 – 5036.
- .04 Steel plates shall comply with Clause 5052.
- .05 Bolts, nuts and washers shall comply with Clauses 5064.
- .06 Rag bolts and nuts shall comply with Clauses 5068.

*S. Ramaswami*

**TRADE PREAMBLES (Ctd.)**

15.00 **STRUCTURAL STEELWORK (Ctd.)**

- .07 Steel plates shall comply with Clause 5052.
- .08 Shop drawings shall be prepared and submitted in accordance with Clause 5147.
- .09 Fabrication of the structural steelwork shall conform to Clauses 5100-5147.
- .10 All welding work shall be carried out in accordance with Clauses 5150-5173.
- .11 Bolting and rivetting shall be carried out in accordance with Clauses 5190-5221.
- .12 All structural steel shall be hot dip galvanised in accordance with Clause 5236 and shop primed in accordance with Clause 5231 before delivery to site.
- .13 Erection shall be carried out in compliance with Clause 5240-5261.
- .14 Testing of all structural steelwork shall be carried out in accordance with Clause 5271.

16.00 **MECHANICAL SERVICES INSTALLATIONS**

- .01 The Trade Preambles given in Pages Q1-Q24 shall apply.
- .02 All the Mechanical Services installations shall be carried out by a nominated and /or domestic Sub-Contractor in accordance with the Drawings, Specifications and Bills of Quantities prepared by the Project Manager's Services Engineers.
- .03 The Main Contractor shall arrange and monitor a Programme for the work of the Sub-Contractor and for all other Sub-Contracts affected by them. The Main Contractor shall ensure that all work and Builder's Work in connection is carried out in a sequence which will allow under-floor drains, piping in ducts, chases and the like leading to or from all sanitary fittings, hot or cold water tanks, gulley traps, vent pipes and the nearest manholes to be installed in their correct positions in order to minimise the amount of cutting of holes, chases, floor ducts, etc. as much as possible.
- .04 The Main Contractor shall carry out the Builder's Work in connection with the Sub-Contract including cutting or forming holes and chases and later making good.
- .05 The Trade Preambles on Pages Q4-Q8 will apply to rainwater pipes and gutters.
- .06 Rainwater downpipes and gutters and fittings shall comply with Clause 6121 and shall be fixed in accordance with Sections 6160 and 6190.
- .07 Roof outlets, gutter brackets, fixing and jointing materials shall be in accordance with Section 6140.
- .08 Testing of downpipes and gutters shall be carried out in accordance with Section 6230.

*ABRAMASNA*

**TRADE PREAMBLES (Ctd.)**

17.00 **ELECTRICAL INSTALLATIONS**

- .01 The Trade Preambles given in Pages R1-R4 shall apply.
- .02 The Electrical Installation work shall be executed by Nominated and / or domestic Sub-Contractors in accordance with the Sub-Contract document prepared by the Project Manager's Electrical Services Engineer.
- .03 The Builder's Work in connection with Electrical Installation shall be carried out by the Main Contractor and the Trade Preambles given in Pages R1-R4 relating to this work shall apply.
- .04 The Main Contractor should particularly note the Clause 6906 on Page R1 relating to the Programme and sequence of works.
- .05 All necessary pipe ducts and the like shall be built in as directed by the Project Manager in readiness for the Electrical Sub-Contractor.
- .06 All conduits, junction boxes and other requirements shall be built into the concrete floor and roofing slabs where required and adequate notice shall be given to the Electrical Sub-Contractor and the Project Manager to enable these to be positioned before concreting.

18.00 **FLOOR, WALL AND CEILING FINISHES**

- .01 The Trade Preambles given on Pages S1-S25 shall apply.
- .02 Finishes generally shall be of the best quality and workmanship and to the approval of the Project Manager.
- .03 If required by the Project Manager a sample panel or panels of any particular finish shall be prepared for his approval and once approved shall form the standard for all similar finishes.
- .04 The joints between different finishes shall be neatly and cleanly executed to the approval of the Project Manager.
- .05 All adjoining surfaces shall be fully protected against any splashing or other damage and such protection shall be afterwards removed and all surfaces made good to the approval of the Project Manager.
- .06 Attention is drawn to Clause 7697 wherein it is specified that the Main Contractor is responsible for preparing all sub-floors, screeds and other backgrounds to the satisfaction of the Sub-Contractor and Project Manager. The Main Contractor must ensure that all such surfaces are smooth level or to required even falls and levels and any cracks or hollows shall be filled with approved levelling compound to the satisfaction of the Sub-Contractor and Project Manager.
- .07 The finishes shall be as per the schedule of finishes appended to these Bills of Quantities.
- .08 Cement and sand screed paving shall be treated with Sodium Silicate in accordance with Clauses 7177 and 7417.
- .09 The internal wall finish shall generally be cement, lime and sand (1:1:6) plaster.



**TRADE PREAMBLES (Ctd.)**

18.00 **FLOOR, WALL AND CEILING FINISHES (Ctd.)**

- .10 External wall finishes shall generally be of cement and sand (1:4) render.
- .11 Plastering and rendering shall be carried out in accordance with Clauses 7180-7307.
- .12 Soffits of concrete slabs and staircases shall generally be finished in minimum 12mm thick two-coat lime plaster and three coats plastic emulsion paint.
- .13 Sides and soffits of beams shall generally be finished in steel float plaster internally.
- .14 A neat "V"-groove shall be provided to all joints between plaster or render to walls and reinforced concrete element. 25mm x 30 s.w.g. hoop iron ties shall be cast into concrete elements at 500mm centres at all such joints to serve as ties for the walling.
- .15 Where specified "making good" shall include repairing and filling in cracks, interstices, holes etc. using an approved filler, rubbing or sanding down with sand paper or emery paper, wire brushing and generally restoring the work to match any similar approved work and preparing for repainting or receiving a new finish.

19.00 **GLAZING**

- .01 The Trade Preambles given on Pages T1-T6 shall apply.
- .02 All glazing shall be carefully executed by an approved Specialist Sub-Contractor.
- .03 Unless otherwise described, glazing to windows is generally 6mm thick clear sheet glass or obscure glass in accordance with Clauses 8326 and 8335 respectively.
- .04 Glazing shall be carried out in accordance with Clauses 8400-8417.
- .05 Glazing to metal windows and doors shall be carried out in accordance with Clauses 8420-8433 using first quality metal casement putty in accordance with Clause 8371.
- .06 All Puttying shall be neatly executed and all front and back puttying shall be to the full height of the frames and cut off cleanly with a putty knife and left perfectly smooth.
- .07 Glazing to timber doors and frames shall be carried out using hardwood timber beads in accordance with Clauses 8440-8461.
- .08 All exposed edges shall be rounded and polished in accordance with Clause 8382.
- .09 Glazing strips, channels and sealant compounds shall conform to Clause 8351.
- .10 Edge clearance and edge cover shall be in accordance with Clauses 8406 and 8407 respectively.
- .11 External glazing shall be weather tight in accordance with Clause 8402.

*S. Bramasna*



PART NO. 4 (Ctd.)TRADE PREAMBLES (Ctd.)19.00 GLAZING (Ctd.)

- .12 Mirrors shall be supplied and fixed in accordance with Clause 8347 and 8418.
- .13 All broken or damaged glass or mirrors shall be replaced before practical completion and the surrounds redecorated to the Project Manager's approval.

20.00 PAINING AND DECORATING

- .01 The Trade Preambles given in Pages U1-U8 shall apply.
- .02 The whole of the work shall be carried out by an approved painter whose name must be submitted for approval by the Project Manager in accordance with Clauses 8501.
- .03 The paint treatment and colour will be selected by the Project Manager and shall be carried out to the full satisfaction of the Project Manager.
- .04 Samples of primers, paints, varnishes and all other treatments to be used in the works shall be submitted to the Project Manager for approval before commencement.
- .05 All backs of timber frames to doors or other joinery surfaces adjoining masonry, concrete block or clay block walling shall be primed as described in Clauses 8512, 8755 and 8756.
- .06 The metal casement putty to all windows shall be primed with one coat approved aluminium primer as soon as the putty is dry, in preparation for finishes.
- .07 Plastered external wall surfaces generally shall be painted with three coats permaplast paint.
- .08 Internal walls are to be painted with three coats of plastic emulsion paint.
- .09 Ceilings are to be painted with three coats of plastic emulsion paint.
- .10 Surfaces of mahogany veneered flush doors and associated frames shall be primed and finished with three coats of two-pack polyurethane.
- .11 All hardwood timber work is to be varnished with three coats of two pack polyurethane varnish.
- .12 All paint shall be from an approved manufacturer.
- .13 All softwood and blockboard timber surfaces generally are to be painted with two undercoats and one finishing coat gloss oil paint.
- .14 All exposed steelwork shall generally be primed with a plumbatic primer and finished in two undercoats and one finishing coats of gloss oil paint.
- .15 All manhole covers shall be finished in one coat of black bituminous paint.



PART NO. 4 (Ctd.)TRADE PREAMBLES (Ctd.)20.00 PAINTING AND DECORATING (Ctd.)

- .16 All external wall plinths shall be finished in two coats of black bituminous paint.
- .17 Where cracks etc. in walling or plaster are repaired, the whole of the panel or "area affected shall be" repainted to the Project Manager's satisfaction.

21.00 EXTERNAL WORKS

- .01 The external works generally shall be carried out in accordance with the Foregoing Trade Preambles where applicable and the Trade Preambles given on Pages V1-V16 and Access Road 1 - Access Road 13.

22.00 DRAINAGE

- .01 The Trade Preambles on Pages V1-V11 shall apply.
- .02 Attention is drawn to items .01 to .03 of the foregoing Trade Preambles for Plumbing and Engineering Installations.
- .03 All excavations and backfilling in black cotton soil shall be carried out in accordance with Clause 9011, 9140 to 9155 and 9280 to 9298.
- .04 Excavations and backfilling in black cotton soil shall be carried out in accordance with Clause 9149. Selected fill shall be in accordance with Clauses 9103 No. 9195.
- .05 The topsoil shall be excavated, kept separate in spoil heaps, re-excavated and spread and levelled as described in Clauses 0691 and 0784.
- .06 Surplus material after backfilling shall be spread and levelled or otherwise disposed off as described in Clauses 0622 and 0782. Surplus rock shall be used as filling materials where directed or shall be removed from site if so directed.
- .07 Pipes are be bedded and laid in trenches in accordance with Clause 9162 and 9164.
- .08 Pipes and fittings shall generally be Golden Brown unplasticised polyvinly chloride (U.P.V.C.) pipes Class 41 to comply with B.S. 4660 (1973/78) and B.S. 3481 (1977). The joints shall be chamfered spigot and ring seal socket with elastomeric sealing ring in accordance with B.S. 2494 and Clauses 9032 and 9221.
- .09 Pipes under buildings, roads and parking areas where specified shall be cast iron spigot and socket pipes to comply with B.S. 4472 and in accordance with Clause 9051.
- .10 Beds and surround to pipes shall be in accordance with Clauses 9160-9199.
- .11 Drain pipes shall generally be bedded and surrounded in granular material in accordance with Clauses 9101, 9173 and 9174. P.V.C. pipes must not be surrounded with concrete.

PART NO. 4 (Ctd.)TRADE PREAMBLES (Ctd.)22.00 DRAINAGE (Ctd.)

- .12 Where directed pipes shall be bedded and surrounded in Type 'C' concrete bed and surround in accordance with Clauses 9132, 9178 and 9183. The concrete bed and surround shall comply with Clauses 9105 and 9167. Where the ground is of low bearing capacity, the concrete bed is to be reinforced in accordance with Clause 9197. The backfilling around pipes having a concrete bed and surround shall be in accordance with Clauses 9285 and 9281.
- .13 Gulley traps shall be bedded and surrounded in accordance with Clause 9199.
- .14 Manholes shall be constructed in accordance with Clauses 9240 to 9261. Cast iron manholes covers and frames shall comply with Clause 9081 and steps irons shall comply with Clauses 9087.
- .15 Concrete blocks for manholes and culvert headwalls shall be built in Group I cement/lime putty/sand mortar (1:1:3 mix) as in Clause 2114. Cement for mortar and internal render to manholes shall be sulphate resisting Portland Cement as Clause 1082. All exposed blockwork shall be rendered with cement and sand (1:5) mortar as Clause 7047.
- .16 Invert block drains and side slabs shall conform to Clause 9072 and shall be laid as specified on the drawings and directed by the Project Manager.
- .17 The banks to both sides of stormwater drains shall be cleared, trimmed and grassed in accordance with Clause 9155.
- .18 Culvert pipes shall be spun concrete pipes of the specified diameter having 'ogee' joints and shall comply with Clauses 9034 and 9072.
- .19 The testing of the drainage shall be carried out in accordance with Clauses 9270-9279.

23.00 ROADS AND PARKING AREA

- .01 The Trade Preambles given in Pages "Access Roads 1" to "Access Roads 13" shall apply to the service yard and road.
- .02 Materials generally shall be in accordance with Clauses 9630 to 9655 and 9730 to 9779.
- .03 Workmanship generally shall be in accordance with Clauses 9670 to 9716 and 9800 to 9895.

**PRELIMINARIES**

**PRELIMINARY PARTICULARS**

**A NAME OF PARTIES**

The "Employer" is : Kenya Power & Lighting Co. Ltd  
P.O. Box 30099 - 00100  
NAIROBI

The term "Employer" and "Kenya Power" and "Kenya Power & Lighting Co. Ltd" wherever

The "Project Manager" is : The Manager,  
Administration & Property, HR& Administration  
Kenya Power & Lighting Co. Ltd  
P.O. Box 30099 - 00101  
NAIROBI

The "Project Officer " is : The Kenya Power Projects Officer  
Administration & Property, HR& Administration  
Kenya Power & Lighting Co. Ltd  
P.O. Box 30099 - 00101  
NAIROBI

The "Project Quantity Surveyor" is The Kenya Power Quantity Surveyor,  
Administration & Property, HR& Administration  
Kenya Power & Lighting Co. Ltd  
P.O. Box 30099 - 00101  
NAIROBI

**B DESCRIPTION OF SITE**

The site is located at the Kenya Power's Kitale depot, within Kitale town in Trans Nzoia County. The depot is located next to Kenya Seed Company, opposite Kenya Cooperative Creameries (KCC).

The Contractor shall visit the Site to acquaint himself with its nature and position, the nature of the ground, substrata and other local conditions, position of power and water supplies, access roads or any other limitations, and no claims for extras will be considered on account of lack of knowledge in this respect.

The Contractor must obtain the Project Manager's approval and directions regarding the use of any materials found on the site.

**C ACCESS TO SITE**

Access to site shall be as directed by the Project Manager. The Contractor shall strictly observe police & NTSA regulations regarding traffic movement.

Preliminaries

Carried to collection

KShs.



Shs.

**GENERAL MATTERS**

**SUFFICIENCY OF TENDER**

A The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his Tender for the Works and of the rates and prices stated in the Priced Bills of Quantities, which rates and prices shall cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.

**B STAMP CHARGES**

The Contractor shall allow for the payment of all Stamp Charges in connection with the Surety and Contract Agreement.

**C DEFINITIONS AND ABBREVIATIONS**

Terms used in these Bills of Quantities shall be interpreted as follows:

"Approved"	Shall mean approved by the Project Manager.
"as directed"	Shall mean as directed by the Project Manager.
"B.S."	Shall mean the current British Standard specifications published by the British Standards Institution, 2 Park Street, London W.1., England.
"CM."	Shall mean Cubic Metres.
"SM."	Shall mean Square Metres.
"LM."	Shall mean Linear Metres.
"MM"	Shall mean Millimetres.
"KG."	Shall mean Kilogramme.
"NO."	Shall mean Number.
"M.S"	Shall mean Measured Separately
PRS or Prs	Shall mean Pairs
a.b.d	Shall mean as before described
Ditto or Do	Shall mean the whole of the preceding description except as qualified in the description in which it occurs.
NTSA	Shall mean National Transport & Safety Authority

Preliminaries

Carried to collection

KShs.



	Shs.
<p><b>A <u>PROGRESS SCHEDULE</u></b></p> <p>The Contractor shall, upon receiving instructions to proceed with the Work, draw up a time and progress Schedule setting out the order in which the Works are to be carried out with the appropriate dates thereof. This Time and Progress schedule is to be agreed with the Project Manager and no deviation from the order set out in this Schedule will be permitted without the <b>written</b> consent of the Project Manager. The Main Contractor will be responsible for arranging the above programme with all Sub-Contractors including the Nominated Sub-Contractors and Nominated Suppliers.</p>	
<p><b>B <u>FIGURED DIMENSIONS</u></b></p> <p>Figured dimensions are to be followed in preference to dimensions scaled from the Drawings; but wherever possible dimensions are to be taken on the Site or from the Buildings. Before any Work is commenced by Sub-Contractors or Specialist Firms, dimensions must be checked on the Site and/or buildings and agreed with the Contractor, irrespective of the comparable dimensions shown on the Drawings. The Contractor shall be responsible for the accuracy of such dimensions.</p>	
<p><b>C <u>PROVISIONAL WORK</u></b></p> <p>All "Provisional" and other work liable to adjustment under this Contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the Quantity <b>Surveyor</b>. Immediately the work is ready for measurement, the Contractor shall give notice to the Quantity Surveyor.</p> <p>If the Contractor makes default in these respects he shall, if the Project Manager so directs, uncover the work at his own expense to enable the measurements to be taken.</p>	
<p><b>D <u>EXISTING SERVICES</u></b></p> <p>Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and <b>protection</b> of such services. Any damage or disturbance caused to any services shall be reported immediately to the Project Manager and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense.</p>	
<p><b>E <u>TRANSPORT TO AND FROM THE SITE</u></b></p> <p>The Contractor shall include in his prices for the transport of materials workmen, etc., to and from the Site of the Proposed Works, at such hours and by such routes and vehicles as are permitted by the Authorities and in particular by the Transport Licensing Board and / or the National Transport &amp; Safety Authority ,</p>	
<p>Preliminaries</p>	<p>Carried to collection</p> <p>KShs.</p>

*E. Namiaswa*

<b>A</b>	<p><b><u>PUBLIC AND PRIVATE ROADS, PAVEMENTS, ETC</u></b></p> <p>The Contractor will be required to make good, at his own expense any damage he may cause to the present road surfaces and pavements within or beyond the boundary of the Site, during the period of the Works. In particular, all existing trees, shrubs, plants, etc., which may be destroyed or damaged during the progress of the Works are to be made good by the Contractor to the approval of the Project Manager.</p>	Shs.
<b>B</b>	<p><b><u>POLICE REGULATIONS</u></b></p> <p>The Contractor is to allow for complying with all instructions and regulations of the police Authorities.</p>	
<b>C</b>	<p><b><u>ENVIRONMENTAL REGULATIONS</u></b></p> <p>The Contractor shall observe all the requirements of the National Environment Management Authority (NEMA) and especially those conditions given in the Project's Environmental Impact Assessment Report Approved by NEMA. The Contractor shall collaborate with the Environmental Impact Assessment (EIA) expert to ensure that proposed mitigation measures are adhered to during construction phase and where necessary appropriate mending up activities undertaken and the same reported back to NEMA as required.</p> <p>In particular the Contractor shall give special emphasis to control dust. The Contractor shall provide all necessary dust screens to prevent dust from the construction works affecting neighbouring property. The dust screens shall be approved by the Project mgr and be acceptable to NEMA officials. The Contractor shall also control dust on site by appropriate watering of the sources of dust.</p> <p>The Contractor shall put emphasis on controlling noise, vibrations and occupational hazards. The provisions of the Occupational Safety and Health Act No. 15 of 2007 must be strictly observed.</p>	
<b>D</b>	<p><b><u>CONTRACTORS' SUPERINTENDENCE</u></b></p> <p>The Contractor shall constantly keep on the Works a literate English-speaking Agent or Representative, competent, NCA accredited and experienced in the kind of work involved, who shall give his whole time to the superintendence of the Works. Such Agent or Representative shall receive on behalf of the Contractor, directions and instructions from the Project Manager and such directions and instructions shall be deemed given to the Contractor in accordance with the conditions of the Contract. The Agent shall not be replaced without the specific approval of the Project Manager.</p> <p>It is to be a specific condition of this Contract that the successful Tenderer shall provide on Site throughout the period of construction until the Date for Practical completion a suitably qualified, experienced and competent person to ensure that the works are carried out to the standard required by the specification and detailed on the Drawings; and shall ensure that upon any termination of employment a suitable replacement is found.</p> <p>Such site superrintendent shall have a National Construction Authority's accreditation</p>	
	<p>Preliminaries</p>	
	<p>Carried to collection</p>	
	<p>KShs.</p>	

Shs.

**CONTRACTORS' SUPERINTENDENCE -(CONTINUED)**

Before the Tenderer's offer is accepted the Project Manager may personally interview the Contractor's proposed Representative.

A curriculum vitae of past experience and qualifications must be provided for the Project Manager's scrutiny.

The Project Manager's decision will be final regarding the suitability of the proposed Representative.

**A WATER**

All water shall be fresh, clean and pure, free from earthy, vegetable or organic mater, acid or alkaline substances in solution or suspension

The Contractor shall provide at his own risk and cost all water for use in connection with the Works (including the work of Sub-Contractors). The Contractor shall provide at his own expense all temporary distribution pipes, storage tanks, metres, etc., and he shall clear away same upon completion of the Works.

**B LIGHTING AND POWER**

The Contractor shall provide at his own risk and cost all artificial lighting and power for use on the Works, including all Sub-Contractors' and Specialists' requirements and including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection therewith.

**C SAFETY**

The Contractor shall comply at all times with the requirements of the Factory Act (Cap 514), Building Construction Rules, Supplement 18, Legal Notice No.40 dated April, 1984 and ensure that the safety of his workpeople and authorised visitors to the Site is protected at all times. In particular there shall be proper provision of planked footways and guard-rails to scaffolding, etc., protection against falling materials and tools and the Site shall be tidy and clear of dangerous rubbish.

The Contractor shall appoint a safety officer as required by the Factory Act and notify the Factory Inspector of his name. the safety Officer shall be on Site at all times and all directions given by the Project Manager to the Safety Officer shall be deemed to be Project Manager's Instructions, and shall be complied with promptly without additional cost to the contract.

Occupational Safety and Health Act no. 15 of 2007 must also be complied with

The Project Manager shall be empowered to suspend work on the Site should he consider these conditions are not being observed, and no claim arising from such suspension will be allowed.

Preliminaries

Carried to collection

KShs.

	Shs.
<p><b>A <u>PROTECTIVE CLOTHING</u></b>                      The Contractor shall provide all protective or any other special clothing or equipment for his employees that may be necessary.                       This shall include, inter-alia, safety helmets, gloves, goggles, earmuffs, gumboots, overalls, etc., according to the type of work. The Contractor shall ensure that safety helmets are worn by all staff at all times.</p>	
<p><b>B <u>PROVISIONAL SUMS</u></b>                      The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A Item A7(i) of the Standard Method of measurements                      Such sums are net and no addition shall be made to them for profit.</p>	
<p><b>C <u>ADJUSTMENT OF PROVISIONAL SUMS</u></b>                      In the final account all provisional sums shall be deducted and the value of the work properly executed in respect of them upon the Project Manager's order added to the contract sum. Such work shall be valued as described for variations in variation clause of the conditions of contract, but should any articles for the work be executed by a Nominated Sub-Contractor, or any articles for the work be supplied by a Nominated Supplier, the Value of such work or articles shall be treated as a P.C. sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>	
<p><b>D <u>PRIME COST (OR P.C.) SUMS</u></b>                      The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(ii) of the Standard Method of Measurements                      Persons or firms Nominated to execute the work or to provide and fix materials or goods as stated in the Conditions of Contract are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described as Nominated suppliers.</p>	
<p><b>E <u>ADJUSTMENT OF P.C. SUMS</u></b>                      In the final account all P.C. sums shall be deducted and the amount properly expended upon the Project Manager's order in respect of each of them added to the contract sum. The Contractor shall produce to the Project Manager such quotation, invoices or bills properly receipted as may be necessary to show the actual details of the sums paid by the contractor.                      Items of profit upon P.C. sums shall be adjusted in the final account prorata to the amount paid.                      Items of Attendance following P.C. Sums shall be adjusted prorata to the physical extent of the work executed (not prorata to the amount paid) and this shall apply though the Contractor's Bills shows a percentage in the rate column in respect of them.                      Should the Contractor be permitted to tender and his tender be accepted for any work which a P.C. sum is included in these Bills of Quantities, profit and attendance will be allowed at the same rate as it would if the work were executed by a Nominated Sub-Contractor.                      Preliminaries Carried to collection. KShs.</p>	

			Shs.
<b><u>MATERIALS AND WORKMANSHIP</u></b>			
<b>A</b>	<b><u>GENERALLY</u></b>		
	<p>All materials shall be new unless otherwise directed or permitted by the Project Manager and in all cases where the quality of goods or materials is not described or otherwise specified, is to be the best quality obtainable in the ordinary meaning of the word "best" and not merely a trade signification of that word.</p> <p>All materials and workmanship shall, unless otherwise specified or described, conform to the appropriate British Standard Institution specification current at the date of tender.</p> <p>The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that such materials are on Site when required for use in the Works.</p> <p>The Contractor shall be responsible for and shall replace or make good at his own expense any materials lost or damaged.</p> <p>The Works throughout shall be executed by skilled workmen well versed in their respective trades.</p>		
<b>B</b>	<b><u>REJECTED WORKMANSHIP OR MATERIALS</u></b>		
	<p>Any workmanship or materials not complying with the specific requirements or approved samples or which have been damaged, contaminated or have deteriorated, must immediately be removed from the Site and replaced at the Contractor's expense, as required.</p>		
<b>C</b>	<b><u>PROPRIETARY MATERIALS</u></b>		
	<p>Where proprietary materials are specified herein-after the contractor may propose the use of materials of other manufacturer but equal quality for approval by the Project Manager.</p> <p>All materials and goods, where specified to be obtained from a particular manufacturer or supplier are to be used or fixed strictly in accordance with their instructions.</p>		
<b>D</b>	<b><u>SAMPLES</u></b>		
	<p>The Contractor shall furnish within the first one week of site take over and before work commences and at his own cost, any samples of materials or workmanship that may be called for by the Project Manager for his approval or rejection, and any further samples in case of rejection until such samples are approved by the Project Manager and such samples, when approved, shall be the minimum standard for the work to which they apply.</p>		
	Preliminaries	Carried to collection	KShs.

*S. B. Namubwa*



<b>SAMPLES (Continued)</b>			Shs.
<p>The sample of natural stones shall be of approved crushing strength. G. 26 IT5 profile roofing sheet, 8mm thick Granitto floor tiles size 600x600mm and specified steel section roofing members shall be required and available for quick reference during the entire period of the contract. The approved samples shall be mounted / applied using the correct methodology, edging and finish as per the bill of quantities; all to reflect the high quality workmanship that will be replicated on the permanent works.</p>			
Preliminaries	Carried to collection	KShs.	

*(Handwritten signature)*



			Shs.
<b><u>TEMPORARY WORKS</u></b>			
A	<b><u>OFFICE AND SHEDS</u></b> The Contractor shall erect and maintain temporary office accommodation for his own use, and ample temporary watertight sheds for the proper storage and protection of materials and for the use of artisans and remove when ordered. Floors of sheds shall be at least 150mm above ground level.		
B	<b><u>SANITATION</u></b> The Contractor shall provide the necessary sanitation for his staff and workmen to the requirements and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.		
	Preliminaries	Carried to collection	KShs.

Shs.

**A PLANT, TOOLS AND SCAFFOLDING**

The Contractor shall provide all necessary hoists, tackle, plant, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove same on completion.

The Contractor shall provide, erect and maintain all temporary scaffolding, sufficiently strong and efficient for the due performance of the Works, including Sub-Contract works, provide special scaffolding as and when required during the Works and remove on completion and make good.

Such scaffolding shall be constructed of tubular steel or timber of sufficient scantlings and be provided with planked footways and guard-rails to approval.

All such plant, tools and scaffolding shall comply with all regulations whether general or local, in force throughout the period of the contract and shall be altered or adapted during the Contract as may be necessary to comply with any amendments in or additions to such regulations.

Scaffolding is not measured hereinafter, and the Contractor must allow here

**B EXISTING AND ADJACENT PROPERTY**

The Contractor must take all steps necessary to safeguard existing and adjacent property, make good at his own expense any damage to persons or property caused thereon, and hold the Employer indemnified against any such claim arising.

The Contractor will be held fully responsible for the safety of the existing and adjacent buildings and for any damage caused in consequence of these Works. He must reinstate all damage at his own expense and indemnify the Employer against any loss.

The Contractor must take such steps and exercise such care and diligence as to minimise nuisance from dust, noise or any other cause to the occupiers of the existing and adjacent property.

**C LABOUR CAMPS**

No labour camps, with the exception of watchmen may be housed on the site and the Contractor shall allow for all transport and other charges in moving labour to and from site at such hours and by such routes as are permitted by the Authorities.

The Contractor shall provide, erect and maintain satisfactory housing for the watchmen and shall remove same on completion of the works.

Preliminaries

Carried to collection

KShs.

		Shs.
A	<p><b><u>HOARDING</u></b></p> <p>The Contractor shall enclose the Site either wholly or in parts with a hoarding 2.40 metres high with openings and gates as required, constructed of substantial timbers to approval and covered with new Galvanised iron corrugated sheeting painted to approval.</p>	
B	<p><b><u>TEMPORARY ROADS</u></b></p> <p>The Contractor shall provide where directed all temporary access roads, tracks and paths necessary for the execution of the Works, including making good when no longer in use.</p>	
C	<p><b><u>SIGNBOARD</u></b></p> <p>The Signboard and lettering on same for the display of the General and Sub-Contractor's names shall be of an approved size with the Employer's name painted thereon. The Project Manager's name shall be printed in letters not exceeding 100mm in height all to the Project Manager's design. No other signboard or advertising will be permitted.</p>	
	<p><b><u>NOMINATED SUB-CONTRACTORS AND SUPPLIERS</u></b></p>	
D	<p><b><u>NOMINATED SUB-CONTRACTORS</u></b></p> <p>The Contractor shall be responsible for Nominated Sub-Contractors in every respect and in particular it shall be the Contractor's responsibility to ensure that each Sub-Contractor commences and completes the work in such manner and is ready on the Site with his materials, labour and special plant at such times so as to conform with the progress Schedule, as specified previously, and so ensure satisfactory progress.</p> <p>The Contractor shall also accept liability for and bear the cost of General Attendance on Nominated Sub-Contractors which shall be deemed to include for:</p>	
	<p>Preliminaries</p>	<p>Carried to collection</p> <p>KShs.</p>

Shs.

**NOMINATED SUB-CONTRACTORS - CONTINUED**

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

The items for "General Attendance" given herein-after following P.C. Sums in respect of Sub-Contractors' work shall be deemed to include all the above.

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

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

The items of "Special Attendance" given herein-after following P.C. Sums shall include any one or more of the above items as set out in the particular reference.

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

A **NOMINATED SUPPLIERS**

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

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

B **PRIME COST RATES**

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

The actual nett cost per unit will be adjusted within the Final Account

Preliminaries

Carried to collection

KShs.

		Shs.
A	<p><b><u>PROTECTION</u></b></p>	
	<p>The Contractor shall cover up and protect from damage, including damage from inclement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Project Manager until the completion of the Contract, and carefully preserve all trees or bushes on or near the Site.</p>	
B	<p><b><u>CLEANING</u></b></p>	
	<p>The Contractor shall, upon completing of the Works, at his own expense, remove and clear away all surplus excavated materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Project Manager, including clearing away and making good all traces of temporary access roads, offices, sheds camps, etc. Particular care shall be taken to leave clean all floors and windows and to remove all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection therewith.</p>	
C	<p><b><u>TRAINING LEVY</u></b></p>	
	<p>The Contractor's attention is drawn to legal Notice No. 237 of October, 1971, which requires payment by the Contractor of Training Levy on all Contracts of more that 50,000/- in value and his Tender must include for all costs arising therefrom.</p>	
D	<p><b><u>NATIONAL CONSTRUCTION AUTHORITY LEVY (NCA)</u></b></p>	
	<p>The contractor shall comply with all necessary National Construction Authority Act requirements including NCA levy. No claims for failure to comply with the NCA act will be entertained.</p>	
E	<p><b><u>DEVELOPMENT APPROVALS</u></b></p>	
	<p>The contractor shall allow for all necessary county government permits &amp; approvals with regard to these works. No claim for failure to comply with county governments Allow for all necessary permits/approvals by the County Government of Mandera</p>	
F	<p><b><u>VALUE ADDED TAX</u></b></p>	
	<p>The Contractor's attention is drawn to the Finance Act 1993 and subsequent ammendments thereof which requires payment by the Contractor of Value Added Tax (VAT) on construction services rendered. Whether VAT is added at the grand summary</p>	
G	<p><b><u>BILL OF QUANTITIES SITE COPY</u></b></p>	
	<p>It shall be a requirement under this contract for the contractor to keep a true and complete copy of the unpriced tender document on site at all times. The contractor shall also be expected to keep in his possession a true and complete copy of the priced tender document.</p>	
	<p>Preliminaries</p>	<p>Carried to collection KShs.</p>

**COLLECTION**

From page No.	P/1
" " "	P/2
" " "	P/3
" " "	P/4
" " "	P/5
" " "	P/6
" " "	P/7
" " "	P/8
" " "	P/9
" " "	P/10
" " "	P/11
" " "	P/12
" " "	P/13
" " "	P/14

**PRELIMINARIES**

**TO GRAND SUMMARY**  
**AT END OF BILLS**

**KSHS.**

Preliminaries





ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<b>BILL NO. II - BUILDING WORKS</b>				
	<b>ELEMENT NO. 1</b>				
	<b>SUBSTRUCTURES (ALL PROVISIONAL)</b>				
	<u>Site clearance</u>				
A	Clear the site off grass, shrubs and all vegetation; cart away as directed	600	SM		
	<u>Excavation</u>				
B	Over-site excavations: 100-200mm Depth, load and deposit as instructed by the project manager	600	SM		
C	Excavation for strip footing trenches n.e. 1.5 m deep	175	CM		
D	Ditto for column footing ditto	69	CM		
E	Extra-over all excavation for excavating rock irrespective of class.	120	CM		
F	Return, fill and ram selected excavated material compacted in layers not exceeding 200mm thick	180	CM		
G	Remove and cart away surplus excavated materials.	184	CM		
	<u>Diposal of water</u>				
H	Keeping all excavations free from all water including spring or running water		ITEM		
	<u>Planking and strutting</u>				
J	Uphold the sides of all excavations		ITEM		
	<u>Filling</u>				
K	Hardcore filling in making up levels, hand packed, 300mm thick in layers of 150mm maximum thickness	180	CM		
L	50mm (average) thick quarry dust blinding to surfaces of hardcore	580	SM		
	<i>Carried to Collection</i>				

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
A	<u>Antitermite treatment</u> Premise 200 SC' or other equal and approved anti-termite insecticide treatment with ten years guarantee, applied strictly in accordance with manufacturer's instructions, to tops of fill and foundation walls	580	SM		
	<u>Concrete</u> Insitu, vibrated reinforced concrete class 20 / (20mm agg) in:				
B	Strip footing	29	CM		
C	Column bases	14	CM		
D	Columns	2	CM		
E	150mm thick bed	580	SM		
	<u>Reinforcement</u> <u>Bars: Ribbed; high yield steel; including bends, hooks, tying wire and distance blocks</u>				
F	In assorted reinforcement of various sizes  Fabric; B.S. 4483	4498	KG		
G	Reference A142 mesh 200 x 200 mm , weight 2.22 kgs per square meter (measured net - no allowance made for laps( including bends, tying wire and distance blocks	580	SM		
	<u>Walling</u>				
H	200 mm thick natural stone foundation walling bedded in c/s mortar <u>Formwork</u> <u>Sawn formwork to the sides of:-</u>	292	SM		
J	Column bases	46	SM		
K	Columns	38	SM		
L	Edges of ground floor slab, 75 to 150mm wide	115	LM		
M	Strip footing	485	LM		
	<u>Damp proofing</u>				
N	<u>Polythene</u> sheet; 1000 gauge, 200mm welted laps (no allowance made to laps), horizontal; 1 no. layer laid on compacted quarry dust blinding	580	SM		
P	200mm wide; B.S. 743 Type A bitumen hessian base 150 mm laps (no allowance made for laps); horizontal, 1 no. layer, bedded in cement sand (1:3) mortar	150	LM		
Q	Ditto but 100mm	10	LM		
<i>Carried to Collection</i>					

*[Handwritten Signature]*

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<b><u>In situ Finishings</u></b>				
A	15mm thick 2 No. coatwork cement sand (1:3) render; wood floated to concrete or blockwork base to walls; external	35	SM		
	<b><u>Painting and Decorations</u></b>				
	<u>Prepare and apply three coats bituminous paint to:</u>				
B	Wood floated rendered plinths over 300mm girth	35	SM		
	<u>Paving Slabs.</u>				
C	600 x 600 x 50 mm Precast concrete class 20/20 paving slabs, laid to falls on 50mm quarry dust blinding on 125mm hardcore bed surface and jointed in cement and sand (1:3) mortar including all necessary excavations (average 200mm deep), disposal and 100thick mass concrete protective edge	138	SM		
<i>Carried to Collection</i>					
	<b><u>COLLECTION</u></b>				
	From page 1				
	From page 2				
	From above				
<b>TOTAL FOR SUBSTRUCTURES CARRIED TO SUMMARY</b>					

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<b>ELEMENT NO. 2</b> <b>RC SUPERSTRUCTURE</b>				
	In situ concrete: vibrated reinforced: class 20 / (20mm agg):				
A	Columns	7	CM		
B	Beams	22	CM		
	<u>Reinforcement</u>				
	<u>Bars, high yield steel: cold worked to B.S. 4461 and hot rolled to B.S. 4449</u> <u>including bends, hooks, tying wire and distance blocks</u>				
C	In assorted reinforcement of various sizes	2800	KG		
	<u>Sawn formwork to insitu concrete as described to:-</u>				
D	Sides of columns	85	SM		
E	Sides and soffits of beams	250	SM		
TOTAL FOR RC SUPERSTRUCTURES CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>ELEMENT NO. 3</u>				
	<u>WALLING</u>				
	<u>Precast concrete grade 20(12mm aggregate) including formwork, finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in cement and sand (1:3) mortar</u>				
A	200x150mm lintel reinforced with and including two 12mm diameter mild steel rods hooked at ends (in 2 No.)	9	LM		
B	<u>WINDOW CILL, 250 x 50 mm extreme height; once weathered; once throated; reinforced as necessary for handling; surface fair finish 275 mm girth; bedding, jointing and pointing in cement sand (1:3) mortar</u>	69	LM		
	<u>MACHINE CUT STONE WALLING</u>				
C	200 mm thick approved local, machine cut stone walling; bedding, jointing and pointing in cement sand (1:3) mortar	220	SM		
D	150mm thick ditto	60	SM		
E	Extra over horizontal pointing in av. 16mm thick square tube in cement and sand (1:3) mortar; one coat of bituminous paint.	172	SM		
	Alumium works <u>partitions:</u>				
F	76x44x1.2mm powder coated aluminium frame (Rails, stiles and mullions ) including matching beadings as necessary in partitions.	102	LM		
G	8mm thick clear laminated glass including antivibration rubber gaskets, beadings and all necessary accessories	23	SM		
H	averaging 18mm thick mdf board faced with scratch proof KPLC blue both sides as infill ditto.	15	SM		
TOTAL FOR WALLING CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>ELEMENT NO. 4</u>				
	<u>ROOFING CONSTRUCTION, COVERING AND RAIN WATER DISPOSAL (PROVISIONAL)</u>				
	<u>Roof covering.</u>				
	<u>Galvanized iron box profile IT5 sheets; 28 gauge; pre-painted</u>				
A	Roof covering; 150mm laps both sides; and fixing to Z purlins (ms) on steel trusses (m/s) at 1200mm c/c all laid to fall at 22.5°	800	SM		
B	Ditto but fibre glass to fall at 5 degrees	0	SM		
	<u>Accessories, fixing as necessary to roof sheets</u>				
C	Overall 400 mm wide ridge cap	40	LM		
D	Ditto, hips ditto	30	LM		
	<u>Steel Sections</u>				
	<u>The following in steel trusses spanning averagely 21m at appropriate centres and hoisted average 4m from ground level including cutting, assembling, bolts, cleats, nuts, washers, fish plates, bracings, anchor plates and gusset plates all as necessary:-</u>				
E	90x75x8mm thick steel angle rafters	96	LM		
F	Ditto but jack rafters	368	LM		
G	65x50x6mm thick steel angle tie beam	360	LM		
H	50x50x6mm thick mild steel angle struts & ties	92	LM		
	<u>The following in Mild Steel plates</u>				
J	1000 mm high fascia weld on 20x20x2mm SHS frame work m/s.	120	SM		
	<u>Square Hollow Sections</u>				
K	20x20x2mm thick (1.13kg/m) frame to hold the metalic fascia including all necessary welding, grinding smooth and priming as necessary.	600	LM		
L	75x50 x4mm thick RHS bearers at 600mm c/c anchored to concrete or block work; ditto	171	LM		
M	Approved eaves timber boarding or any other equal and approved ceiling board secret fixed to and including 50 x 50mm celcured wrot cypress bearers fixed to metal or masonry surfaces and brandering at 600mm centres.	104	SM		
	<i>Carried to Collection</i>				



ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>RAINWATER DISPOSAL</u>				
	<u>The following in heavv dutv uPVC, corrosion and heat resistance</u>				
A	250mm dia. half round uPVC gutter including gutter joint bracket, bracket, twin recessed thermo rubber seals, clip lock, joints in the running length fixed to fascia framework with and including gutter support brackets at approved centers	115	LM		
B	Extra; for 100mm diameter outlet; 100mm long	8	NO		
C	100mm uPVC diameter rainwater downpipe fixed with and including downpipe clip and connectors at 900mm centres, plugged and screwed to wall	40	LM		
D	Extra over for swan neck bend with 1135mm projection	8	NO		
E	Extra over for shoe bend encased in concrete surround	8	NO		
	<u>Painting and Decorations</u>				
	<u>Prepare and apply one coat primer to general metal surfaces;</u>				
F	Red oxide metal primer - gloss 200-300mm girth external	3673	LM		
G	Ditto to mettalic fascia board	120	SM		
	<u>Prepare and apply 2 coats First grade oil paint to general metal surfaces;</u>				
H	Super gloss to 200-300mm girth	3673	LM		
J	Ditto to mettalic fascia board	120	LM		
	<u>On Woodwork</u>				
	<u>Prepare and apply one zinc plumbate primer and three coats of 'CROWN SOLO' or other equal and approved super gloss oil paint to -</u>				
K	Eaves surface	104	SM		
<i>Carried to Collection</i>					
	<u>COLLECTION</u>				
	From page 6				
	From above				
TOTAL FOR ROOFING CONSTRUCTION, COVERING AND RAIN WATER DISPOSALCARRIED TO SUMMARY					

*Handwritten signature*

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>ELEMENT NO. 5</u> <u>DOORS</u>				
	<u>ALUMINIUM WORK PURPOSE - MADE UNITS</u>				
	Heavy duty Powder coated Aluminium doors complete with 75x40x2.1mm frames, 8mm thick clear glass sheet, locks, handles, plugged and screwed to walls and all necessary anti-vibration rubber gaskets and any other necessary ironmongery all as per the door schedules provided to approval:				
A	Double door size; 1800 x 2400mm high,	1	NO		
B	Ditto 1200x2100ditto	2	NO		
C	Ditto 900x2100ditto	2	NO		
	<u>TIMBER DOORS</u>				
	<u>Wrot hardwood timber framings</u>				
D	150 x 50 mm; 4 No. labours; plugged door frame	55	LM		
E	100 x 38mm architraves with 4 No. labours	55	LM		
F	38 x 38mm quadrants with 3 No. labours	55	LM		
	<u>45mm Thick semi-solid core flush doors to B.S 459: part 2 with internal quality plywood and lipped on all edges in approved hardwood</u>				
G	Door; overall size 800 x2000 mm high	8	NO		
H	Ditto but double leaf overall size 1120x2060mm high	1	NO		
	<u>Painting and Decoration</u> <u>On Woodwork</u>				
	<u>Knot prime &amp; stop, prepare and apply one zinc plumbate primer and three coats of 'CROWN SOLO' or other equal and approved super gloss oil paint to:-</u>				
J	Door frames 225 to 300mm girth	55	LM		
K	Ditto 75-150 ditto	55	LM		
L	Ditto 0-75 ditto	55	LM		
M	Timber door surfaces	25	SM		
	<i>Carried to Collection</i>				

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>Iron mongery</u>				
	Supply and fix the following to 'UNION' catalogue or other equal and approved				
	<i>To softwood, hardwood or the like fixing with screws</i>				
A	Indicator bolt	6	NO		
B	100mm brass butt hinges	6	PRS		
	<u>To concrete or blockwork: fixing with bolts: plugging</u>				
C	Rubber door stop complete with 38 mm rawl bolt	20	NO		
<i>Carried to Collection</i>					
	<u>COLLECTION</u>				
	From page 8				
	From page above				
TOTAL FOR DOORS CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>ELEMENT NO. 6</u> <u>WINDOWS</u> <u>Wrot Cypress</u>				
A	150 x 25 mm thick window boards including bull-nosed edges and 25 x 25 mm bearer, plugged, counter sinking and flush pelleting.	69	LM		
	<u>Vertical blinds</u>				
B	Supply and fix high quality fabric "Venetian" window curtain blinds or equal and approved 2000mm high including 25 x 25mm pvc tracks secured to 50x25mm timber fixed to concrete and/or masonry all complete with necessary	110	SM		
	<u>ALUMINIUM WORK PURPOSE - MADE UNITS</u> <u>Aluminium sliding windows including 60x40x2.1mm frames. iron mongery plugged and screwed to walls and all necessary antivibration rubber gaskets and the like, all to approval as per schedule attached</u>				
C	Size 4000 x 1500 mm high	15	NO		
D	Ditto 900 x 1500 ditto	2	NO		
E	Ditto 900 x 600 ditto	6	NO		
	<u>Glazing</u> <u>Sheet glass panes over 0.5 but not exceeding 1.0 square meters, fixing rubber and lining</u>				
H	8mm thick laminated clear glass sheet	110	SM		
J	Ditto but obscure	2	SM		
	<u>Grills</u> <u>Fabricate and fix corporate grilling as described below:</u>				
K	20x20x3mm thick SHS in 100mm maximum spacing welded and ground smooth to approval including two coats of first quality red oxide primer	112	SM		
L	Prepare and apply three coats of 'CROWN SOLO' or other equal and approved super gloss oil paint to metallic surfaces	223	SM		
<b>TOTAL FOR WINDOWS CARRIED TO SUMMARY</b>					

*Handwritten signature*

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>ELEMENT NO. 07</u> <u>ENTRY FOYER</u>				
	<u>Covered pergolla</u>				
	<u>Supply, fabricate, assemble the following in roof decking in planed timber sections</u>				
A	200x100mm planed hardwood timber joists at approx 1500mm centres with 4 labours	30	LM		
B	100x50mm sawn cel-cured cypress wall plate	13	LM		
	<u>Knot, prime, stop, prepare and apply three coats of matt varnish to:-</u>				
C	Wooden surfaces	18	SM		
D	Supply and fix 10mm thick perspex roofing glass to approval	30	SM		
E	Supply and fix 900mm high stainless steel railings in one no. 75mm dia hand rail; av. 32mm dia balustrades at 400mm centres; 12mm dia solid bars as <u>intermediate</u> rails at 300mm centres; including encasing in masonry or concrete; all complete with necessary welds, grinding smooth and polishing	10	LM		
TOTAL FOR ENTRY FOYER CARRIED TO SUMMARY					

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>ELEMENT NO. 8</u> <u>FINISHES</u>				
	<u>Wall finishes</u> <u>In situ finishes</u>				
	<u>Render: 15mm thick. 1 No. coatwork of cement and sand (1:3); wood floated to concrete or blockwork base generally to -</u>				
A	<u>Beds and backings</u> Beams and columns externally	47	SM		
B	15mm thick walls internal to receive wall tiles (ms)	79	SM		
	<u>Plaster: 18mm thick. 2 No. coatwork. 15mm first coat of cement sand (1:3). 3mm second coat of cement and lime putty (1:9); steel trowelled to concrete or blockwork base generally to -</u>				
C	Walls, beams; internal	400	SM		
D	Ditto Columns	20	SM		
	<u>Painting and decorations</u>				
	<u>Prepare and apply one undercoat and three coats of Crown Solo or equal and approved quality paint :-</u>				
E	Silk vinyl to plastered surfaces internally	400	SM		
F	Vinyl matt emulsion ditto externally	47	SM		
G	250x400x6mm thick coloured ceramic matt finish wall tiling as "SAJ CERAMICS" or equal and approved including grouting	79	SM		
	<u>Floor finishes</u>				
	<u>C/s backings</u>				
H	32mm thick cement sand backing to receive tiles	576	SM		
J	600x600x8mm thick granito non-slip floor tiling or equal and approved including grouting	482	SM		
K	300x200x8mm thick granito non-slip floor tiling or equal and approved including grouting	94	SM		
L	300x300x8mm thick granito non-slip floor tiling or equal and approved including grouting	25	SM		
M	100mm wide skirting; rounded junction with wall finish, coved junction with floor finish.	210	LM		
	<u>Suspended Acoustic ceiling comprising V-carriers, panels suspension hangers, flush jointing and trap doors.</u>				
N	Acoustic ceiling	576	SM		
TOTAL FOR FINISHINGS CARRIED TO SUMMARY					



ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>ELEMENT NO. 9</u> <u>BUILDER'S WORK IN CONNECTION TO SPECIALISED</u> <u>INSTALLATIONS (ALL PROVISIONAL)</u>				
	<u>IN CONNECTION TO PLUMBING AND DRAINAGE INSTALLATIONS</u>				
	<u>Chase in masonry or concrete surfaces for:-</u>				
A	20mm diameter PPR pipe	30	LM		
B	25mm ditto	54	LM		
	<u>Cut through 200mm thick wall for:-</u>				
C	20mm diameter PPR pipe	1	NO		
D	25mm ditto	1	NO		
E	50mm diameter uPVC pipes	1	NO		
F	40mm ditto	1	NO		
G	32mm ditto	2	NO		
	<u>IN CONNECTION TO ELECTRICAL INSTALLATIONS</u>				
	<u>Chase in masonry or concrete surfaces for:-</u>				
H	20mm diameter heavy gauge conduits	120	LM		
J	25mm ditto	80	LM		
	<u>Cut in masonry and concrete for :-</u>				
K	600x600x100mm deep for 3 phase TPN 125A distribution board	1	NO		
L	24 x 24 Duel tariff meter board	1	NO		
M	Switches	17	NO		
N	13A SP twin switched socket outlets	50	NO		
P	45A DP Cooker control unit	1	NO		
Q	Excavate trench for ducts n.e 700 mm depth	5	LM		
R	Backfill ditto	5	LM		
S	Lay hatari tiles, standard	5	LM		
T	50mm diameter HG PVC ducts with 100 mm thick concrete surround	5	LM		
	<b>TOTAL FOR BUILDER'S WORKS IN CONNECTION TO SPECIALISED</b> <b>INSTALLATIONS CARRIED TO SUMMARY</b>				




ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u>BILL NO. II SUMMARY</u>				
ELEMENT NO	TITLE			PAGE NO.	K.SHS.
1	SUBSTRUCTURES (ALL PROVISIONAL)			3	
2	RC SUPERSTRUCTURES			4	
3	WALLING			5	
4	ROOF CONSTRUCTION			7	
5	DOORS			9	
6	WINDOWS			10	
7	ENTRY FOYER			11	
8	FINISHES			12	
9	BUILDER'S WORK IN RELATION TO SPECIALISED INSTALLATIONS			13	
<b>TOTAL FOR BUILDING WORKS CARRIED TO GRAND SUMMARY</b>					

*[Handwritten Signature]*

**BILL NO. IV- ELECTRICAL INSTALLATIONS**

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Supply, install, test and commission the following ;-</b>				
	<b><u>LIGHTING POINTS</u></b>				
A	Lighting points wired in 3x 1.5 mm <sup>2</sup> SC CU cables drawn in 20mm diameter concealed HG P.V.C conduits for one way switching couplers , sandles clips junction boxes but excluding the fittings .	200	LM		
B	Lighting points wired in 3x 1.5 mm <sup>2</sup> SC CU cables drawn in 20mm diameter concealed HG P.V.C conduits for two way switching couplers , sandles clips junction boxes but excluding the fittings .	400	LM		
	<b>Piloted Flush mounted 10Amps wide rocker , switch plate as MK or approved equivalent as for</b>				
C	One gang one way	9	No.		
D	Two gang two way	4	No.		
E	Two gang one way	2	No.		
F	Three gang One way	2	No.		
	<b><u>LIGHTING FITTINGS</u></b>				
	<b><u>Lighting fittings complete with electronic ballasts and tubes/lamps as follows:-</u></b>				
G	<b>Type A-</b> 1200x36W high frequency surface mounted slim section fluorescent light fitting with 28w LED tubes (frostred ) , white finished steel body and ABS plastic end caps as Thorn Modulight or approved equivalent	9	No.		
H	<b>Type B-</b> 600x600mm 36W slim LED panels frosted. high frequency ceiling luminaire with polycarbonate body and trim in white polycarbonate diffuser .	72	No.		
I	<b>Type D)</b> - Self contained single sided exit sign with 8W fluorescent lamp for maintained emergency lighting for 3 hour duration as Thorn EFX3 c/w CAT EFXF 7 Euro Legends or approved equivalent	2	No.		
<b>SUB TOTAL C/F TO PRICE SUMMARY PAGE</b>					



Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
<b>POWER POINTS</b>					
A	3x4 mm <sup>2</sup> SC CU cables for twin flush wall mounted socket outlets drawn in 25mm Ø HG PVC conduit from distribution board concealed in walls.	600	LM		
B	13A flush mounted twin piloted white enamel moulded type socket outlet faceplate as MK cat2647 WHI or approved equivalent mounted flush on the wall .	50	No.		
C	45A DP cooker unit + 15A SP switched socket outlet neon indicators and marked cooker.	1	No.		
D	Cooker Connector unit as MK or equivalent	1	No.		
E	3x6.0 mm <sup>2</sup> SC CU cables drawn in 25mmØ HG PVC conduit from distribution board for cooker point above	60	LM		
F	Piloted 20A DP isolator unit as MK cat 2202CH for undersink instantaneous water heaters	1	No		
G	Power points wired in 3x4 mm <sup>2</sup> SC CU cables in concealed 20mm dia HG PVC conduit from distribution board to DP points for items above	1	No.		
<b><u>AREA/PARKING LIGHTING.</u></b>					
H	50W LED flood light lamp overall size 206x145.5mm with powder coated steel plate casement with holder complete with integral control gear, wiring in 1.5mm <sup>2</sup> twin with earth sheathed cable from the distribution board for a height of upto 3metres on the wall.	8	No.		
I	60A/30mA ELCB as MEM or approved equivalent	1	No.		
J	Photo electric cell (Timer) as THORN cat No. QPK or approved equivalent	1	No.		
K	30 Amps. Triple pole contactor as TELEMECANIQUE or approved equivalent.	1	No.		
<b>SUB TOTAL C/F TO PRICE SUMMARY PAGE</b>					

*S. B. M. M. M.*

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	5 Metres, top entry, Galvanised steel post for mounting the photocell above.	1	No.		
B	1.5mm <sup>2</sup> twin with earth sheathed copper cable drawn in 20 mm dia.PVC conduit from the distribution boardPVC/SWA/PVC copper cables complete with appropriate cable glands and lugs concealed in walls for security lights.	200	LM		
<b>POWER DISTRIBUTIONS</b>					
E	12way TPN, flush mounted distribution board complete with 125A integral isolator as MEM or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
<b>Miniature Circuit Breakers (MCB's/RCBOS) for item</b>					
F	10A SP MCB	4	No.		
G	20A SP MCB	3	No.		
H	30A SP MCB	2	No.		
J	45A SP MCB	1	No.		
K	60A TPN MCB	1	No.		
L	TP blanking plate	9	No.		
<b>SUB TOTAL C/F TO PRICE SUMMARY PAGE</b>					

*J. N. Mwangi*

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Earthing, for all electrical installation above of the following and any other necessary accessories to KEBS and KPLC approved standards.:-</b>				
A	12.5 mm x 1200 mm earth rod as FURSE cat. No. RB 105.	1	No.		
B	12.5 mm dia. Driving stud as FURSE cat.No. ST100.	1	No.		
C	Rod to cable clamp as FURSE cat. No. CR510.	1	No.		
D	<b>Concrete</b> inspection pit as FURSE cat. No.PT005. (or a well made 320mm x 320mmx 210 mm depth pit.)	1	No.		
E	6mm sq. SC PVC CU cables drawn in 20 mm dia.PVC conduit concealed in walls.	20	LM		
<b>SUB TOTAL C/F TO PRICE SUMMARY PAGE</b>					

*J. Bwama*



### SUMMARY

ITEM	DESCRIPTION			AMOUNT	
				KSHS	CTS
1	Total from page E / 1				
2	Total from page E / 2				
3	Total from page E / 3				
4	Total from page E / 4				
5	Allow for production of 3 copies of as installed drawings				
	<b>TOTAL C/F TO GRAND SUMMARY</b>				

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

Tenderer's (Sub- contractor's) Name and Stamp.....

PinNo.....VAT Certificate

Witness.....Address.....

Signature of  
 Witness.....Date.....

*G. M. M. M. M. M.*

**BILL NO. III-SANITARY FITTINGS.PLUMBING & DRAINAGE WORKS**

(ALL PROVISIONAL)

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<p><b><u>SANITARY FITTINGS</u></b>  <b>Supply, deliver, install, test and commission the following sanitary appliances complete with all the accessories including all connections to the services, waste, jointing to water supply overflows, supports and all plugging and screwing to walls and floors.</b>  <b>Note:</b>  <b>(i) All sanitary fittings shall be in approved colour.</b>  <b>(ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings.</b>  <b>(iii) Equivalent and Approved models may be acceptable.</b></p>				
A	<p><b>Water closet (wc) suite</b>                      Close coupled wash down water closet in approved colour complete with horizontal outlet to BS 3402 with valveless cistern fittings including syphon, 15mm bottom inlet valve, 20mm bottom overflow, bolts and connecting fitments from cistern bowl, chrome-plated lever, heavy duty seat and cover and p-trap outlet connector all as Twyford's Galerie ref. No.GR1148 CH or approved equivalent.</p>	6	No		
B	<p><b>Urinal</b>                      3 range Urinal bowl in white vitreous china complete with 14 litres automatic ceramic cistern ref CX 8611 WH, and fittings including siphon ball valve, cistern supports and drip tap in brass, chrome plated bottle trap, chrome plated flushpipe and spreader ref SS 6071SS with all connections, wall hangers/supports and divisions. To be as Twyford's 'Camden' or approved equivalent.</p>	1	No.		
C	<p><b>Wash hand basin</b>                      Wash hand basin as Twyford "Advent 565 Countertop" size 565 x 425mm with one central tap hole Cat. No. AD4531 WH complete with 32mm diameter lift-up waste (No. WF9365CP) and 32mm plastic bottle trap (No. WF8482XX)</p>	5	No		
D	<p><b>Self-closing pillar tap, 15mm C.P.,non concussive type pegler-Prestex Cat. No.877</b></p>	5	No		
E	<p><b>Toilet bip tap as Cobra No. 206-CP, heavy duty with star handle.</b></p>	2	No		
<b>Total carried forward to next page</b>					

PROPOSED KITALE COMMERCIAL OFFICE

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
<b>Total brought down from previous page</b>					
A	<b>Toilet Roll Holder</b> Wall mounted clear jumbo tissue holder	3	No		
B	<b>Hand drier</b> compatibe with 240V/1 phase/50 Hz power supply. To be complete with mounting plate, centrifugal fan, <b>thermal</b> overload 2400watts by spirally wound element, <b>automatic</b> resetting and thermal cutout. As Heatrae sadia or equal and approved.	3	No		
C	<b>Mirrors</b> 6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	5	No		
D	<b>Robe Hook</b> Robe hook in Satin Aluminium to be mounted by concealed screws to wall wedges. To be as Twyfords Spectrum 2000 accessories or equal and approved.	5	No		
E	<b>Flexible Tubing</b> 15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve for connecting the sanitary fitting to water supply. To be as Cobra or equal and approved.	12	No		
F	<b>Soap Dispenser</b> Soap Dispenser, capacity 1.136 litres complete with plastic rawl plugs, fixing screws, lock and key complete with initial fill of soap gel. The soap dispenser to be as ZALPON'S <b>MARK 7</b> model, size 125 x 100 x 290mm high or approved equivalent	3	No.		
G	<b>CLEANERS SINK</b> Cleaner's sink made out of 18/8 stainless steel as manufactured by ASL and of size 580 x 400 x 200 mm with <b>bucket</b> grating and bright machine polish finish as Ref No. 133 complete with Cobra Watertech 1/2" <b>diameter</b> wall type chrome plated heavy duty bib tap with star handles Ref 206	1	No		
<b>Total carried forward to next page</b>					

**BILL NO. III-SANITARY FITTINGS, PLUMBING & DRAINAGE WORKS**

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
<b>Total brought down from previous page</b>					
A	<b>KITCHEN SINK</b> Double Bowl Double Drainer, (DBDD) stainless steel sink, size averaging 1800x600 mm, bowl size 430x420 complete with overflow, waste fittings, plugs, chain stays and 40mm diameter plastic P trap with 75mm deep seal. The sink to be as ASL or approved equivalent.	1	No		
B	<b>Sink pillar tap</b> as Cobra No. 115/041 chrome plated with over arm swivel outlet, carina head complete with mixer (Hot & Cold) tap or equal and approved	1	No		
C	Wheel chair accessible W.C facility Comprising of the following:- i) Close coupled W.C with 7.5 litre cistern with bottom inlet and overflow. The bowl shall be of size 375x560x420mm high. The bowl and cistern shall be manufactured from vitreous china complying with B.S 3402. The unit shall be complete with valveless cistern fittings including syphon, 15mm side inlet ball valve, 3/4" side overflow, plastics flush bend, inlet connector and reversible metallic chrome plated cistern lever. There shall also be a heavy duty seat (25mm high) and cover with chrome plated metal hinges, toilet roll holder, 610 x 610 x 6mm thick mirror and robe hook. ii) Semi pedestal wall mounted W.H.B of size 600x500x545mm high with flexible connectors to waste and taps. The basin shall be manufactured from vitreous china complying with B.S 3402. It shall have one L/H tap hole with 15mm chrome plated lever action pillar tap, chrome plated waste with height adjustable trap, pedestal and wall fixing bolts. iii) Hinged support rail with 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate plate size 230x100 mm, 4No. 600mm grab rails with covered wall plates. The set shall be as Twyfords DOC.M wheelchair accessible W.C. facility or approved equivalent.	1	Set		
<b>Total for sanitary fittings carried forward to collection page</b>					

PROPOSED KITALE COMMERCIAL OFFICE

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b><u>INTERNAL PLUMBING.</u></b>				
	<b><u>ALL PROVISIONAL</u></b>				
	<b>PPR Pipes</b>				
A	Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	<b>PPR PIPEWORK</b>				
B	20mm dia pipe	30	Lm		
C	25mm -ditto-	54	Lm		
D	32mm -ditto	140	Lm		
	<b><u>Extra-over PPR pipework for the following:-</u></b>				
	<b>Sockets</b>				
E	20mm dia. PPR sockets	10	No		
F	25mm -ditto-	20	No		
G	32mm -ditto-	10	No		
	<b>Bends</b>				
H	20mm -ditto-	20	No		
J	25mm -ditto-	10	No		
K	32mm -ditto-	10	No		
	<b>Threaded bend</b>				
L	20mmx1/2' threaded bend	5	No		
M	25mm x3/4" Ditto	5	No		
N	32mm x1" ditto	5	No		
	<b>Equal Tees</b>				
P	20mm dia. Tee	10	No		
Q	25mm dia tee	10	No		
R	32mm dia tee	5	No		
<b>Total carried forward to next page</b>					

PROPOSED KITALE COMMERCIAL OFFICE

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
<b>Total brought down from previous page</b>					
	<b>Threaded tee</b>				
A	20mm x1/2' threaded tee	10	No		
B	25mmx1/2' threaded tee	5	No		
C	32mmx1/2' threaded tee	5	No		
	<b>Unions</b>				
D	25mm	4	No		
E	32mm	4	No		
F	20mm	4	No		
	<b>Reducers</b>				
G	32x25mm reducer	9	No		
H	32x20mm reducer	5	No		
J	25x20mm reducer	9	No		
	<b>Gate valves</b>				
K	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating, with wheel and head joints to steel tubing and complete with round male threaded transition fittings. The gate valve to be as PEGLER or approved equivalent.	4	No.		
L	32mm -ditto-	4	No		
M	20mm -ditto-	6	No		
	<b>Roof Water Storage Tank</b>				
N	Supply, deliver and install vertical close end plastic rectangular moulded tank of capacity 920 litres . The tank to be assembled complete with cover and having screwed connections for 25mm dia.inlet, 20mm dia.outlet, 25mm dia.overflow, 25mm dia ball valve, 25mm dia.drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on the slab in the ceiling space.	2	No.		
P	Supply and install 6000litrs x 2150 mm dia x 2250mm high; UPVC septic tanks complete	3	No.		
Q	Allow for excavation and backfilling avarage depth 600mm trench to receive 32mm dia. PPR pipe .	80	LM		
<b>Total for internal plumbing carried forward to collection page</b>					



PROPOSED KITALE COMMERCIAL OFFICE

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>INTERNAL DRAINAGE</b>				
	Supply, deliver and install the following uPVC and muPVC soil and waste pipework. Bidders must allow in their prices for all the various sizes of connectors, adaptors etc required for the satisfactory functioning of the drainage system				
	<b><u>uPVC and muPVC pipes</u></b>				
A	110mm diameter heavy gauge golden brown mUPVC pipe in trenches	40	Lm		
B	110mm diameter heavy gauge light grey UPVC pipe as vent pipe on clipped on wall as nec.	20	Lm		
C	50mm dia. H.gauge light grey UPVC waste pipe in floor and wall chases	25	Lm		
D	40mm-ditto-	25	Lm		
E	32mm -ditto-	25	Lm		
	<b><u>Extra-over uPVC and muPVC pipework for the following:-</u></b>				
	<b>Traps</b>				
F	100x50mm dia floor trap	3	No		
G	Standard 300 x 300 x 450mm masonry gully trap complete with 125mm thick reinforced concrete cover.	1	No.		
	<b>Weathering Slates and Vent Cowls</b>				
H	100mm dia vent cowl and weathering slate.	3	No		
	<b>Bends</b>				
J	110mm bend	10	No		
K	50mm bend	20	No		
L	40mm ditto	20	No		
M	20mm ditto	20	No		
	<b>Sweep tees</b>				
N	110mm dia sweep tee	6	No		
P	50mm ditto	2	No		
Q	40mm ditto	2	No		
R	32mm -ditto-	2	No		
	<b>Boss connectors</b>				
S	110x50mm boss connector	6	No		
	<b>Wc connectors</b>				
T	110mm WC connector	6	No		
U	Manhole overall size 600x600xx1000mm deep average including all necessary excavation, disposal and backfilling; 150mm thick block walling, plaster, Concrete cover greased as necessary, concrete base and haunching as necessary	3	No		
	Total carried forward to next page				

PROPOSED KITALE COMMERCIAL OFFICE

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
<b>Total brought down from previous page</b>					
A	Allow for connection of drains to septic tank	ITEM			
<b><u>Fire Fighting Equipment</u></b>					
B	9 litres water extinguisher with CO2 propellant for class A fires	2	No		
C	5 Kg gas CO2 gas extinguisher for class B,C,E fires	2	No		
D	Swinging type hose reel complete with 30M x 19M hose, tubing, spray nozzle and valve	2	No		
<b>Total for internal drainage carried forward to collection page</b>					

*Handwritten signature*

PROPOSED KITALE COMMERCIAL OFFICE

ITEM	DESCRIPTION	AMOUNT (Kshs)
<u>COLLECTION PAGE</u>		
A	Total for sanitary fittings brought down from page PD / 3	
B	Total for internal plumbing brought down from page PD / 5	
C	Total drainage brought down from page PD / 7	
D	Allow for production of 3 copies of as installed drawings	
TOTAL C/F TO GRAND SUMMARY		

Amount in words

.....  
 .....

Tenderer's (Sub contractor's) Name and Stamp.....

PIN NO.....

VAT CERTIFICATE NO.....

Witness.....

Address.....

Signature.....

Date.....



PROPOSED KITALE COMMERCIAL OFFICE

GRAND SUMMARY

BILL NO.	DESCRIPTION	Page No.	CONTRACTOR'S USE		OFFICIAL USE
			K.SHS.	CTS.	K.SHS.
1	PREAMBLES	TP/15			
2	PRELIMINARIES	PL/15			
3	BUILDER'S WORKS	BW/ 14			
4	ELECTRICAL WORKS	E/5			
5	PLUMBING AND DRAINAGE WORKS	PD/8			
	Sub Total Kshs				
6	Add: 16 % VAT				

**GRAND TOTAL (Vat Incl.) Kshs.**

Amount in Words:.....

Name of Tenderer.....

Signature:.....

Date:.....

Stamp.....

