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**NGONG AFFORDABLE HOUSING  
PROJECT(NGONG  
PUBLIC WORKS HOUSING)**

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**AFFORDABLE HOUSING PROGRAMME**

# UNPRICED BILLS OF QUANTITIES

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**REPUBLIC OF KENYA**



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

**STATE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**

**ADDENDUM BILL OF QUANTITIES**

**FOR:**

**PROPOSED CONSTRUCTION OF AFFORDABLE HOUSING UNITS AND ASSOCIATED SOCIAL INFRASTRUCTURE AT  
NGONG IN KAJIADO COUNTY**

Ministry of Lands, Public Works, Housing and Urban Development

State Department for Housing and Urban Development,

P.O Box 30119-00100 Nairobi,

Kenya Tel: +254-020-2713833

**PROJECT DATA SHEET**

**PROJECT : PROPOSED CONSTRUCTION OF AFFORDABLE HOUSING AND ASSOCIATED SOCIAL INFRASTRUCTURE AT NGONG, KAJIADO WEST CONSTITUENCY, KAJIADO COUNTY**

| <b>Item</b> | <b>DETAILS OF SITE</b> | <b>PROJECT PARTICULARS</b>   |
|-------------|------------------------|--|
| 1           | <b>Site location</b>   | Kajiado West Constituency, Kajiado County  |
| 2           | <b>Land Size</b>       | Approximately 24.20 Acres  |
| 3           | <b>Scope</b>           | <p>2000No. of Units in 10No of blocks Type A &amp; 10 No block Type B distributed as follows</p> <p>1 Room Social Housing : 100 Units<br/>           2 Room Social Housing : 200 Units<br/>           3 Room Social Housing : 100 Units</p> <p>Studio Apt Affordable Housing : 300 Units<br/>           2Br Apt Affordable Housing : 600 Units<br/>           3Br Apt Affordable Housing : 200 Units</p> <p>2Br Apt Market Housing : 200 Units<br/>           3Br Apt Market Housing : 300 Units</p> |
| 4           | <b>Amenities</b>       | Club house, Commercial Centre, Mixed use development, Kindergarten, school, Guard House, Garbage Receptacles   |
| 5           | <b>External works</b>  | Roads & Parking works, sewer & waste water treatment, Boundary wall, Landscaping,  |
| 6           | <b>Built area</b>      | 132,738.00sm   |

# **GENERAL SPECIFICATIONS**

## **SPECIFICATIONS**

Reference is made to the General Specifications for Building Works (1976) by the Ministry of Works, Housing and Physical Planning.

A copy is available for perusing at the request of the procuring entity.

Contractors are required to adhere to the latest industry standards as outlined in the most recent version of KS (Kenyan Standards). Failure to comply may result in project delays or financial penalties. It is the responsibility of the Contractor to stay informed about and apply the current industry standards throughout the construction process. Any disputes arising from non-compliance with updated standards will be subject to resolution through dispute resolution mechanism outlined in the contract.

**PRELIMINARIES**

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
| A    | <p><b><u>BILL NO. 1</u></b></p> <p><b><u>PARTICULAR PRELIMINARIES</u></b></p> <p><b><u>PARTIES</u></b></p> <p>The <b>Employer</b> is:</p> <p>Principal Secretary, Ministry of Lands, Public works,Housing and Urban Development,<br/>State Department of Housing and Urban Development<br/>P.O Box 30119 -00100<br/>NAIROBI, KENYA</p> <p>The <b>Engineer</b> is:</p> <p>The term "PM" wherever used in these Bills of Quantities shall be deemed to imply the Engineer as defined in Condition 1 of the Conditions of Contract or such person or persons as may be duly authorised to represent him on behalf of the Government .</p> <p><b>The Architect is:</b></p> <p>Ministry of Lands, Public works,Housing and Urban Development, State Department of Housing and Urban Development<br/>P.O Box 30119 -00100<br/>NAIROBI, KENYA</p> <p><b>The Quantity Surveyors is:</b></p> <p>Ministry of Lands, Public works,Housing and Urban Development, State Department of Housing and Urban Development<br/>P.O Box 30119 -00100<br/>NAIROBI, KENYA</p> <p><b>The Structural/ Civil Engineers is:</b></p> <p>Ministry of Lands, Public works,Housing and Urban Development, State Department of Housing and Urban Development<br/>P.O Box 30119 -00100<br/>NAIROBI, KENYA</p> <p><b>The Electrical / Mechanical Engineers is:</b></p> <p>Ministry of Lands, Public works,Housing and Urban Development, State Department of Housing and Urban Development<br/>P.O Box 30119 -00100<br/>NAIROBI, KENYA</p> |        |



| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
| A    | <p><b><u>LOCATION OF SITE</u></b></p> <p>The site of the proposed works is located <b>Ngong Veterinary, Kajiado County</b></p> <p>The Contractor shall be deemed to have visited the site and satisfied himself as to:-</p> <p>a) The nature, position, topography and access of the site<br/> b) The amount of the rubbish or debris to be cleared away before commencement.<br/> c) The nature, current usage, proximity and size of adjoining property and buildings<br/> d) The availability of land for the erection and positioning of all temporary structures, plant and materials necessary for the execution of the works.</p> <p>The Contractor shall obtain approval from the relevant Local Authority in adherence to site access and erection of temporary structures and must ensure all matters relating to the requirements of these authorities.</p> <p>No claim will be allowed for travelling or other expenses which may be incurred by the Contractor in visiting the site or preparing the tender for the works.</p> |        |
| B    | <p><b><u>EXISTING SITE CONDITIONS</u></b></p> <p>The site for the proposed works is <b>Ngong Veterinary, Kajiado County</b></p> <p>The Contractor is advised to visit the site to familiarize with the nature and position of structures on site for demolition before pricing the item on demolitions No claims arising from the Contractor's failure to do so will be entertained.</p> <p>All occupation health and safety requirements must be met as required by law.</p> <p>This includes prevention and or minimizing noise, dust, fumes e.t.c.</p> <p>Notices should be given prior to disruption of services</p>  |        |
| C    | <p><b><u>SCOPE OF CONTRACT</u></b></p> <p><b><u>The Works under this contract comprises of the following;</u></b></p> <p>(a) 10 No Type A Hostel Block with a plinth area of 54,035 SM<br/> (b) 10 No Type B Hostel Block with a plinth area of 68,750SM<br/> (c) School Plinth area 6352 SM<br/> (d) Kindergarten Plinth area 552 SM<br/> (e) Club House Plinth area 1044 SM<br/> (f) Commercial Centre area 624 SM<br/> (g) Mixed use development Plinth area 1000 SM<br/> (h) 3 No Waste receptacle Plinth area 336 SM<br/> (i) 3 No. Guard House Plinth area 45 SM<br/> (j) Basket Ball Pitch 574 Sm<br/> (k) Boundary wall - 3.3m high with a length of 800LM<br/> (l) Road works - 1530 SM<br/> (m) Associated electrical and Mechanical works<br/> (n) External and Civil works</p> <p>Carried to collection</p>   |        |

| ITEM     | DESCRIPTION   | AMOUNT |
|----------|---|--------|
| <b>A</b> | <p><b><u>DESCRIPTION OF THE WORKS</u></b></p> <p>The construction comprises reinforced concrete foundations, masonry walling, reinforced concrete beams, column , staircases and suspended solid slabs, roof construction.</p> <p>The exterior facade consists of steel casement windows, steel and timber doors , render and paint finish, clay and stone facing finish to walls</p> <p>The interior works includes timber doors and finishes which are generally plaster and paint to walls, ceramic and non slip ceramic tiles to floors and walls.</p> <p>External works generally comprise of foul water drainage, storm water drainage, pathway, dryline area, septic tank, underground water tank.</p> <p>All mechanical / electrical services and other specialist works associated with the above works shall be executed by domestic/nominated sub contractors approved by the Engineer</p> <p><b><u>CONTRACT PARTICULARS</u></b></p> |        |
| <b>B</b> | <p><b><u>FORM OF CONTRACT</u></b></p> <p>The Contractor will be required to enter into a contract with the Employer under the <b>Terms and Conditions of Contract as "Standard Tender Document for Procurement of Works (Building and Associated Civil Engineering Works) Issued by the Public Procurement Regulatory Authority in February 2021 (updated 2022)</b> and in association with the latest applicable version of the Public Procurement and Asset Disposal Act.</p> <p>The Contractor's attention is called to the appendix of the conditions of Contract and additions and amendments thereto, which shall be read as incorporated herein and he shall allow any sums which he considers necessary for the observance of such conditions, together with sub clauses used in application.</p> <p>The priority of such documents shall be as stated in the conditions of agreement.</p>  |        |
|          | <b>Carried to collection</b>  |        |
|          |   |        |
|          |   |        |

| ITEM            | DESCRIPTION   | AMOUNT |
|-----------------|---|--------|
| <p><b>A</b></p> | <p><b><u>LIABILITY AGAINST INJURY TO PERSONS AND PROPERTY</u></b></p> <p>Insurance against injury to persons and property</p> <p>NOTES</p> <p>In addition to the conditions of the contract and the requirement contained herein the contractor's all risk policy shall cover the full value of the following and allow for all costs thereof:-</p> <p>i) The works and temporary works erected in performance of this contract.<br/>                     ii) The materials on site, plant and tools<br/>                     iii) The cost and expense of removing debris of the property insured, destroyed or damaged by any peril insured.<br/>                     iv) Professional fees (to be allowed at 15% of the contract sum)<br/>                     v) Employer's liability (workman's compensation)<br/>                     ii) Third party (Public liability for an indemnity of not less than kshs.....<b>5,000,000</b>..... for any accident or series of accidents arising from the same event (unlimited in aggregate)</p> <p>The contractor shall ensure that all sub-contractors effect and maintain such insurances as are necessary to cover their liabilities in respect of injury to persons and property and workman,s compensation.</p> <p>Should the contractor already hold annual insurances covering the whole of his activities, and the indemnity required under the existing policy/ies then further insurances shall be effected and maintained to cover such excess, the policies of insurances being suitably endorsed to cover this project</p> |        |
| <p><b>B</b></p> | <p><b><u>Insurance of the works (contractors liability)</u></b></p> <p>The Contractor shall insure as required in the Conditions of Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the Engineer either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects.</p> <p>Thereafter the Engineer shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the Engineer's inspection.</p>  |        |
|                 | <p><b>Carried to collection</b></p>   |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
|      | <p data-bbox="161 226 416 253"><b><u>PERFORMANCE BOND</u></b></p> <p data-bbox="113 286 528 313"><b>A Performance bond for the works</b></p> <p data-bbox="161 349 1107 539">The Contractor shall find and submit on the Form of Tender an approved bank or approved (By PPRA) Insurance Company and who will be willing to be bound to the Employer in an amount equal to <b>ten percent (10%)</b> of the Contract amount for the due performances of the Contract up to the date of completion as certified by the Engineer and who will when and if called upon, sign a Bond to that effect on the relevant standard form as seen in the CONTRACT STANDARD FORMS (without the addition of any limitations)</p> <p data-bbox="161 600 1107 656">And should the surety fail to be approved, the Contractor shall furnish within seven days another Surety to the approval of the Employer.</p> <p data-bbox="161 694 1107 775">Note that no payments on account of works executed will be made to the Contractor until he has submitted the Performance bond, duly stamped signed and sealed by an approved bank or insurance company.</p> <p data-bbox="113 819 579 846"><b>B <u>POSSESSION AND COMMENCEMENT</u></b></p> <p data-bbox="161 882 1107 960">The Contractor shall take possession of the site on the date indicated in the acceptance letter. The date of commencement of the works shall also be communicated to the Contractor and the contract period shall run from the commencement date.</p> <p data-bbox="161 1039 1107 1117">The Contractor is expected to utilize the period between possession and commencement to mobilise his resources to ensure smooth running of the works from the commencement date.</p> <p data-bbox="161 1787 395 1814"><b>Carried to collection</b></p> |        |
|      |   |        |

| ITEM     | DESCRIPTION   | AMOUNT |
|----------|---|--------|
|          | <b><u>PROJECT SUPERVISION</u></b>   |        |
| <b>A</b> | The said works shall be executed under the direction and to the entire satisfaction of the Engineer and Clerk of works who shall have the Engineer's specifically delegated authority and shall at all times have access to the works, to the yards and workshops of the contractor or other places where goods are being prepared for the building.  |        |
|          | <b><u>LABOUR CAMPS</u></b>  |        |
| <b>B</b> | The contractor will generally not be permitted to house labour on site subject to approval by Architect.  |        |
|          | <b><u>DOWNTAKINGS</u></b>   |        |
| <b>C</b> | All materials arising from demolitions and downtakings are deemed to be the property of the employer. No claim will be entertained on account of employer excising this right to retain the materials   |        |
|          | All downtakings shall be carefully removed, taken down, dismantled and stored on site until instructed by the Engineer to remove from the site. Such materials shall only be incorporated in the new works if required by the Engineer in which case appropriate adjustments will be made in the final account for the cost of labour, screws etc for fixing such downtakings in the new works. |        |
|          | <b><u>DAMAGES</u></b>   |        |
| <b>D</b> | Damages for delay in completion shall be levied at the rate of Kshs .....<br>.....<br>.....   |        |
|          | <b><u>OTHER PRELIMINARIES</u></b>   |        |
| <b>E</b> | Allow for any other item necessary to execute the works and state them below;<br>.....<br>.....<br>.....<br>.....   |        |
|          | <b>Carried to collection</b>  |        |
|          |   |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
|      | <p><b><u>BILL NO. 1</u></b></p> <p><b><u>PARTICULAR PRELIMINARIES</u></b></p> <p><b><u>COLLECTION</u></b></p> <p>Carried from page 1/1</p> <p>Carried from page 1/2</p> <p>Carried from page 1/3</p> <p>Carried from page 1/4</p> <p>Carried from page 1/5</p> <p>Carried from page 1/6</p> |        |
|      | <b>Particular Preliminaries Carried to Grand Summary</b>  |        |
|      |   |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
|      | <p><b><u>BILL NO. 2</u></b></p> <p><b><u>GENERAL PRELIMINARIES</u></b></p> <p><b><u>PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</u></b></p> <p><b>A</b> Whenever in the Contractor's priced Bills of Quantities no price appears against an item of Preliminaries or Preambles or work items , the value of such item shall be deemed to be included in his prices for other items in the Bills of Quantities.</p> <p><b><u>SUFFICIENCY OF TENDER</u></b></p> <p><b>B</b> 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. Rates and prices quoted shall cover all his obligations under the contract and all the matters and maintenance of the works</p> <p><b><u>RECORDS</u></b></p> <p><b>C</b> The Contractor shall ensure proper records are kept and maintained for : Daily Reports on Personnel and Machinery; tracked programme; weather charts/reports; site instruction book and query book,a digital camera shall be provided for taking progress photos</p> <p>The contractor shall be required to provide equipment for taking ground and aerial photos or videos in relation to the progress of works when called upon to do so.</p> <p><b><u>DEFINITIONS AND ABBREVIATIONS</u></b></p> <p><b>D</b> Throughout these Bills, units of measurements and terms are abbreviated and shall be interpreted as follows:</p> <p>mm shall mean millimeter</p> <p>lm shall mean linear meter</p> <p>sm shall mean square meter</p> <p>m<sup>2</sup> shall mean square meter</p> <p>cm shall mean cubic meter</p> <p>kg shall mean kilogramme</p> <p>N shall mean Newton</p> <p>KN shall mean KiloNewton</p> <p><b>Carried to collection</b></p> |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
|      | <p>in/" shall mean inches</p> <p>L f shall mean linear foot</p> <p>s f shall mean square foot</p> <p>c f shall mean cubic foot</p> <p>L b shall mean pound avoirdupois</p> <p>No. shall mean number</p> <p>B.S. shall mean the current British Standard Specification published by the British Standard Institution, 2 Park Street, LONDON W.I, England.</p> <p>B.S.M shall mean both sides measured</p> <p>K.S. shall mean current Kenya Standard specification published by the Kenya Bureau of Standard, P.O. Box 54974. NAIROBI, Kenya.</p> <p>'As described' shall mean as described in these Bills of Quantities.</p> <p>'As before described' shall mean the whole of the previous description except as qualified in the current one.</p> |        |
|      | <b>Carried to collection</b>  |        |



| ITEM | DESCRIPTION  | AMOUNT |
|------|--|--------|
| A    | <p><b><u>SITE LEVELS</u></b></p> <p>Before commencing work the Contractor must arrange for and agree with the Architect, Engineer and Quantity Surveyor the existing site levels and similarly establish and agree on a bench mark.</p> <p>The Contractor shall provide a surveyor to ensure all levels are achieved as per the drawings and Architects/Structural Engineer's instructions</p> <p><b><u>SETTING OUT</u></b></p> <p>The contractor shall set out works in accordance with the dimensions and levels shown on the drawings and shall be responsible for the correctness of all dimensions and levels set out by him and he will be required to amend all errors arising from inaccurate setting out at his own cost and expenses. In the event of any error or discrepancy in the dimensions or levels marked on the drawings being discovered, such errors or discrepancies must be reported by the Contractor to the Engineer for his immediate attention.</p> <p>No work shall be commenced by the Contractor until he has received written instructions from the Engineer to adjust such discrepancies which may be proved, upon receipt of such instructions and no claim for extra expenses or relief from the provisions of Clause 5 of the Conditions of the Contract , any discrepancy or error in the dimensions or levels shown on the drawings may be made thereafter.</p> <p>The Contractor shall give the Engineer reasonable notice of the intention to set out or take levels for any part of the Works so that arrangements may be made for checking the work. The accuracy of setting out and leveling shall be within the tolerances specified in the Specifications or on the Drawings. The checking of setting out or leveling by the Engineer shall not relieve the Contractor of his duties or responsibilities under the Contract.</p> <p><b><u>MEASUREMENTS</u></b></p> <p>C Measurements are based on <b>Standard Methods of Measurement of Building Works and Associated Civil Works For Eastern Africa (SMM) Second Edition 2008.</b></p> <p>In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence.</p> <p>D <b><u>GENERAL SPECIFICATIONS</u></b></p> <p>All works to be carried out in accordance with the Ministry of Roads, public Works and Housing <b>General Specifications for Building Works issued in 1976</b> or as qualified and amended.</p> |        |
|      | <b>Carried to collection</b>   |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
|      | <p><b><u>SAMPLES</u></b></p> <p><b>A</b> The contractor shall furnish at the earliest possible opportunity before work commences and at his own cost any samples of materials or workmanship that may be called for by the Engineer for his approval or rejection until such samples are approved to be the acceptable standard for the work to which they apply.</p> <p>The samples shall be maintained and displayed on a designated section within the site for the duration of the project where practical and possible.</p> <p><b><u>PROTECTION OF EXISTING PROPERTY</u></b></p> <p><b>B</b> The contractor shall take every precaution to avoid damage to all existing property including boundary wall, carpark, roads, cables, drains, staircases, lift etc including other services and he will be held responsible for all damages hereto arising from the execution of his contract and he shall make good all such damages when directed at his own expense.</p> <p>Any damage or disturbances caused to any element shall be reported immediately to the Engineer and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense.</p> <p><b>C <u>PROTECTION / RELOCATION OF 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 and all other services in the area and he shall make whatever provisions may be required by the authorities concerned for the support and protection and/or relocation of such services as will be necessitated.</p> <p>The contractor is also expected to generate a utility management plan to the approval of the Engineer .</p> <p>Any damage or disturbances caused to any service shall be reported immediately to the Engineer and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense.</p> <p><b>Carried to collection</b></p> |        |

| ITEM | DESCRIPTION  | AMOUNT |
|------|--|--------|
| A    | <p><b><u>MATERIALS, TOOLS, PLANT AND SCAFFOLDINGS</u></b></p> <p>All materials and workmanship used in the execution of the works shall be of the best quality and description. Any materials for the works condemned by the Engineer shall immediately be removed from the site at the Contractor's expense.</p> <p>The Contractor shall be responsible for the provision of all materials, scaffolding, tools, plant, transport and workmen required for the works except in so far as may be stated otherwise herein and he shall allow for the provision of the foregoing except for such items specifically and only required for the use of Nominated Sub-contractors as described herein.</p> <p>No timber used for scaffolding, formwork or similar purpose shall be used afterwards in the permanent works.</p> <p>All such plant, tools and scaffolding shall comply with all regulations whether general or local in force including Environmental, Social, Health and Safety (ESHS) policies throughout the period of the contract and shall be required as may be necessary to comply with any amendments in or additions to such regulations</p> <p>The Contractor shall keep on the site and maintain in good condition one dumpy or quickset level, metric leveling staff and one 30 metre steel tape for the use of the Architect, Surveyor and Engineer.</p> <p>The contractor may be required to provide an appropriate tower crane as required during the project life. Where a crane is provided, it should meet all regulatory and technical standards, all licences in connection with erection, usage shall be at the Contractors expense.</p> <p>The contractor may be required to provide an appropriate tower crane as required during the project life. Where a crane is provided, it should meet all regulatory and technical standards, all licences in connection with erection, usage shall be at the contractors expense.</p> <p><b>Carried to collection</b></p> |        |

| ITEM            | DESCRIPTION   | AMOUNT |
|-----------------|---|--------|
| <p><b>A</b></p> | <p><b><u>LOCAL REGULATIONS AND BY-LAWS</u></b></p> <p>The contractor is to comply with all local regulations and by-laws of the Local Authority including serving notices and paying of fees where applicable. These include, but not limited to: National Environmental Management Authority (NEMA), National Construction Authority (NCA), Water Resources Management Authority (WARMA)</p> <p>The Contractor will be held responsible for serving on the Chief Inspector of Factories a written notice not later than seven days after the beginning of the building operations included in this contract stating the particulars required.</p> <p><b><u>TRANSPORT TO AND FROM THE SITE</u></b></p> <p><b>B</b> 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 as are permitted by the Authorities.</p> <p>All unit rates for local or imported goods are to include freight, insurance, handling and delivery costs to the project site together with import duties, sale tax, port charges etc and all other charges of whatever nature.</p> |        |
|                 | <p><b>Carried to collection</b></p>   |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
| A    | <p><b><u>FAIR WAGES</u></b></p> <p>The Contractor shall pay rates of wages and observe hours and conditions of labour not less favourable than the minimum conditions of employment applicable in the area in which the work is carried out. The relevant notice must be posted up and kept posted upon the site where it can be conveniently read by the employees concerned in languages they can understand.</p> <p>The Contractor is to comply with the regulations of Wages and Conditions of Employment Act, Building and Construction Industry Wages Council and is to be responsible for compliance of the sub-contractors employed in the execution of the contract. If required he is to notify the Engineer of the names and addresses of all such Sub-contractors. Any Contractor or Sub-contractors not complying will not be permitted to tender for other work for such a period as the Engineer may determine</p> <p>Should a claim be made to the Engineer alleging the Contractor's default in payment of fair wages to any workman employed on the contract and if proof thereof satisfactory to the Engineer, may failing payment by the Contractor, pay the claim out of any monies due or which may become due to the contractor under this contract.</p> <p>The Contractor is to furnish to the Engineer, if called upon to do so, such particulars of the rates of wages, hours and conditions of labour referred to above as the Engineer may direct</p> |        |
| B    | <p><b><u>SECURITY OF WORKS</u></b></p> <p>The Contractor shall be entirely responsible and shall pay security of all works, stores, materials, plant, personnel etc both his own and sub-contractors and shall also provide all necessary watching, lighting, and other precautions as necessary to ensure the security, the safety and protection of the public. He is to ensure that there is no informal business settlement near the establishment.</p>   |        |
|      | <b>Carried to collection</b>  |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
| A    | <p><b><u>OCUPATIONAL HEALTH AND SAFETY MEASURES</u></b></p> <p>The Engineer expects the Contractor to adhere to strict safety measures. In this regard the Contractor should ensure that all his workers, the Consultants and his sub-Contractors workmen are wearing Personal Protective Equipment (PPE) before commencement of any work where applicable including overalls with the company name clearly printed on the back each with clearly marked Identification Numbers stitched or imprinted on.</p> <p>The Contractor shall allow for providing all watching, lighting, barriers, signs, covering open trenches and protection of the works, including Sub-Contract works, as may be necessary for the safety of the works and for the protection of the public and his own and Sub-Contractors' employees.</p> <p>He shall also ensure provision of a certified and qualified safety, health and environmental officer, access to ambulance services at all worksites and arrangement to access a local hospital/dispensary with qualified medical staff.</p> <p>The contractor shall take cognisance and shall fullay adhrere to the regulations of the <b>Occupational Safety and Health Act of 2007</b> including all the associated revisions</p> <p>The Engineer shall expect full compliance to this regulation and no excuses will be entertained for non-compliance which may lead to suspension of works until the issue is addressed satisfactorily.</p> |        |
| B    | <p><b><u>PUBLIC, PRIVATE ROADS AND PAVEMENTS ETC</u></b></p> <p>The contractor will be required to make good at his own expense any damages he may cause to the present approach and surrounding road surfaces during the period of the works</p>   |        |
| C    | <p><b><u>POLICE REGULATIONS</u></b></p> <p>The contractor is to allow for complying with all Government Acts, orders or regulations in connection with employment of labour and other matters related to the execution of the works.</p> <p>The Contractor must acquit himself duly with current acts and regulations, including police regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc..</p> <p>Particular attention is drawn to the rules published in Legal Notice 179 dated 2nd June 1978 ( Building Operations and Work of Engineering Construction )</p> <p><b>Carried to collection</b></p>   |        |
|      |   |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
| A    | <p><b><u>AREA TO BE OCCUPIED BY CONTRACTOR</u></b></p> <p>The area of the site which may be occupied by the Contractor for use as storage and for the purpose of erecting workshops etc shall be defined on the site by the Engineer</p>  |        |
| B    | <p><b><u>PROGRESS SCHEDULE</u></b></p> <p>Immediately after signing the contract the Contractor is to prepare a Time Progress Chart showing the time and order in which he proposes to carry out the works within the total construction time stated in the contract. The chart will show in detail the construction time and order in which each section of the work is to be carried out and be sub-divided into trades and tasks. If the contractor proposes sectional completion of the project he must plan this in detail including access roads, and services and this shall be reflected on the chart</p> <p>Upon the letting of the Sub-Contractors work the Contractor is to incorporate times and details of each separate Sub-Contractor work which information is to be agreed by the Sub-Contractor and the chart will be so designed to accommodate this information.</p> <p>At the end of each week the Contractor is to mark on the chart in a different colour the actual time taken to complete the respective stages and sections of the work. The contractor shall obtain the Engineer's approval on the chart and then shall supply copies to the Engineer and Quantity Surveyor</p> <p>If at any time it should appear to the Engineer that the actual progress of the works does not conform to the approved programme progress schedule the Contractor shall produce at the request of the Engineer a revised programme showing the modifications and accelerations to the approved programme necessary to ensure completion of the works within the agreed contract period.</p> <p>The submission of and approval by the Engineer of such revisions and accelerations shall not entitle the Contractor to any extra payment or extension of time and shall not relieve the Contractor of any duties or obligations or responsibilities under the contract</p> |        |
|      | <b>Carried to collection</b>  |        |

| ITEM  | DESCRIPTION | AMOUNT |
|---|-------------|--------|
| <p><b>A</b></p> <p><b><u>OVERTIME</u></b></p> <p>The Contractor shall be responsible for any extra costs for overtime working he considers will be necessary in order to complete the works within the contract period or time for completion apart from overtime working which may be authorised by the Engineer</p> <p>If overtime is worked out in accordance with a written instruction issued by the Engineer the contractor will be reimbursed in respect of such overtime to the unproductive time payable over and above the basic hourly rates as laid down by the Regulation of wages and Conditions of employment Act, Building and Construction Industry Wages Council and excluding any bonuses, profits and overheads.</p> <p><b>B</b></p> <p><b><u>WATER</u></b></p> <p>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 make arrangements with the local authority for the installation of a separate meter where applicable and possible for all water used by him throughout the contract and pay all costs and fees in connection therewith. He shall also provide temporary storage tanks and tubing etc as he may consider necessary and clear away at completion.</p> <p>The contractor is to provide clean drinking water at the construction site for his workers at all times.</p> <p>All water shall be fresh, clean and pure, free from earthly vegetable or organic matter, acid or alkaline substance in solution or suspension.</p> <p><b>C</b></p> <p><b><u>TELEPHONE</u></b></p> <p>The contractor shall provide in the office, from the commencement to the completion of the works, a wireless or mobile phone and shall pay all charges or airtime necessary for its use</p> <p><b>D</b></p> <p><b><u>LIGHTING AND POWER</u></b></p> <p>The contractor shall provide at his own risk and cost all temporary 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.</p> <p><b>Carried to Collection</b></p> |             |        |



| ITEM            | DESCRIPTION  | AMOUNT |
|-----------------|--|--------|
| <p><b>A</b></p> | <p><b><u>TESTING</u></b></p> <p>Allow for all expenses in connection with the testing of materials as specified hereunder including the supply and preparation of materials to be tested, the cost of materials and their packing and conveyance to the nearest approved Testing Laboratory, laboratory charges, etc. The following items of tests will be measured according to the number of tests actually called for by the Engineer but unsuccessful tests will not be included in the remeasurement.</p> <p>Allow for executing the following tests as detailed in the Appendices to these Bills of Quantities (PROVISIONAL))</p> <p>Water Test .....<b>10</b>...(litres)</p> <p>Sand Test .....<b>0.1</b>....(m3)</p> <p>Aggregate Test .....<b>0.1</b>....(m3)</p> <p>Reinforcement test (1m of mild steel rod or high tensile steel bar of various sizes) .....<b>2</b>.....</p> <p>Concrete Test (each test comprising .....<b>5 NO</b>..... cubes as described hereinafter)</p> <p>.....</p> <p>Testing of concrete or stone blocks of various strengths in accordance with Kenya Standard Specification (one test comprising .....<b>5 NO</b>..... blocks)</p> |        |
| <p><b>B</b></p> | <p><b><u>PRICING RATES</u></b></p> <p>The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.</p>  |        |
|                 | <p><b>Carried to collection</b></p>  |        |

| ITEM            | DESCRIPTION   | AMOUNT |
|-----------------|---|--------|
| <p><b>A</b></p> | <p><b><u>TEMPORARY STRUCTURES</u></b></p> <p>a) The Contractor shall allow for providing and clearing away on completion of the works such temporary hoarding , rubbish chutes, gates, planked walkways, guard rails etc. as may be necessary for the protection of the workers, the general public, and for the proper execution of the works.</p> <p>b) As such, temporary structures shall be constructed with the approval of the Engineer and to his full satisfaction and in such a manner as to cause minimum intrusiveness and disturbance to occupants of adjacent developments and users of the adjacent roads.</p> <p>c) All such temporary structures shall comply in all aspects with the national laws, rules, and regulations currently in force and applicable to such structures.</p> <p>d) All temporary structures shall be erected in a manner so that the unloading of materials causes minimum obstruction to the use of adjacent roads and other facilities</p> <p>e) All temporary structures shall be kept properly lighted throughout the periods of darkness and any corners or projections shall be painted white.</p> <p>g) Temporary structures shall not be used or permitted to be used for advertisement purposes except with the written consent of the Engineer</p> <p>h) All temporary structures shall be maintained at all times in good order and good condition to the satisfaction of the Engineer.</p> <p>i) All temporary structures shall be removed when so required by the Engineer or at the end of the period for which it is required.</p> <p>j) The Contractor shall indemnify and shall keep the employer idemnified against any expenses, loss, claim or suits arising out of or in connection with the temporary structures.</p> <p><b>Carried to collection</b></p> |        |

| ITEM            | DESCRIPTION  | AMOUNT |
|-----------------|--|--------|
| <p><b>A</b></p> | <p><b><u>SITE OFFICE</u></b></p> <p>The contractor shall supply, maintain, service, clean and light a fully furnished, suitable office having an approximate floor area of not less than .....sqm. . The office shall have a sample room suitable dimensions with clean running water and electricity connected to the approval of the Engineer.</p> <p>The Contractor shall provide offices, messrooms and all other buildings required by the Contractor for his own use and the use of by Clerk of Works and Nominated SubContractors as required by the items or attendance</p> <p>The site office shall be equipped with a table and chairs of sufficient size and number for site meetings and plan chests for drawings shall also be provided by the contractor</p> <p>The Contractor shall allow for the cost of providing light refreshment for the consultants at site meetings.</p> <p><b><u>TEMPORARY DISPOSAL OF RAIN WATER</u></b></p> <p><b>B</b></p> <p>The Contractor shall provide and maintain all necessary temporary gutters, downpipes, chutes, drains etc. for conveying rainwater from the buildings and storage tanks for rainwater harvesting.</p> <p>The Contractor shall allow for temporary drainage plumbing and piping for keeping the premises and site free from accumulation of water. He shall also allow for construction and maintaining any necessary storm water drainage structures as directed.</p> <p><b><u>CLEARING AWAY</u></b></p> <p><b>C</b></p> <p>The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate, on intervals as instructed by the Engineer and upon completion of the works, remove and clear away all plant, equipment, rubbish, unused materials and stains and leave in a clean and tidy state to the reasonable satisfaction of the Engineer.</p> <p>The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the Engineer.</p> |        |
|                 | <p><b>Carried to collection</b></p>  |        |

| ITEM            | DESCRIPTION   | AMOUNT |
|-----------------|---|--------|
| <p><b>A</b></p> | <p><b><u>SITE ACCOMODATION &amp; STORAGE</u></b></p> <p>The Contractor shall provide sheds for storage accommodation for all goods and materials liable to suffer damage from exposure to sunlight or inclement weather.</p> <p>The Contractor shall provide offices, mess rooms and all the buildings required by the Contractor for his own use and the use of Nominated Sub-Contractors as required by the items of attendance only.</p> <p>The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the Engineer</p> <p>Upon completion all temporary buildings are to be removed and cleared away</p>  |        |
| <p><b>B</b></p> | <p><b><u>SANITATION OF THE WORKS</u></b></p> <p>The sanitation of the works shall be provided, maintained and removed on completion by the Contractor to the satisfaction of the Engineers and local Authorities.</p> <p>The sanitary facilities shall be of generally acceptable standard regardless of the material being used to ensure ease of cleaning and maintain general well being of the users. Their location shall be agreed with the Engineers and the works shall not be commenced before the sanitary accommodation has been approved by the above mentioned authorities.</p> <p>The Contractor will be required to pay all conservancy charges and shall ensure clean daily maintenance and disinfecting of the sanitary facilities, and not less than once per week, the whole area shall be sprayed with disinfectant and insecticides and any temporary drains shall be removed and all works and surfaces disturbed made good and then the whole area disinfected and left clean and free from pollution to the satisfaction of the Engineer and local authorities.</p> |        |
| <p><b>C</b></p> | <p><b><u>HOARDINGS</u></b></p> <p>The Contractor shall provide, erect and maintain throughout the course of the Contract and thereafter clear away and make good disturbed areas, temporary hoarding; <b>approximate length of 1000 metres:</b> 2400mm high above ground consisting of: 100mm diameter timber poles at 1200mm centres firmly founded and secured, 75x50mm horizontal timber rails at 900mm centres, painted GCI sheets, proper timber gates with suitable locks to Engineers approval.</p>  |        |
|                 | <p><b>Carried to collection</b></p>   |        |

| ITEM | DESCRIPTION  | AMOUNT |
|------|--|--------|
| A    | <p><b><u>DEMOLITIONS AND DOWNTAKINGS</u></b></p> <p>The Contractor is to allow for all temporary protection required during the works including ordinary and special dust screens, hoardings, barriers, warning signs etc. as directed by the Engineer and as necessary for the adequate protection of adjacent property and finishes, workmen employed upon the site and the public. Any damage or loss incurred due to the insufficiency of such protection must be made good by the Contractor. All protective devices are to be removed on completion of the work and any necessary making good consequent upon this is to be executed to the satisfaction of the Engineer</p> <p>All materials arising from demolitions and downtakings are deemed to be the property of the employer. No claim will be entertained on account of employer excising this right to retain the materials unless otherwise stated.</p> <p>The Contractor shall allow in his rates the cost of handling and disposal of debris arising out of the demolition works</p> <p>All downtakings shall be carefully removed, taken down, dismantled and stored on site until instructed by the Engineer to remove from the site. Such materials shall only be incorporated in the new works if required by the Engineer in which case appropriate adjustments will be made in the final account for the cost of labour, screws etc for fixing such downtakings in the new works.</p> <p>The Contractor shall be entirely responsible for any breakage or damage which may occur to materials required for re-use, during their removal, unless it is certified by the Engineer that such damage or breakage was inevitable as a result of the condition of the item concerned.</p> |        |
| B    | <p><b><u>ACCESS TO SITE AND TEMPORARY ROADS</u></b></p> <p>Means of access to the site shall be agreed with the Engineer prior to commencement of the works and the Contractor must allow for building and maintaining any temporary access roads for the transport of materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges or any other means of gaining access.</p> <p>Upon the completion the works the Contractor shall remove such temporary roads, temporary culverts bridges etc and make good and reinstate all works and services disturbed to the satisfaction of the Engineer.</p>   |        |
|      | <b>Carried to collection</b>   |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
| A    | <p><b><u>SIGN BOARD</u></b></p> <p>The Contractor shall provide and erect where directed and maintain during the whole period of the building operation and remove at completion, one approved sign board of <b>approximately 3000x3000mm and approximately 5800mm overall height</b> to the Architect's later design giving a brief description of the works, a 3D perspective image of the project, and showing the names of the employer and the consultants, with sufficient space to append the names of the sub-contractors and suppliers when known. The lettering concerning the Architect, Quantity Surveyor and Engineer is not to be more than 50mm high.</p>  |        |
| B    | <p><b><u>PRIME COST SUMS</u></b></p> <p>i) The words "Prime Cost" (or the initials "P.C") appearing in the contract documents shall mean net costs exclusive of any trade, cash or other discount whatsoever but inclusive of the costs of the packing, carriage and delivery. Such costs shall be the same due to the sub-contract or supplier after adjustments where applicable in respect of measurements of rates.</p> <p>ii) Any increase or decrease in the prime costs sums resulting from the adjustments and properly paid by the contractor shall be added or deducted from the contract sum in the final account. In substantiation the contractor will require to produce to the Quantity Surveyor all quotations, invoices and receipted accounts as shall be necessary to show the details of the sums actually paid.</p> <p>iii) Any sum added by the contractor in these Bills of Quantities in respect of profits upon any prime costs will be deducted at the final settlement of accounts and the sum will be added to the amount of which will bear the same proportion to the sum added as the net amount properly expended to the original P.C sum. The profit is a management fee for arranging and taking responsibility of the sub-contract works or arranging for and checking the supply of materials and goods from nominated suppliers.</p> |        |
|      | <b>Carried to collection</b>  |        |

| ITEM | DESCRIPTION  | AMOUNT |
|------|--|--------|
| A    | <p><u>NOMINATED SUB-CONTRACTORS</u></p> <p>The contractor shall accept responsibility for providing the following services for nominated sub-contractors.</p> <p>i) GENERAL ATTENDANCE:</p> <p>The following services are described as "allow for general attendance" . This shall mean:</p> <p>a) Use for the purpose of the sub-contract works of any scaffolding belonging to or provided by the contractor while it remains so erected upon site, provided that no warranty or other liability on the part of the contractor or of his other sub-contractors shall be created or implied in regard to the fitness, condition or suitability of the said scaffolding</p> <p>b) Provision of water, lighting, watching and attendance for the purpose of the sub-contract works.</p> <p>c) Use of sanitary accommodation, mess rooms and welfare facilities.</p> <p>d) Provision of space for erecting of offices or stores or space for storage of plant and materials.</p> <p>ii) SPECIAL ATTENDANCE:</p> <p>The following services are described as "allow for special attendance" . This shall mean:</p> <p>a) Taking delivery and including the provision of unskilled labour necessary to attend upon the sub-contractors workmen for the purpose of unloading plants/equipment and materials of significant weight and/or size, when received upon the site and placing in position within the sub-contractor's storage space or store.</p> <p>b) Special Scaffolding, scaffolding additional to the Contractors scaffolding or Reassembling of contractor's scaffolding.</p> <p>c) Facilitating special power requirements during the course of the works.</p> <p><b>Carried to collection</b></p> |        |

| ITEM | DESCRIPTION  | AMOUNT |
|------|--|--------|
|      | <p><b>CLAIMS</b></p> <p><b>A</b> It shall be a condition of this contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and / or expenses due to any of the contract conditions, or by any other reason whatsoever, he shall present such a claim or intent to claim notice to the Engineer within the contract period. No claim shall be entertained upon the expiry of the said contract period.</p> <p><b>PAYMENTS</b></p> <p><b>B</b> The tenderer's attention is drawn to the fact that the payments shall be made in accordance with Clause 14 of the Conditions of Contract Agreement. In order to facilitate this, a list of the general component elements for the works is given at the summary page of these specifications and the tenderer is requested to break down his tender sum commensurate to the said elements.</p> <p><b>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</b></p> <p><b>C</b> The Contractor is thus instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of activities being carried out. The Contractor shall allow in his rates any expense he deemed necessary by taking such care within the site.</p> |        |
|      | <p><b>Carried to collection</b></p>  |        |



| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
| A    | <p><b><u>NOMINATED SUPPLIERS</u></b></p> <p>The contractor shall take delivery all materials or goods supplied by the Nominated suppliers and shall sign a receipt as having received them in good order and condition. He shall offload, transport to site, unload, hoist, provide safe storage and thereafter be responsible for any loss or damage or replacement of any such lost or damaged articles at his own expense and shall return case if so required.</p> <p>Provision is made herein following each appropriate P.C sums for the costs of the foregoing services against items reading "take delivery of and fix only"</p> <p><u>Fix Only:-</u></p> <p>"Fix Only" shall mean take delivery within a radius/ distance of 20 Km from the site (Unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, unload, store, unpack, assemble as necessary, distribute to position, hoist and fix only.</p> |        |
| B    | <p><b><u>DIRECT CONTRACTS</u></b></p> <p>Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum in the priced Bills of Quantities will be adjusted as described for P.C. Sums is allowed.</p>   |        |
| C    | <p><b><u>PROTECTION OF THE WORK</u></b></p> <p>The Contractor shall cover up and protect all finished work liable to damage including provision of temporary roof, gutters, drains etc until the completion of the works.</p> <p>In the event of any damages occurring to the works, materials, sewers, drains, gullies, paths or other works on site in temporary possession of the contractor for the purpose of this contract either from weather, want of proper protection, defects, or insufficiency of the works or any other causes or whatsoever during the progress of the works, the contractor shall be responsible and without extra charge, make good all damage and pay all costs which may be levied.</p>   |        |
|      | <p><b><u>BLASTING OPERATIONS</u></b></p>  |        |
| D    | <p>Blasting will only be allowed with the express permission of the Engineer in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Engineer governing the use and storage of explosives.</p>  |        |
|      | <p><b>Carried to collection</b></p>   |        |

| ITEM | DESCRIPTION  | AMOUNT |
|------|--|--------|
|      | <p><b><u>PREVENTION OF NUISANCE</u></b></p> <p><b>A</b> The works and such sections of the site necessary thereafter shall be under the entire care and control of the contractor during the whole period of the contract and shall take all possible precautions to prevent any nuisance, inconvenience or injury to the holder or occupiers of the existing or surrounding properties and to the public generally, and shall at all times keep all paths and roads affected by the works in a safe and clear state, and shall use proper precautions to ensure the safety of all wheeled traffic and pedestrians.</p> <p>The contractor shall provide appropriate screens to seal off the working area.</p> <p><b><u>REMOVAL OF PLANT AND RUBBISH ETC</u></b></p> <p><b>B</b> The Contractor shall upon completion of the works remove and clear away all temporary buildings, plant, rubbish and unused materials, and shall leave the whole of the site of the works in a clean and tidy state to the satisfaction of the Engineer. He shall also remove all rubbish and dirt from the site at intervals or as directed by the Engineer.</p> <p>Particular care shall be taken in leaving windows, floors and fittings clean and the removal of all paint and cement stains therefrom.</p> <p>The contractor is expected to have established a well planned method of solid disposal of debris/garbage on and off the camp site</p> <p><b><u>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</u></b></p> <p><b>C</b> The Contractor shall constantly keep on the works a literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works.</p> <p>Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Engineer and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.</p> <p><b>Carried to collection</b></p> |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
|      | <p><b><u>TRAINING LEVY</u></b></p> <p><b>A</b> The Contractor's attention is drawn to legal notice No. 237 of 2007 which requires payment by the Contractor for a training levy and the contractor shall allow in the preliminaries of this contract (basic rates column) for all costs arising or resulting therefrom.</p> <p>Proof of payment of this Levy should be provided at the request of the Engineer</p> <p><b><u>STANDARDS LEVY</u></b></p> <p><b>B</b> The Contractor is required to make payments to the Kenya Bureau of Standards as Standard Levy inline with the current current and prevailing regulations. The Contractor shall allow in the Preliminaries of this Contract for all costs arising or resulting therefrom.</p> <p><b><u>VALUE ADDED TAX (V.A.T.)</u></b></p> <p><b>C</b> The Contractor's attention is drawn to V.A.T PUBLIC NOTICE NO. 6 of 5th August, 1993 regarding the Finance Bill 1993 which expanded the V.A.T base to cover construction services amongst other items. The Contractor's attention is also drawn to all other notices issued by the government in relation to taxation. The Contractor shall familiarise himself with the said notices and allow in all his Bills of Quantities rates (Excluding P.C and Provisional Sums) for the net tax. (i.e less input tax where applicable) as required by law.</p> <p>Please note that allowing a lump sum tax either in preliminaries or in summary page shall not be acceptable.</p> <p>Any additional information and assistance concerning the application of the said notice should be directed to the office of the Commissioner of Value Added Tax</p> <p><b>Carried to collection</b></p> |        |

| ITEM | DESCRIPTION   | AMOUNT |
|------|---|--------|
|      | <b><u>BILL NO. 1</u></b>  |        |
|      | <b><u>GENERAL PRELIMINARIES</u></b>                             |        |
|      | <b><u>COLLECTION</u></b>  |        |
|      | Carried from page 1/1   |        |
|      | Carried from page 1/2   |        |
|      | Carried from page 1/3   |        |
|      | Carried from page 1/4   |        |
|      | Carried from page 1/5   |        |
|      | Carried from page 1/6   |        |
|      | Carried from page 1/7   |        |
|      | Carried from page 1/8   |        |
|      | Carried from page 1/9   |        |
|      | Carried from page 1/10  |        |
|      | Carried from page 1/11  |        |
|      | Carried from page 1/12  |        |
|      | Carried from page 1/13  |        |
|      | Carried from page 1/14  |        |
|      | Carried from page 1/15  |        |
|      | Carried from page 1/16  |        |
|      | Carried from page 1/17  |        |
|      | Carried from page 1/18  |        |
|      | Carried from page 1/19  |        |
|      | Carried from page 1/20  |        |
|      | Carried from page 1/21  |        |
|      | <b>Total for General Preliminaries Carried to Grand Summary</b> |        |
|      |   |        |

| ITEM   | DESCRIPTION   | UNIT     | AMOUNT       |
|--|---|----------|--------------|
| <p><b><u>PROJECT EXPENSES</u></b></p>  |   |          |              |
| <p><b>Disclaimer: The following items are provisional sums provided by the Engineer. They are to be expended at the written instruction of the Engineer.</b></p> |   |          |              |
| <p><b>Note: Tenderers should not attach, revise or add any conditions or specifications to the project supervisor's expenses</b></p>                             |   |          |              |
| <b>A</b>   | Provide and maintain equipment for the Engineer's site office for the duration of the project   | Lump Sum | 2,500,000.00 |
| <b>B</b>   | Provide for supervision as follows: 1 No. Clerks of works, (Building and services) for the duration of project and 1 no. Work Inspectors, and 1 No Surveyor to be engaged on need basis.  | Lump Sum | 2,700,000.00 |
| <b>C</b>   | Allow a provisional sum of Kshs. Eight Million (8,000,000) for Project Management Team and other stakeholders facilitation allowances during project implementation, as and whenever it is necessary.   | Lump Sum | 8,000,000.00 |
| <b>D</b>   | <p>Allow a P.C. Sum of KShs. 8,500,000 for supply of 1 Nr. (one)4WD station wagon SUV zero mileage vehicles of 2500 cc, or approved equivalent, including road licenses, number plates, insurances, etc. The vehicles to revert to Employer after completion of Contract. Minimum specifications include but not limited to the following:</p> <ul style="list-style-type: none"> <li>• Engine - 2.5 litres Turbo Diesel</li> <li>• Rear Differential Gear Lock</li> <li>• Braking System to include ABS (Anti-Lock Brake System)</li> <li>• Power Steering with adjustable Steering Column</li> <li>• Electronic Fuel Injection System.</li> <li>• 5 Speed Semi-Auto Transmission</li> <li>• Power Windows</li> <li>• Immobilizer and Alarm System</li> <li>• Fuel tank capacity between 80 litres and 100 litres</li> </ul> | Item     | 8,500,000.00 |
| <b>E</b>   | Allow for the Contractor's overheads and profits on items A,B, and C above.   |          |              |
| <b>F</b>   | Provide for the driver, fuels, maintenance, lubricants and servicing of the vehicle for kilometrage over 1,500 km per vehicle month.  |          | 1,440,000.00 |
| <b>Total carried forward</b>   |   |          |              |

| ITEM     | DESCRIPTION   | UNIT | AMOUNT       |
|----------|---|------|--------------|
|          | <b>Total brought forward</b>  |      |              |
| <b>A</b> | Provide a Prime-cost sum of Kshs five Hundred Thousand, (500,000.00) only for carrying out environmental impact assessment before the commencement of works and undertaking environmental mitigation measures as the work progresses. |      | 500,000.00   |
| <b>B</b> | Provide a Prime-cost sum of Kshs one million, (1000,000.00) only for carrying out Geotechnical survey before the commencement of works and preparation of the reports   |      | 1,000,000.00 |
| <b>C</b> | Allow a provisional sum of Kshs. Two Hundred and Fifty Thousand (250,000.00) for stationery, documentation, model making, review and preparation of as built drawings Manager.  |      | 250,000.00   |
| <b>D</b> | Allow a provisional sum of Kshs. Three Hundred and Fifty Thousand (350,000.00) for provision of Laptop Computer for the Engineer's Team.  |      | 350,000.00   |
|          | <b>Contractor's profits and overheads</b>   |      |              |
| <b>E</b> | Allow for the Contractor's overheads and profits on items F, G, H, J & K above.   | %    |              |
|          | <b>Total for Project Expenses Carried to Grand Summary</b>  |      |              |
|          |   |      |              |

**BUILDERS WORK**

**BLOCK TYPE A**



| Item   | Description   | Unit | QTY   | Rate | Block A G+9<br>Amount |
|--|---|------|-------|------|-----------------------|
| <b><u>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK</u></b> |   |      |       |      |                       |
| <b><u>(TYPE A G+9)</u></b>                             |   |      |       |      |                       |
| <b>BILL NO.4 -BLOCK A</b>                              |   |      |       |      |                       |
| <b>ELEMENT NO 1 - SUBSTRUCTURES (ALL PROVISIONAL)</b>  |   |      |       |      |                       |
| <i>Site Clearance</i>                                  |   |      |       |      |                       |
| A  | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas.   | SM   | 682   |      |                       |
| B  | Bulk excavation to reduce levels depth not exceeding 1.5m commencing from existing ground level   | CM   | 1,022 |      |                       |
| C  | Ditto but exceeding 1.5 metres but not 3 metres deep  | CM   | 682   |      |                       |
| D  | Extra over all type of excavation for excavating in soft rock   | CM   | 85    |      |                       |
| E  | Ditto excavation in hard rock class I   | CM   | 85    |      |                       |
| <b>Disposal of water</b>                               |   |      |       |      |                       |
| F  | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary | Item |       |      |                       |
| <b>Planking and strutting</b>                          |   |      |       |      |                       |
| G  | Allow for maintaining and upholding the sides of excavations and keeping excavations clear of all fallen materials, rubbish etc             | Item |       |      |                       |
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| <b>Carried to collection</b>                           |   |      |       |      |                       |

| Item | Description   | Unit | QTY  | Rate | Block A G+9<br>Amount |
|------|---|------|------|------|-----------------------|
|      | <b><u>Disposal of excavated material</u></b>  |      |      |      |                       |
| A    | Load, wheel and cart away surplus excavated material to a Local Authority designated dumping site or fill soil heaps as away from site instructed by the Project Engineer.  | CM   | 656  |      |                       |
| B    | Return, fill and ram selected excavated material around sides of foundations.   | CM   | 1049 |      |                       |
|      | <b>Fillings</b>   |      |      |      |                       |
| C    | Make up levels using approved imported materials: compacted in layers not exceeding 300mm thick with a roller: to the satisfaction of the Structural Engineer.  | CM   | 821  |      |                       |
| D    | 300mm thick hardcore bed: hand packed : compacted in layers not exceeding 150mm thick: to the satisfaction of the Structural Engineer   | SM   | 456  |      |                       |
| E    | 50 mm Stone dust/ Murrum blinding to surfaces of hardcore   | SM   | 456  |      |                       |
|      | <b>Anti - termite to treatment</b>  |      |      |      |                       |
| F    | Approved anti-termite treatment, with ten-year guarantee, sprayed to surfaces of hardcore strictly in accordance with manufacturer's instructions.  | SM   | 532  |      |                       |
|      | <b>Damp-proof membrane</b>  |      |      |      |                       |
| G    | 1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps); 1 No. layer: bedded in and including cement and sand (1:3) mortar | SM   | 532  |      |                       |
|      | <b>Concrete Blinding</b>  |      |      |      |                       |
|      | <b>In situ concrete Class 15MPa: vibrated:</b>  |      |      |      |                       |
| H    | 50 mm thick blinding under raft   | SM   | 682  |      |                       |
| I    | 50 mm thick blinding under ground beams   | SM   | 76   |      |                       |
|      | <b>In- situ vibrated reinforced concrete Class 25 MPa: in:</b>  |      |      |      |                       |
| J    | Raft Foundation   | CM   | 511  |      |                       |
| K    | Ground Beams  | CM   | 15   |      |                       |
| L    | 100mm thick surface bed   | SM   | 532  |      |                       |
| M    | Steps   | CM   | 1    |      |                       |
|      | <b>In- situ vibrated reinforced concrete Class 30 MPa: in:</b>  |      |      |      |                       |
| N    | Columns   | CM   | 22   |      |                       |
| O    | 200mm thick Lift pit shaft wall   | SM   | 31   |      |                       |
|      | <b>Carried to collection</b>  |      |      |      |                       |

| Item | Description   | Unit | QTY   | Rate | Block A G+9<br>Amount |
|------|---|------|-------|------|-----------------------|
|      | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b>  |      |       |      |                       |
| A    | Assorted reinforcement  | KGS  | 24718 |      |                       |
|      | <b>Mesh fabric reinforcement to K/EAS 412;2 (2019) BRC A142;200 x 200mm, weighing 2.22kg/m<sup>2</sup> (measured net - no allowance) for laps; in two layers - top &amp; bottom; including bends, tying wire and spacer blocks)</b>                     |      |       |      |                       |
| B    | In ground floor slab  | SM   | 532   |      |                       |
|      | <u>Modular steel frame with steel plates covering formwork and/or marine board formwork: to:</u>  |      |       |      |                       |
| C    | Sides of raft foundation  | SM   | 106   |      |                       |
| D    | Sides of ground beams   | SM   | 152   |      |                       |
| E    | Vertical sides to columns   | SM   | 261   |      |                       |
| F    | Vertical sides to lift shaft walls  | SM   | 61    |      |                       |
| G    | Edge of slab not exceeding 150mm girth  | LM   | 142   |      |                       |
| H    | Edges of risers 75 - 150mm high   | LM   | 12    |      |                       |
|      | <b>Foundation Walling</b>   |      |       |      |                       |
|      | <b>Natural quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</b>                |      |       |      |                       |
| I    | 200mm thick walls in foundations  | SM   | 724   |      |                       |
|      | <b>Pavings</b>  |      |       |      |                       |
| J    | Supply and lay 600 x 600 x 50mm reinforced concrete precast paving slabs around the building including laying, spreading and compacting 100mm thick approved sand bed blinding, on and including 150mm thick compacted hardcore to Engineer's approval. | SM   | 85    |      |                       |
|      | <b>Plinth</b>   |      |       |      |                       |
|      | <b><u>25mm Thick cement and sand (1:4) rendering on concrete or masonry ; wood float finished; to</u></b>   |      |       |      |                       |
| K    | Plinths externally  | SM   | 64    |      |                       |
|      | <b><u>Two coats black bitumastic paint on:</u></b>  |      |       |      |                       |
| L    | Rendered surfaces   | SM   | 64    |      |                       |
|      | <b><u>Cement/sand (1:3) screed with approved waterproofing admixture, steel trowelled hard and smooth to receive waterproofing (m/s)</u></b>  |      |       |      |                       |
| M    | 20mm thick water proof cement/sand (1:4) screed to lift pit floor prepared to receive water proofing  | SM   | 7     |      |                       |
| N    | 12mm thick water proof cement/sand (1:4) render to wall prepared to receive water proofing  | SM   | 32    |      |                       |
|      | <b>Carried to collection</b>  |      |       |      |                       |

| Item                 | Description  | Unit | QTY | Rate | Block A G+9<br>Amount |
|----------------------|--|------|-----|------|-----------------------|
|                      | <b>Waterproofing</b>   |      |     |      |                       |
|                      | <b>CRYSTALLINE WATERPROOFING</b>   |      |     |      |                       |
|                      | <u>All areas indicated shall be waterproofed by approved cementitious system , provide 10 year guarantee, all to manufacturer's specifications and instructions as described:</u>                        |      |     |      |                       |
|                      | <u>Two coat slurry application: waterproofing powder: 1kg per m2 per coat, minimum 2 coats to seal all expansion joints, holes, repaired areas and angle fillet or as per manufacturers instructions</u> |      |     |      |                       |
|                      | <u>Application of render coat: waterproofing powder: 1kg per m2 at 4.5mm thick on slabs. Rate shall allow for hacking and preparing all concrete surfaces or as per manufacturers instructions</u>       |      |     |      |                       |
| A                    | Horizontal surfaces of lift base   | SM   | 7   |      |                       |
| B                    | Vertical surfaces of Lift shaft walls  | SM   | 32  |      |                       |
|                      | <b>Carried to collection</b>   |      |     |      |                       |
|                      | <b>COLLECTION</b>  |      |     |      |                       |
|                      | Total brought forward from page no: 1  |      |     |      |                       |
|                      | Total brought forward from page no: 2  |      |     |      |                       |
|                      | Total brought forward from page no: 3  |      |     |      |                       |
|                      | Total brought forward from above   |      |     |      |                       |
| <b>ELEMENT NO. 1</b> | <b>Carried to</b>  |      |     |      |                       |
| <b>SUBSTRUCTURES</b> | <b>Main summary</b>  |      |     |      |                       |

| Item   | Description  | Unit                | QTY    | Rate | Block A G+9<br>Amount |
|--|--|---------------------|--------|------|-----------------------|
| <b><u>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK</u></b><br><b><u>(TYPE A G+9)</u></b>   |  |                     |        |      |                       |
| <b>BILL NO.4 -BLOCK A</b>  |  |                     |        |      |                       |
| <b>ELEMENT No 2 - R.C FRAME</b>  |  |                     |        |      |                       |
| <b><u>Insitu concrete class 30MPa: vibrated: reinforced</u></b>  |  |                     |        |      |                       |
| A  | Columns  | CM                  | 301    |      |                       |
| B  | 200mm thick Lift shaft wall  | SM                  | 417    |      |                       |
| <b><u>Insitu concrete class 25MPa: vibrated: reinforced</u></b>  |  |                     |        |      |                       |
| C  | Beams  | CM                  | 279    |      |                       |
| D  | Upper Roof Beams   | CM                  | 3      |      |                       |
| E  | 130mm thick suspended slabs  | SM                  | 4083   |      |                       |
| F  | 150mm thick suspended slabs  | SM                  | 1237   |      |                       |
| G  | 150mm thick Tank Slab over stairwell   | SM                  | 82     |      |                       |
| H  | 150 mm thick landing   | SM                  | 103    |      |                       |
| I  | Staircases   | CM                  | 40     |      |                       |
| J  | 100 mm thick reinforced concrete benches reinforced with BRC mesh A142 complete with formwork and all necessary plasterworks/screed work | SM                  | 24     |      |                       |
| <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b> |  |                     |        |      |                       |
| K  | Assorted reinforcement   | Kg                  | 151369 |      |                       |
| <b><u>Modular steel frame with steel plates covering formwork and/or marine board formwork: to</u></b>   |  |                     |        |      |                       |
| L  | Sides of columns   | SM                  | 3597   |      |                       |
| M  | Sides and soffites of beams  | SM                  | 2695   |      |                       |
| N  | Soffits of suspended slabs   | SM                  | 5402   |      |                       |
| O  | Edges of slab over 75mm but not exceeding 150mm girth  | LM                  | 3138   |      |                       |
| P  | To sloping soffites of staircases  | SM                  | 148    |      |                       |
| Q  | Soffits of landings  | SM                  | 103    |      |                       |
| R  | Riser of steps over 150 mm but not exceeding 225 mm girth  | LM                  | 480    |      |                       |
| S  | Staircase string 300mm extreme girth and cut to profile of steps   | LM                  | 247    |      |                       |
| T  | Edges of landing over 150 but ot exceeding 225mm high  | LM                  | 80     |      |                       |
| U  | Sides of lift walls  | SM                  | 834    |      |                       |
| V  | Edges of lift shaft openings 150-225mm high  | LM                  | 114    |      |                       |
| <b><u>ELEMENT NO. 2</u></b>  |  | <b>Carried to</b>   |        |      |                       |
| <b><u>R.C FRAME</u></b>  |  | <b>Main summary</b> |        |      |                       |

| Item   | Description  | Unit                | QTY  | Rate | Block A G+9<br>Amount |
|--|--|---------------------|------|------|-----------------------|
| <b>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK<br/>(TYPE A G+9)</b>   |  |                     |      |      |                       |
| <b>BILL NO.4 -BLOCK A</b>  |  |                     |      |      |                       |
| <b>ELEMENT No 3-WALLING</b>  |  |                     |      |      |                       |
| <b>WALLING</b>   |  |                     |      |      |                       |
| <b>External Walling</b>  |  |                     |      |      |                       |
| <i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength ;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i> |  |                     |      |      |                       |
| A  | 200mm thick walling Externally   | SM                  | 2967 |      |                       |
| B  | 200mm thick parapet walling  | SM                  | 308  |      |                       |
| <b>Internal Walling</b>  |  |                     |      |      |                       |
| <i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength ;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i> |  |                     |      |      |                       |
| C  | 200mm thick walling Internally   | SM                  | 2214 |      |                       |
| D  | 150mm thick walling Internally   | SM                  | 2781 |      |                       |
| E  | 100mm thick walling Internally   | SM                  | 238  |      |                       |
| F  | Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar  | LM                  | 266  |      |                       |
| G  | Approved hessian based damp proof course to 150mm thick walling in cement/sand mortar  | LM                  | 150  |      |                       |
| <b>Precast Concrete Breeze Ventilation Blocks</b>  |  |                     |      |      |                       |
| H  | 150 x 150mm wide x 50mm thick Pre Cast Concrete flower 3D breeze ventilation blocks bedded and jointed in cement and sand (1:4) mortar                 | SM                  | 233  |      |                       |
| <b>COPING</b>  |  |                     |      |      |                       |
| I  | 600 x 350 wide x 100mm thick insitu reinforced concrete class 20Mpa coping, throated and weathered and jointing to columns with cement sand 1:4 mortar | NO                  | 79   |      |                       |
| J  | Ditto 300 x 100mm insitu concrete coping to walls twice weathered and throated;  | LM                  | 257  |      |                       |
| <b>Lintols</b>   |  |                     |      |      |                       |
| K  | 200mm x 200mm Deep lintols in reinforced concrete class 20MPa with and including 4No T10 and T8 stirups at 200mm centres; complete with formwork       | LM                  | 592  |      |                       |
| <b>ELEMENT NO. 3</b>   |  | <b>Carried to</b>   |      |      |                       |
| <b>WALLING</b>   |  | <b>Main summary</b> |      |      |                       |

| Item | Description  | Unit | QTY  | Rate | Block A G+9<br>Amount |
|------|--|------|------|------|-----------------------|
|      | <p align="center"><b><u>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK</u></b><br/><b><u>(TYPE A G+9)</u></b></p> <p align="center"><b>BILL NO.4 -BLOCK A</b></p> <p><b>ELEMENT NO 4-WINDOWS</b></p> <p><b><u>MILD STEEL WINDOWS</u></b></p> <p>Supply, fabricate and fix the following purpose made small pane mild steel casement windows to be fabricated from approved mild steel sections (atleast 14g 2mm thick ) comprising of frame and casement incorporating permanent hooded high level ventilation panels infilled with mosquito gauze : window supplied complete with and including 12mm solid square burglar proofing bars fixed at 200mm centres both ways and metal fixing lugs including building into wall and making good, and all necessary iron mongery viz hinges, fasteners, and hasp including shop priming window with red oxide primer before delivery to site:-</p> <p><b><u>A prime cost sum of Kshs 4,500 per Sqm has been allowed for fabrication of the above specified Steel casement Windows by AHP juakali artisans as approved by the Project Manager/Architect.</u></b></p> <p><b><u>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</u></b></p> |      |      |      |                       |
| A    | Window, overall size 1200 X 1500mm high to Architects Details (Lounge)   | NO   | 111  |      |                       |
| B    | Ditto Size 1200 x 1500mm high (bedroom)  | NO   | 150  |      |                       |
| C    | Ditto Size 1200 x 1200mm high (Kitchen)  | NO   | 80   |      |                       |
| D    | Ditto Size 600 x 900mm high (WC/SH)  | NO   | 171  |      |                       |
|      | <b><u>Glazing</u></b>  |      |      |      |                       |
| E    | 4mm Thick clear sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with premium putty  | SM   | 601  |      |                       |
| F    | Ditto; obscure   | SM   | 97   |      |                       |
|      | <b><u>Painting and Decorations</u></b>   |      |      |      |                       |
|      | <b><u>On Metal work</u></b>  |      |      |      |                       |
|      | <b><u>Prepare and apply aerosol spray painting in two finishing coats of first grade paint as per the manufacturer's printed instructions to: -</u></b>  |      |      |      |                       |
| G    | General window and grille surfaces; over 300mm girth internal  | SM   | 1397 |      |                       |
|      | <b>Carried to Collection</b>   |      |      |      |                       |

| Item | Description   | Unit | QTY | Rate | Block A G+9<br>Amount |
|------|---|------|-----|------|-----------------------|
|      | <p><b><u>Precast concrete window cill finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in pigmented cement and sand (1:3) mortar</u></b></p> |      |     |      |                       |
| A    | 150 x 25mm thick Precast concrete window sill   | LM   | 634 |      |                       |
|      | <b><u>Curtain rods;</u></b>   |      |     |      |                       |
| B    | 1.5mm thick, 20mm thick diameter twin powdercoated mild steel rod complete accessories to approval  | LM   | 525 |      |                       |
|      | <b>Carried to collection</b>  |      |     |      |                       |
|      | <b>COLLECTION</b>   |      |     |      |                       |
|      | Total brought forward from page no: 7   |      |     |      |                       |
|      | Total brought forward from above  |      |     |      |                       |
|      | <b><u>ELEMENT NO. 4</u></b>   |      |     |      |                       |
|      | <b><u>WINDOWS</u></b>   |      |     |      |                       |
|      | <b>Carried to the Main summary</b>  |      |     |      |                       |



| Item  | Description   | Unit | QTY | Rate | Block A G+9<br>Amount |
|---|---|------|-----|------|-----------------------|
| <p style="text-align: center;"><b><u>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK</u></b><br/><b><u>(TYPE A G+9)</u></b></p> <p style="text-align: center;"><b>BILL NO.4 -BLOCK A</b></p> <p><b>ELEMENT NO 5-DOORS</b></p> <p><b><u>External Doors</u></b></p> <p><b><u>Hardwood Panelled Doors</u></b></p> <p><b><u>50mm thick approved hardwood PANEL doors with 12.5mm thick mahogany</u></b><br/><b><u>hardwood lipping to Architect's details, specifications and approval</u></b></p> <p><b><u>A prime cost sum at the rate indicated below has been allowed for fabrication of the above specified Hardwood panelled door leaves by AHP juakali artisans as approved by the Project Manager/Architect.</u></b></p> <p><b><u>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accessories in addition to the PC Rate.</u></b></p> |   |      |     |      |                       |
| A   | Double leaf door size 1500 x 2400mm high ( PC Rate Kshs 41,000)                     | NO   | 3   |      |                       |
| B   | Single leaf Size 900 x 2400mm high (- PC Rate Kshs 25,000)                          | NO   | 111 |      |                       |
| <i>Frames and frame finishes in mahogany timber:</i>  |   |      |     |      |                       |
| C   | 25 x 25mm quadrant beading (PC Rate Kshs 75)  | LM   | 663 |      |                       |
| D   | 25 x 50mm architrave with two labours, plugged (PC Rate Kshs 150)                   | LM   | 663 |      |                       |
| E   | 150mm x 50mm frame with three labours; chamfered edges; plugged (PC Rate Kshs 1400) | LM   | 663 |      |                       |
| <b>Carried to collection</b>  |   |      |     |      |                       |

| Item | Description   | Unit | QTY  | Rate | Block A G+9<br>Amount |
|------|---|------|------|------|-----------------------|
|      | <p><b><u>Internal Doors</u></b></p> <p><b><u>Flush timber doors</u></b></p> <p><b><u>50 mm thick Semi Solid cored flush doors with plywood facing to receive painting (m.s) all to Architects details, specifications and approval</u></b></p> <p><b><u>A prime cost sum at the rate indicated below for fabrication of the above specified Timber Flush door leaves by AHP juakali artisans as approved by the Project Manager/Architect.</u></b></p> <p><b><u>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</u></b></p> |      |      |      |                       |
| F    | Door size 900mm x 2400mm High comprising of 1 No Opennable leaf size 800 x 2100mm high including fixed fanlight size 900 x 300mm high in 4mm clear glass ( measured separetely) (PC Rate Kshs 4,000)  | NO   | 150  |      |                       |
| G    | Ditto 800 x 2100mm high comprising of 1No. Opennable leaf size 700 x 2100mm high (PC Rate Kshs 3,500)   | NO   | 171  |      |                       |
|      | <b><u>4mm Thick clear sheet glass fixing with matching timber glazing beads to timber frames</u></b>  |      |      |      |                       |
| H    | In panes exceeding 0.1 sqm but not exceeding 0.5 square metres.   | SM   | 41   |      |                       |
|      | <b><u>Frames and frame finishes in cypress Timber</u></b>   |      |      |      |                       |
| I    | 25 x 25mm quadrant (PC Rate Kshs 75)  | LM   | 1710 |      |                       |
| J    | 25 x 50mm architrave with two labours, plugged (PC Rate Kshs 150)   | LM   | 1710 |      |                       |
| K    | 150mm x 50mm transome with three labours; chamfered edges; plugged (PC Rate Kshs 800)   | LM   | 135  |      |                       |
| L    | 150mm x 50mm frame with three labours; chamfered edges; plugged (PC Rate Kshs 800)  | LM   | 1710 |      |                       |
|      | <b>Carried to collection</b>  |      |      |      |                       |

| Item | Description   | Unit                | QTY  | Rate | Block A G+9<br>Amount |
|------|---|---------------------|------|------|-----------------------|
|      | <u>Painting and decorating</u>  |                     |      |      |                       |
|      | <u>Priming back of frame with an aluminium or equivalent and approved wood primer</u>   |                     |      |      |                       |
| A    | Surfaces not exceeding 100mm girth  | LM                  | 4745 |      |                       |
| B    | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 2373 |      |                       |
|      | <u>Prepare Knot, prime, stop and apply one undercoat and two finishing coats first grade timber quality paint to wood surfaces as per the manufacturer's printed instructions</u> |                     |      |      |                       |
| C    | General timber surfaces   | SM                  | 1750 |      |                       |
| D    | Surfaces over 200mm but not exceeding 300mm girth   | LM                  | 2373 |      |                       |
| E    | Architraves: not exceeding 100 mm girth   | LM                  | 2373 |      |                       |
| F    | Quadrant beading : not exceeding 100 mm girth   | LM                  | 2373 |      |                       |
|      | <b>Ironmongery</b>  |                     |      |      |                       |
|      | <b>Supply and fix the following ironmongery to timber complete with matching screws and keys to the approval of the Architect</b>   |                     |      |      |                       |
| G    | 100mm pressed steel Butt Hinges   | PRS                 | 657  |      |                       |
| H    | Stainless steel 3 Lever Mortice Door Lock with handle furniture set;( keyhole escutcheons, cylinder and latch )   | NO                  | 114  |      |                       |
| I    | Ditto: but 2 Lever Door Lock with handle  | NO                  | 321  |      |                       |
| J    | Door fixing cramps  | NO                  | 435  |      |                       |
| K    | 200 x 75 x 3mm perspex door signage with door numbers as per Architect detail   | NO                  | 0    |      |                       |
| L    | Block sign with block type, name and number in exterior quality paint as per Architect detail   | NO                  | 0    |      |                       |
|      | <b>Carried to Collection</b>  |                     |      |      |                       |
|      | <b>COLLECTION</b>   |                     |      |      |                       |
|      | Total brought forward from page no: 10  |                     |      |      |                       |
|      | Total brought forward from page no: 11  |                     |      |      |                       |
|      | Total brought forward from above  |                     |      |      |                       |
|      | <b>ELEMENT NO. 5</b>  | <b>Carried to</b>   |      |      |                       |
|      | <b>DOORS</b>  | <b>Main summary</b> |      |      |                       |

| Item  | Description   | Unit                | QTY  | Rate | Block A G+9<br>Amount |
|---|---|---------------------|------|------|-----------------------|
| <b>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK<br/>(TYPE A G+9)</b>  |   |                     |      |      |                       |
| <b>BILL NO.4 -BLOCK A</b>   |   |                     |      |      |                       |
| <b>ELEMENT NO 6 - EXTERNAL FINISHES</b>   |   |                     |      |      |                       |
| <b>EXTERNAL WALL FINISHES</b>   |   |                     |      |      |                       |
| <b>External Render</b>  |   |                     |      |      |                       |
| <u>Cement and sand (1:3) render:wood floated: on concrete or blockwork:<br/>to</u>  |   |                     |      |      |                       |
| A   | 15mm thick to beams, Columns, Slab Moulds and walling externally  | SM                  | 5555 |      |                       |
| B   | Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand mix (1:3) mortar including one coat Bituminous paint | SM                  | 0    |      |                       |
| <b>External Painting</b>  |   |                     |      |      |                       |
| <u>Prepare and apply one coat Alkali Resistant primer followed by two coats of silicon exterior Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u>  |   |                     |      |      |                       |
| C   | Concrete/masonry surfaces externally-Beam, Column and Slab Moulds   | SM                  | 5555 |      |                       |
| <b>ROOF FINISHES</b>  |   |                     |      |      |                       |
| <b>Cement and sand (1:3) screeded beds: on concrete: complete with coloured pigmentation additives and hardener to:</b>   |   |                     |      |      |                       |
| D   | 50mm average waterproofed lightweight screed laid to falls and crossfalls to roof slabs -upper roof including gutter bases            | SM                  | 648  |      |                       |
| <u>Prepare and apply to vertical/ horizontal surfaces 4mm thick APP/EPDM water proofing or other equal and approved membrane with surface finish weighing 4kg/sm; laid on primer with torch-on process ;by an approved specialist all in accordance with the manufacturers instructions including provision of a written ten (10) year anti leak guarantee.</u> |   |                     |      |      |                       |
| E   | 4mm thick APP membrane applied to roof slabs  | SM                  | 648  |      |                       |
| F   | Ditto to skirting 200mm high  | LM                  | 358  |      |                       |
| G   | Dress membrane around 100mm rainwater outlet  | No.                 | 12   |      |                       |
| <u>The Following Flat roof concrete tiles fixed with approved adhesive, laid and jointed with waterproofing bituminous compound</u>   |   |                     |      |      |                       |
| H   | 20mm thick interlocking Concrete tiles of size 225 x 225mm with and including cement sand (1:4) backing to falls                      | SM                  | 614  |      |                       |
| <b>ELEMENT NO. 6</b>  |   | <b>Carried to</b>   |      |      |                       |
| <b>EXTERNAL FINISHES</b>  |   | <b>Main summary</b> |      |      |                       |

| Item  | Description  | Unit | QTY   | Rate | Block A G+9<br>Amount |
|---|--|------|-------|------|-----------------------|
| <b>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK<br/>(TYPE A G+9)</b>  |  |      |       |      |                       |
| <b>BILL NO.4 -BLOCK A</b>   |  |      |       |      |                       |
| <b>ELEMENT NO 7 - INTERNAL FINISHES</b>   |  |      |       |      |                       |
| <b><u>Internal Wall Finishes</u></b>  |  |      |       |      |                       |
| <u>Cement and sand (1:3) backings</u>   |  |      |       |      |                       |
| A   | 15mm thick to receive Ceramic Wall tiles   | SM   | 2757  |      |                       |
| B   | To receive porcelain wall tiles (m.s.) (Lift Lobby)  | SM   | 172   |      |                       |
| <u>Ceramic wall tiles</u>   |  |      |       |      |                       |
| <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |  |      |       |      |                       |
| C   | Supply and Fix ceramic wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces   | SM   | 2757  |      |                       |
| <u>Porcelain wall tiles</u>   |  |      |       |      |                       |
| <u>Allow a Prime Cost supply rate of Ksh. 1500 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |  |      |       |      |                       |
| D   | Supply and Fix porcelain wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces | SM   | 172   |      |                       |
| <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |  |      |       |      |                       |
| E   | Concrete/masonry surfaces  | SM   | 12110 |      |                       |
| <b><u>Painting and Decoration</u></b>   |  |      |       |      |                       |
| <u>Prepare, Skim and apply Emulsion or universal undercoat followed by 2 finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u> |  |      |       |      |                       |
| F   | Plastered concrete/masonry surfaces internally   | SM   | 12110 |      |                       |
| <b>Carried to Collection</b>  |  |      |       |      |                       |

| Item | Description   | Unit           | QTY  | Rate | Block A G+9<br>Amount |
|------|---|----------------|------|------|-----------------------|
|      | <b><u>Floor Finishes</u></b>  |                |      |      |                       |
|      | <u>Cement and sand (1:3) screeds, backings, beds etc</u>  |                |      |      |                       |
| A    | 32mm bed finished to receive floor Tiles (m.s)  | SM             | 3487 |      |                       |
| B    | 32mm Thick coloured cement sand screed mix 1:3 finished with red oxide to approval  | SM             | 1036 |      |                       |
|      | <u>Cement and sand (1:3) backings etc</u>   |                |      |      |                       |
| C    | 32mm bed finished to receive ceramic tiles to surfaces of Landings (m.s)  | SM             | 103  |      |                       |
| D    | 25 x 300 mm wide treads to receive ceramic tiles (m.s)  | LM             | 432  |      |                       |
| E    | 20 x 150mm risers to receive ceramic tiles (m.s)  | LM             | 480  |      |                       |
|      | <u>Ceramic Floor tiles</u>  |                |      |      |                       |
|      | <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |                |      |      |                       |
| F    | Supply and Fix Ceramic tiles; on prepared bed(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval.   | SM             | 2365 |      |                       |
| G    | Ditto Non Slip Ceramic Tiles  | SM             | 1122 |      |                       |
| H    | Ditto 100mm wide Wall Skirtings   | LM             | 3996 |      |                       |
| I    | Non Slip Ceramic Tiles to surfaces of Landings  | SM             | 103  |      |                       |
| J    | Non Slip Ceramic Tiles to 300 mm wide treads  | LM             | 432  |      |                       |
| K    | Non Slip Ceramic Tiles to 150mm risers  | LM             | 480  |      |                       |
|      | <u>Wet areas waterproofing - Kitchens, Toilets etc.</u>   |                |      |      |                       |
| L    | Liquid membrane - High build bitumen/ rubber latex emulsion with excellent adhesion, liquid applied to form a seamless flexible water proof/ vapour proof membrane as <b>as per the manufacturer's printed instructions to: solid content =65%, Rubber Content=10% in dried film)</b> |                |      |      |                       |
| M    | To floors and walls   | m <sup>2</sup> | 1567 |      |                       |
|      | <b><u>Staircase soffit finishes</u></b>   |                |      |      |                       |
|      | <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |                |      |      |                       |
| N    | Soffits of staircase landing  | SM             | 103  |      |                       |
| O    | Ditto to sloping soffites exceeding 15° from horizontal   | SM             | 148  |      |                       |
| P    | Staircase string 300mm extreme girth and cut to profile of steps  | LM             | 247  |      |                       |
|      | <b>Carried to Collection</b>  |                |      |      |                       |

| Item                         | Description   | Unit | QTY  | Rate | Block A G+9<br>Amount |
|------------------------------|---|------|------|------|-----------------------|
|                              | <b><u>Paint works</u></b>   |      |      |      |                       |
|                              | <u>Prepare, skim and apply Emulsion or universal undercoat followed by 3 coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u> |      |      |      |                       |
| A                            | Soffits of staircase landing  | SM   | 103  |      |                       |
| B                            | Ditto to sloping soffites exceeding 15° from horizontal   | SM   | 148  |      |                       |
| C                            | Staircase string 300mm extreme girth and cut to profile of steps  | LM   | 247  |      |                       |
|                              | <b><u>Ceiling finishes</u></b>  |      |      |      |                       |
|                              | <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>                                   |      |      |      |                       |
| D                            | Soffits of Concrete surfaces  | SM   | 5402 |      |                       |
|                              | <b><u>Painting and Decoration</u></b>   |      |      |      |                       |
|                              | <u>Prepare, skim and apply Emulsion or universal undercoat followed by 3 coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u> |      |      |      |                       |
| E                            | Plastered ceilings  | SM   | 5402 |      |                       |
| <b>Carried to Collection</b> |   |      |      |      |                       |

| Item | Description                            | Unit | QTY | Rate | Block A G+9<br>Amount |
|------|--|------|-----|------|-----------------------|
|      | <b>COLLECTION</b>                      |      |     |      |                       |
|      | Total brought forward from page no: 12 |      |     |      |                       |
|      | Total brought forward from page no: 13 |      |     |      |                       |
|      | Total brought forward from page no: 14 |      |     |      |                       |
|      | <b>ELEMENT NO. 7</b> Carried to        |      |     |      |                       |
|      | <b>INTERNAL FINISHES Main summary</b>  |      |     |      |                       |



| Item   | Description   | Unit | QTY | Rate | Block A G+9<br>Amount |
|--|---|------|-----|------|-----------------------|
| <p><b>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK<br/>(TYPE A G+9)</b></p> <p><b>BILL NO.4 -BLOCK A</b></p> <p><b>ELEMENT NO 8- BALUSTRADING AND RAILING</b></p> <p><u>Balustrades and staircase railings</u></p> |   |      |     |      |                       |
| A  | 900mm high mild Steel balustrade; comprising 60 x 10mm mild Steel balusters at 900mm centres; bolted to base plate and tread (m.s), with 7No. 25mm diameter horizontal bars, and 75x4mm diameter CHS mild Steel handrail part welded into 60x10mm balustrades; to Architects drawings | LM   | 159 |      |                       |
| B  | 50mm diameter x 3mm CHS handrail supported by 50 x 50 x 3mm thick SHS balusters anchored to slab with and including w/steel bolts and plates at 1800mm centres smooth welded 100mm high (Staircase)   | LM   | 90  |      |                       |
| <p><u>Prepare, prime and apply one undercoat and two finishing coats first quality gloss oil paint on</u></p>  |   |      |     |      |                       |
| C  | General metal surfaces of balustrading (both sides measured overall)  | SM   | 400 |      |                       |
| <p><b>ELEMENT NO. 8</b> Carried to the</p>   |   |      |     |      |                       |
| <p><b>BALUSTRADE AND RAILING</b> Main summary</p>  |   |      |     |      |                       |

| Item   | Description   | Unit                  | QTY    | Rate | Block A G+9<br>Amount |
|--|---|-----------------------|--------|------|-----------------------|
| <b>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK<br/>(TYPE A G+9)</b>   |   |                       |        |      |                       |
| <b>BILL NO.4 -BLOCK A</b>  |   |                       |        |      |                       |
| <b>ELEMENT NO 9 - JOINERY FITTINGS</b>   |   |                       |        |      |                       |
| <u>Allow for providing materials, labour and construct fixtures and fittings as per Architects drawings of the following JOINERY FITTINGS AND FIXTURES complete with associated iron mongery;</u>  |   |                       |        |      |                       |
| <u>NOTE: All blockboard, MDF boards,etc in joinery works shall be lipped with hardwood lipping all round before fixing.</u>  |   |                       |        |      |                       |
| <u>High level cupboards</u>  |   |                       |        |      |                       |
| <u>400mm Wide high level kitchen cupboards in 18mm laminated mdf sides &amp; shelves complete with doors, top, bottom &amp; divisions with and including all necessary ironmongery; to Architect's details</u>   |   |                       |        |      |                       |
| A  | High level storage cupboard units 600mm high x 400mm deep   | LM                    | 230.00 |      |                       |
| <u>Low level kitchen cupboards</u>   |   |                       |        |      |                       |
| <u>Low level kitchen worktops with 600x600x10mm porcelain tiles top on 100mm thick reinforced concrete slab with A142 BRC mesh, formwork to soffits and slab edges, plater to soffits of slab, screed to top slab, 100mm thick plastered steeper walls, including 300x300x6mm thick ceramic wall tiles on both sides of the wall: 100mm plastered mass concrete plinths in concrete class 15MPa: 18mm laminated mdf sides &amp; shelves complete with doors, shelves, drawers, cutting tiles for kitchen sink (m.s) &amp; all necessary ironmongery; to Architect's details and approval</u> |   |                       |        |      |                       |
| B  | Low level kitchen cupboards 850mm high x 600mm deep         | LM                    | 230    |      |                       |
| <u>Bedroom Wardrobes</u>   |   |                       |        |      |                       |
| <u>600mm Wide x 2200mm high wardrobes in 18mm laminated mdf sides, divisions, drawers, shelves ; complete with sliding/ side hung doors, shelves, divisions, shoe racks, hanging rails, drawers, &amp; all necessary ironmongery; 100mm plastered mass concrete plinths in concrete class 15MPa ; to Architect's details</u>   |   |                       |        |      |                       |
| C  | Bedroom wardrobes size 2200mm high x 600mm deep in bedrooms | LM                    | 217    |      |                       |
| <b>Duct doors</b>  |   |                       |        |      |                       |
| <u>50mm thick laminated MDF duct doors; complete with frames, ironmongery and all necessary paintwork</u>  |   |                       |        |      |                       |
| D  | Duct doors size 300mm wide x 2100mm high                    | NO.                   | 10     |      |                       |
| E  | Duct doors size 350mm wide x 2100mm high                    | NO.                   | 10     |      |                       |
| F  | Duct doors size 600mm wide x 2100mm high                    | NO.                   | 50     |      |                       |
| G  | Duct doors size 500mm wide x 2100mm high                    | NO.                   | 20     |      |                       |
| H  | Duct doors size 700mm wide x 2100mm high                    | NO.                   | 20     |      |                       |
| I  | Duct doors size 800mm wide x 2100mm high                    | NO.                   | 20     |      |                       |
| <b>ELEMENT NO. 9</b>   |   | <b>Carried to the</b> |        |      |                       |
| <b>JOINERY &amp; FITTINGS</b>  |   | <b>Main summary</b>   |        |      |                       |



| Item   | Description                                       | Unit        | QTY             | Rate                  | Block A G+9<br>Amount |
|--|---|-------------|-----------------|-----------------------|-----------------------|
| <b><u>PROPOSED SOCIAL + AFFORDABLE UNITS BLOCK</u></b><br><b><u>(TYPE A G+9)</u></b> |   |             |                 |                       |                       |
| <b>BILL NO.4 -BLOCK A</b>  |   |             |                 |                       |                       |
| <b>MAIN SUMMARY</b>  |   |             | <b>Page No.</b> | <b>Amount (Kshs.)</b> |                       |
| 1  | <b>Substructures</b>                              |             | A/4             |                       |                       |
| 2  | <b>Reinforced Concrete Frame</b>                  |             | A/5             |                       |                       |
| 3  | <b>Walling</b>                                    |             | A/6             |                       |                       |
| 4  | <b>Windows</b>                                    |             | A/8             |                       |                       |
| 5  | <b>Doors</b>                                      |             | A/10            |                       |                       |
| 6  | <b>External Finishes</b>                          |             | A/11            |                       |                       |
| 7  | <b>Internal Finishes</b>                          |             | A/15            |                       |                       |
| 8  | <b>Balustrade and Railing</b>                     |             | A/16            |                       |                       |
| 9  | <b>Joinery and Fittings</b>                       |             | A/17            |                       |                       |
| 10   | <b>Builders works in connection with services</b> |             | A/18            |                       |                       |
| <br>   |   |             |                 |                       |                       |
| <b><u>TOTAL FOR 1NO. TYPE A (G+9) BLOCK</u></b>                                      |   |             |                 |                       |                       |
| <br>   |   |             |                 |                       |                       |
| <b>NO. OF BLOCKS</b>   |   |             |                 |                       |                       |
| MULTIPLY BY 10.NO OF BLOCKS  |   | <b>X 10</b> |                 |                       | 10                    |
| <br>   |   |             |                 |                       |                       |
| <b><u>TOTAL FOR TYPE A (G+9) BLOCK(S) CARRIED TO GRAND SUMMARY</u></b>               |   |             |                 |                       |                       |

**BLOCK TYPE B**

| Item   | Description   | Unit | QTY  | Rate | Amount |
|--|---|------|------|------|--------|
| <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b> |   |      |      |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |      |      |      |        |
| <b>ELEMENT NO 1 - SUBSTRUCTURES (ALL PROVISIONAL)</b>                  |   |      |      |      |        |
| <u>Site Clearance</u>  |   |      |      |      |        |
| A  | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas.   | SM   | 938  |      |        |
| B  | Bulk excavation to reduce levels depth not exceeding 1.5m commencing from existing ground level   | Cm   | 1407 |      |        |
| C  | Ditto but exceeding 1.5 metres but not 3 metres deep  | Cm   | 938  |      |        |
| D  | Extra over all type of excavation for excavating in soft rock   | Cm   | 117  |      |        |
| E  | Ditto excavation in hard rock class I   | Cm   | 117  |      |        |
| <b>Disposal of water</b>   |   |      |      |      |        |
| F  | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary | Item | 1    |      |        |
| <b>Planking and strutting</b>  |   |      |      |      |        |
| G  | Allow for maintaining and upholding the sides of excavations and keeping excavations clear of all fallen materials, rubbish etc             | Item | 1    |      |        |
| <b>Carried to collection</b>   |   |      |      |      |        |

| Item | Description   | Unit | QTY  | Rate | Amount |
|------|---|------|------|------|--------|
|      | <b><u>Disposal of excavated material</u></b>  |      |      |      |        |
| A    | Load, wheel and cart away surplus excavated material to a Local Authority designated dumping site or fill soil heaps as away from site instructed by the Project Engineer.  | CM   | 1491 |      |        |
| B    | Return, fill and ram selected excavated material around sides of foundations.   | CM   | 854  |      |        |
|      | <b>Fillings</b>   |      |      |      |        |
| C    | Make up levels using approved imported materials: compacted in layers not exceeding 300mm thick with a 10 tonne roller: to the satisfaction of the Structural Engineer.   | CM   | 1407 |      |        |
| D    | 300mm thick hardcore bed: hand packed : compacted in layers not exceeding 150mm thick: to the satisfaction of the Structural Engineer   | SM   | 938  |      |        |
| E    | 50 mm Stone dust/ Murrum blinding to surfaces of hardcore   | SM   | 938  |      |        |
|      | <b>Anti - termite to treatment</b>  |      |      |      |        |
| F    | Approved anti-termite treatment, with ten-year guarantee, sprayed to surfaces of hardcore strictly in accordance with manufacturer's instructions.  | SM   | 938  |      |        |
|      | <b>Damp-proof membrane</b>  |      |      |      |        |
| G    | 1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps); 1 No. layer: bedded in and including cement and sand (1:3) mortar | SM   | 938  |      |        |
|      | <b>Concrete Blinding</b>  |      |      |      |        |
|      | <b>In situ concrete Class 15MPa: vibrated:</b>  |      |      |      |        |
| H    | 50 mm thick blinding under raft   | SM   | 938  |      |        |
| H    | 50 mm thick blinding under column bases   | SM   | 0    |      |        |
| I    | Ditto; under ground beams   | SM   | 94   |      |        |
|      | <b>In- situ vibrated reinforced concrete Class 25MPa: in:</b>   |      |      |      |        |
| I    | Column bases  | CM   | 0    |      |        |
| J    | Ground Beams  | CM   | 19   |      |        |
| N    | 100mm thick surface bed   | SM   | 680  |      |        |
|      | <b>In- situ vibrated reinforced concrete Class 30MPa: in:</b>   |      |      |      |        |
| J    | Raft  | CM   | 704  |      |        |
| K    | Columns   | CM   | 18   |      |        |
| L    | 200mm thick Lift pit shaft wall   | SM   | 24   |      |        |
|      | <b>Carried to collection</b>  |      |      |      |        |

| Item | Description   | Unit | QTY       | Rate | Amount |
|------|---|------|-----------|------|--------|
|      | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b>  |      |           |      |        |
| A    | Assorted reinforcement  | KGS  | 31,160.00 |      |        |
|      | <b>Mesh fabric reinforcement to K/EAS 412;2 (2019) BRC A142;200 x 200mm, weighing 2.22kg/m<sup>2</sup> (measured net - no allowance) for laps; in two layers - top &amp; bottom; including bends, tying wire and spacer blocks)</b>                     |      |           |      |        |
| B    | In ground floor slab  | SM   | 680       |      |        |
|      | <u>Modular steel frame with steel plates covering formwork and/or marine board formwork: to:</u>  |      |           |      |        |
| C    | Sides of the raft   | SM   | 103       |      |        |
| D    | Sides of ground beam  | SM   | 188       |      |        |
| E    | Vertical sides to columns   | SM   | 219       |      |        |
| F    | Vertical sides to lift shaft walls  | SM   | 48        |      |        |
| G    | Edge of slab not exceeding 150mm girth  | LM   | 162       |      |        |
|      | <b>Foundation Walling</b>   |      |           |      |        |
|      | <b>Natural quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</b>                |      |           |      |        |
| H    | 200mm thick walls in foundations  | SM   | 266       |      |        |
|      | <b><u>Pavings</u></b>   |      |           |      |        |
| I    | Supply and lay 600 x 600 x 50mm reinforced concrete precast paving slabs around the building including laying, spreading and compacting 100mm thick approved sand bed blinding, on and including 150mm thick compacted hardcore to Engineer's approval. | SM   | 97        |      |        |
|      | <b><u>Plinth</u></b>  |      |           |      |        |
|      | <b><u>25mm Thick cement and sand (1:3) rendering on concrete or masonry ; wood float finished; to</u></b>   |      |           |      |        |
| J    | Plinths externally  | SM   | 49        |      |        |
|      | <b>Two coats black bitumastic paint on:</b>   |      |           |      |        |
| K    | Rendered surfaces   | SM   | 49        |      |        |
|      | <b>Carried to collection</b>  |      |           |      |        |



| Item | Description  | Unit                | QTY | Rate | Amount |
|------|--|---------------------|-----|------|--------|
|      | <b><u>Cement/sand (1:3) screed with approved waterproofing admixture, steel trowelled hard and smooth to receive waterproofing (m/s)</u></b>   |                     |     |      |        |
| A    | 20mm thick water proof cement/sand (1:3) screed to lift pit floor prepared to receive masterseal water proofing  | m <sup>2</sup>      | 9   |      |        |
| B    | 12mm thick water proof cement/sand (1:3) render to wall prepared to receive water proofing   | m <sup>2</sup>      | 26  |      |        |
|      | <b><u>Waterproofing</u></b>  |                     |     |      |        |
|      | <b><u>CRYSTALLINE WATERPROOFING</u></b>  |                     |     |      |        |
|      | <u>All areas indicated shall be waterproofed by approved cementitious system , provide 10 year guarantee, all to manufacturer's specifications and instructions as described:</u>                        |                     |     |      |        |
|      | <u>Two coat slurry application: waterproofing powder: 1kg per m2 per coat, minimum 2 coats to seal all expansion joints, holes, repaired areas and angle fillet or as per manufacturers instructions</u> |                     |     |      |        |
|      | <u>Application of render coat: waterproofing powder: 1kg per m2 at 4.5mm thick on slabs. Rate shall allow for hacking and preparing all concrete surfaces or as per manufacturers instructions</u>       |                     |     |      |        |
| C    | Horizontal surfaces of lift base   | m <sup>2</sup>      | 9   |      |        |
| D    | Vertical surfaces of Lift shaft walls  | m <sup>2</sup>      | 26  |      |        |
|      | <b>Carried to collection</b>   |                     |     |      |        |
|      | <b>COLLECTION</b>  |                     |     |      |        |
|      | Total brought forward from page no:  |                     |     |      |        |
|      | Total brought forward from page no:  |                     |     |      |        |
|      | Total brought forward from page no:  |                     |     |      |        |
|      | Total brought forward from above   |                     |     |      |        |
|      | <b><u>ELEMENT NO. 1</u></b>  | <b>Carried to</b>   |     |      |        |
|      | <b><u>SUBSTRUCTURES</u></b>  | <b>Main summary</b> |     |      |        |

| Item   | Description  | Unit                | QTY    | Rate | Amount |
|--|--|---------------------|--------|------|--------|
| <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b>   |  |                     |        |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |  |                     |        |      |        |
| <b>ELEMENT No 2 - R.C FRAME</b>  |  |                     |        |      |        |
| <b><u>In situ concrete class 30MPa: vibrated: reinforced</u></b>   |  |                     |        |      |        |
| A  | Columns  | CM                  | 273    |      |        |
| B  | Lift shaft wall  | SM                  | 415    |      |        |
| <b><u>In situ concrete class 25MPa: vibrated: reinforced</u></b>   |  |                     |        |      |        |
| C  | Beams  | CM                  | 312    |      |        |
| D  | Upper Roof Beams   | CM                  | 14     |      |        |
| E  | 130mm thick suspended slabs                                      | SM                  | 4709   |      |        |
| F  | Ditto but 150mm thick  | SM                  | 2093   |      |        |
| G  | 150mm thick Tank Slab over stairwell                             | SM                  | 48     |      |        |
| H  | 150 mm thick landing   | SM                  | 101    |      |        |
| I  | Staircases   | CM                  | 40     |      |        |
| <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b> |  |                     |        |      |        |
| J  | Assorted reinforcement   | Kg                  | 166382 |      |        |
| <b><u>Modular steel frame with steel plates covering formwork and/or marine board formwork: to</u></b>   |  |                     |        |      |        |
| K  | Sides of columns   | Sm                  | 3240   |      |        |
| L  | Sides and soffits of beams                                       | Sm                  | 3086   |      |        |
| M  | Soffits of suspended slabs                                       | Sm                  | 6858   |      |        |
| N  | Edges of slab over 150mm but not exceeding 225mm girth           | Lm                  | 2236   |      |        |
| O  | To sloping soffits of staircases                                 | SM                  | 154    |      |        |
| P  | Soffits of landings  | SM                  | 101    |      |        |
| Q  | Riser of steps over 150 mm but not exceeding 225 mm girth        | LM                  | 480    |      |        |
| R  | Staircase string 300mm extreme girth and cut to profile of steps | LM                  | 268    |      |        |
| S  | Edges of landing over 150 but not exceeding 225mm high           | Lm                  | 96     |      |        |
| T  | Edges of lift shaft openings 150-225mm high                      | LM                  | 114    |      |        |
| U  | Sides of lift walls  | SM                  | 829    |      |        |
| <b><u>ELEMENT NO. 2</u></b>  |  | <b>Carried to</b>   |        |      |        |
| <b><u>R.C FRAME</u></b>  |  | <b>Main summary</b> |        |      |        |

| Item | Description   | Unit | QTY    | Rate | Amount |
|------|---|------|--------|------|--------|
|      | <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b>  |      |        |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>   |      |        |      |        |
|      | <b>ELEMENT No 3-WALLING</b>   |      |        |      |        |
|      | <b>WALLING</b>  |      |        |      |        |
|      | <b>External Walling</b>   |      |        |      |        |
|      | <i>Machine cut quarry stone walling with a minimum of 7.0 N/mm2 average compressive strength ;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i> |      |        |      |        |
| A    | 200mm thick walling Externally  | Sm   | 3440   |      |        |
| B    | 200mm thick parapet walling   | Sm   | 193    |      |        |
|      | <b>Internal Walling</b>   |      |        |      |        |
|      | <i>Machine cut quarry stone walling with a minimum of 7.0 N/mm2 average compressive strength ;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i> |      |        |      |        |
| C    | 200mm thick walling Internally  | Sm   | 2377   |      |        |
| D    | 150mm thick walling Internally  | Sm   | 2973   |      |        |
| E    | Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar   | Lm   | 282    |      |        |
| F    | Approved hessian based damp proof course to 150mm thick walling in cement/sand mortar   | Lm   | 179    |      |        |
|      | <b>Precast Concrete Breeze Ventilation Blocks</b>   |      |        |      |        |
| G    | 150 x 150mm wide x 50mm thick Pre Cast Concrete flower 3D breeze ventilation blocks bedded and jointed in cement and sand (1:4) mortar  | Sm   | 405    |      |        |
|      | <b>COPING</b>   |      |        |      |        |
|      | 600 x 350 wide x 100mm thick insitu reinforced concrete class 20Mpa coping, throated and weathered and jointing to columns with cement sand 1:4 mortar  | No   | 84     |      |        |
| H    | Ditto 300 x 100mm concrete coping to walls twice weathered and throated;  | LM   | 209    |      |        |
|      | <b>Lintols</b>  |      |        |      |        |
| I    | 200mm x 200mm Deep lintols in reinforced concrete class 20MPa with and including 4No T10 and T8 stirups at 200mm centres; complete with formwork  | LM   | 798.00 |      |        |
|      | <b>ELEMENT NO. 3</b>  |      |        |      |        |
|      | <b>WALLING</b>  |      |        |      |        |
|      | <b>Carried to Main summary</b>  |      |        |      |        |

| Item | Description   | Unit | QTY  | Rate | Amount |
|------|---|------|------|------|--------|
|      | <p><b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b></p> <p><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT NO 4-WINDOWS</b></p> <p><b><u>MILD STEEL WINDOWS</u></b></p> <p>Supply, fabricate and fix the following purpose made small pane mild steel casement windows to be fabricated from approved mild steel sections (atleast 14g 2mm thick ) comprising of frame and casement incorporating permanent hooded high level ventilation panels infilled with mosquito gauze : window supplied complete with and including 12mm solid square burglar proofing bars fixed at 200mm centres both ways and metal fixing lugs including building into wall and making good, and all necessary iron mongery viz hinges, fasteners, and hasp including shop priming window with red oxide primer before delivery to site:-</p> <p>A prime cost sum of Kshs 4,500 per Sqm has been allowed for fabrication of the above specified Steel casement Windows by AHP juakali artisans as approved by the Project Manager/Architect.</p> <p>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</p> |      |      |      |        |
| A    | Window, overall size 1500 X 1200mm high to Architects Details (Lounge)  | NO   | 80   |      |        |
| B    | Ditto Size 1500 x 1200mm high (bedroom)   | NO   | 200  |      |        |
| C    | Ditto Size 1200 x 1200mm high (Kitchen)   | NO   | 80   |      |        |
| D    | Ditto Size 900 x 600mm high (WC/SH)   | NO   | 200  |      |        |
|      | <b><u>Glazing</u></b>   |      |      |      |        |
| E    | 4mm Thick clear sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with premium putty   | SM   | 619  |      |        |
|      | Ditto; obscure  | SM   | 108  |      |        |
|      | <b><u>Painting and Decorations</u></b>  |      |      |      |        |
|      | <b><u>On Metal work</u></b>   |      |      |      |        |
|      | <b><u>Prepare and apply aerosol spray painting in two finishing coats of first grade paint as per the manufacturer's printed instructions to: -</u></b>   |      |      |      |        |
| F    | General window and grille surfaces; over 300mm girth internal   | SM   | 1454 |      |        |
|      | <b>Carried to Collection</b>  |      |      |      |        |

| Item                                | Description  | Unit | QTY | Rate | Amount |
|-------------------------------------|--|------|-----|------|--------|
| A                                   | <p><b><u>Precast concrete window cill finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in pigmented cement and sand (1:3) mortar</u></b></p> <p>150 x 25mm thick Precast concrete window sill</p> | LM   | 808 |      |        |
| B                                   | <p><b><u>Curtain rods:</u></b></p> <p>1.5mm thick, 20mm thick diameter twin powdercoated mild steel rod complete accessories to approval</p>   | LM   | 624 |      |        |
| <b>Carried to collection</b>        |  |      |     |      |        |
| <b>COLLECTION</b>                   |  |      |     |      |        |
| Total brought forward from page no: |  |      |     |      |        |
| Total brought forward from page no: |  |      |     |      |        |
| <b><u>ELEMENT NO. 4</u></b>         | <b>Carried to the</b>  |      |     |      |        |
| <b><u>WINDOWS</u></b>               | <b>Main summary</b>  |      |     |      |        |

| Item  | Description  | Unit | QTY  | Rate | Amount |
|---|--|------|------|------|--------|
| <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b>  |  |      |      |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>   |  |      |      |      |        |
| <b>ELEMENT NO 5-DOORS</b>   |  |      |      |      |        |
| <b><u>External Doors</u></b>  |  |      |      |      |        |
| <b><u>Hardwood Panelled Doors</u></b>   |  |      |      |      |        |
| <b>50mm thick approved hardwood PANEL doors with 12.5mm thick Meru oak hardwood lipping to Architect's details, specifications and approval</b>   |  |      |      |      |        |
| <b>A prime cost sum at the rate indicated below has been allowed for fabrication of the above specified Hardwood panelled door leaves by AHP juakali artisans as approved by the Project Manager/Architect.</b> |  |      |      |      |        |
| <b>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accessories in addition to the PC Rate.</b>   |  |      |      |      |        |
| A   | Double leaf door size 1500 x 2400mm high ( PC Rate Kshs 41,000)  | NO   | 3    |      |        |
| B   | Single leaf Size 900 x 2400mm high (- PC Rate Kshs 25,000)   | NO   | 80   |      |        |
| <b><u>Frames and frame finishes in mahogany timber:</u></b>   |  |      |      |      |        |
| C   | 25 x 25mm quadrant beading (PC Rate Kshs 75)   | LM   | 483  |      |        |
| D   | 25 x 50mm architrave with two labours, plugged (PC Rate Kshs 150)  | LM   | 483  |      |        |
| E   | 150mm x 50mm frame with three labours; chamfered edges; plugged (PC Rate Kshs 1400)  | LM   | 483  |      |        |
| <b><u>Internal Doors</u></b>  |  |      |      |      |        |
| <b><u>Flush timber doors</u></b>  |  |      |      |      |        |
| <b>50 mm thick Semi Solid cored flush doors with plywood facing to receive painting (m.s) all to Architects details, specifications and approval</b>  |  |      |      |      |        |
| <b>A prime cost sum at the rate indicated below for fabrication of the above specified Timber Flush door leaves by AHP juakali artisans as approved by the Project Manager/Architect.</b>                       |  |      |      |      |        |
| <b>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accessories in addition to the PC Rate.</b>   |  |      |      |      |        |
| F   | Door size 900mm x 2400mm High comprising of 1 No Opennable leaf size 800 x 2100mm high including fixed fanlight size 900 x 300mm high in 4mm clear glass ( measured separately) (PC Rate Kshs 4,000) | NO   | 260  |      |        |
| G   | Ditto 800 x 2100mm high comprising of 1No. Opennable leaf size 700 x 2100mm high (PC Rate Kshs 3,500)  | NO   | 200  |      |        |
| <b>4mm Thick clear sheet glass fixing with matching timber glazing beads to timber frames</b>   |  |      |      |      |        |
| H   | In panes exceeding 0.1 sqm but not exceeding 0.5 square metres.  | SM   | 70   |      |        |
| <b><u>Frames and frame finishes in cypress Timber</u></b>   |  |      |      |      |        |
| I   | 25 x 25mm quadrant (PC Rate Kshs 75)   | LM   | 2482 |      |        |
| J   | 25 x 50mm architrave with two labours, plugged (PC Rate Kshs 150)  | LM   | 2482 |      |        |
| K   | 150mm x 50mm transome with three labours; chamfered edges; plugged (PC Rate Kshs 800)  | LM   | 234  |      |        |
| L   |  | LM   | 2482 |      |        |
| <b>Carried to collection</b>  |  |      |      |      |        |

| Item | Description   | Unit                | QTY  | Rate | Amount |
|------|---|---------------------|------|------|--------|
|      | <u>Painting and decorating</u>  |                     |      |      |        |
|      | <u>Priming back of frame with an aluminium or equivalent and approved wood primer</u>   |                     |      |      |        |
| A    | Surfaces not exceeding 100mm girth  | LM                  | 5930 |      |        |
| B    | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 3199 |      |        |
|      | <u>Prepare Knot, prime, stop and apply one undercoat and two finishing coats first grade timber quality paint to wood surfaces as per the manufacturer's printed instructions</u> |                     |      |      |        |
| C    | General timber surfaces   | SM                  | 1867 |      |        |
| D    | Surfaces over 200mm but not exceeding 300mm girth   | LM                  | 3199 |      |        |
| E    | Architraves: not exceeding 100 mm girth   | LM                  | 2965 |      |        |
| F    | Quadrant beading : not exceeding 100 mm girth   | LM                  | 2965 |      |        |
|      | <b>Ironmongery</b>  |                     |      |      |        |
|      | <b>Supply and fix the following ironmongery to timber complete with matching screws and keys to the approval of the Architect</b>   |                     |      |      |        |
| G    | 100mm pressed steel Butt Hinges   | PRS                 | 815  |      |        |
| H    | Stainless steel 3 Lever Mortice Door Lock with handle furniture set;( keyhole escutcheons, cylinder and latch )   | NO                  | 343  |      |        |
| I    | Ditto: but 2 Lever Door Lock with handle  | NO                  | 200  |      |        |
| J    | Door fixing cramps  | NO                  | 543  |      |        |
| K    | 200 x 75 x 3mm perspex door signage with door numbers as per Architect detail   | NO                  | 0    |      |        |
| L    | Block sign with block type, name and number lin exterior quality paint as per Architect detail  | NO                  | 0    |      |        |
|      | <b>Carried to Collection</b>  |                     |      |      |        |
|      | <b>COLLECTION</b>   |                     |      |      |        |
|      | Total brought forward from page no:   |                     |      |      |        |
|      | Total brought forward from page no:   |                     |      |      |        |
|      | <b><u>ELEMENT NO. 5</u></b>   | <b>Carried to</b>   |      |      |        |
|      | <b><u>DOORS</u></b>   | <b>Main summary</b> |      |      |        |

| Item  | Description   | Unit                | QTY      | Rate | Amount |
|---|---|---------------------|----------|------|--------|
| <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b>  |   |                     |          |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>   |   |                     |          |      |        |
| <b>ELEMENT NO 6 - EXTERNAL FINISHES</b>   |   |                     |          |      |        |
| <b>EXTERNAL WALL FINISHES</b>   |   |                     |          |      |        |
| <b>External Render</b>  |   |                     |          |      |        |
| <i>Cement and sand (1:3) render:wood floated: on concrete or blockwork: to</i>  |   |                     |          |      |        |
| A   | 15mm thick to beams, Columns, Slab Moulds and walling externally  | SM                  | 5,332.00 |      |        |
| B   | Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand mix (1:3) mortar including one coat Bituminous paint | SM                  | 0        |      |        |
| <b>External Painting</b>  |   |                     |          |      |        |
| <i>Prepare and apply one coat Alkali Resistant primer followed by two finishing coats of silicon exterior Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</i>  |   |                     |          |      |        |
| C   | Concrete/masonry surfaces externally-Beam, Column and Slab Moulds   | SM                  | 5332     |      |        |
| <b>ROOF FINISHES</b>  |   |                     |          |      |        |
| <b>Cement and sand (1:3) screeded beds: on concrete: complete with coloured pigmentation additives and hardener to:</b>   |   |                     |          |      |        |
| D   | 50mm average waterproofed lightweight screed laid to falls and crossfalls to roof slabs -upper roof including gutter bases            | SM                  | 728      |      |        |
| <i>Prepare and apply to vertical/ horizontal surfaces 4mm thick APP/EPDM water proofing or other equal and approved membrane with surface finish weighing 4kg/sm; laid on primer with torch-on process ;by an approved specialist all in accordance with the manufacturers instructions including provision of a written ten (10) year anti leak quarantee.</i> |   |                     |          |      |        |
| E   | 4mm thick APP membrane applied to roof slabs  | SM                  | 728      |      |        |
| F   | Ditto to skirting 200mm high  | LM                  | 186      |      |        |
| G   | Dress membrane around 100mm rainwater outlet  | No.                 | 12       |      |        |
| <i>The Following Flat roof concrete tiles fixed with approved adhesive, laid and jointed with waterproofing bituminous compound</i>   |   |                     |          |      |        |
| H   | 20mm thick interlocking Concrete tiles of size 225 x 225mm with and including cement sand (1:4) backing to falls                      | SM                  | 728      |      |        |
| <b>ELEMENT NO. 6</b>  |   | <b>Carried to</b>   |          |      |        |
| <b>EXTERNAL FINISHES</b>  |   | <b>Main summary</b> |          |      |        |



| Item  | Description   | Unit | QTY      | Rate | Amount |
|---|---|------|----------|------|--------|
| <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b>  |   |      |          |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>   |   |      |          |      |        |
| <b>ELEMENT NO 7 - INTERNAL FINISHES</b>   |   |      |          |      |        |
| <b><u>Internal Wall Finishes</u></b>  |   |      |          |      |        |
| <u>Cement and sand (1:3) backings</u>   |   |      |          |      |        |
| A   | 15mm thick to receive ceramic Wall tiles  | SM   | 2,647.00 |      |        |
| B   | To receive ceramic wall tiles (m.s.) (Lift Lobby)   | SM   | 141.00   |      |        |
| <u>Ceramic wall tiles</u>   |   |      |          |      |        |
| <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |   |      |          |      |        |
| C   | Supply and Fix approved ceramic wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces | SM   | 2647     |      |        |
| <u>Porcelain wall tiles</u>   |   |      |          |      |        |
| <u>Allow a Prime Cost supply rate of Ksh. 1500 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |   |      |          |      |        |
| D   | Supply and Fix porcelain wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces        | SM   | 141.00   |      |        |
| <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |   |      |          |      |        |
| F   | Concrete/masonry surfaces   | SM   | 12882    |      |        |
| <b><u>Painting and Decoration</u></b>   |   |      |          |      |        |
| <u>Prepare, Skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u> |   |      |          |      |        |
| G   | Plastered concrete/masonry surfaces internally  | SM   | 12882    |      |        |
| <b>Carried to Collection</b>  |   |      |          |      |        |

| Item | Description   | Unit | QTY  | Rate | Amount |
|------|---|------|------|------|--------|
|      | <b><u>Floor Finishes</u></b>  |      |      |      |        |
|      | <u>Cement and sand (1:3) screeds, backings, beds etc</u>  |      |      |      |        |
| A    | 32mm bed finished to receive Floor Tiles (m.s)  | SM   | 5074 |      |        |
|      | <u>Cement and sand (1:3) backings etc</u>   |      |      |      |        |
| B    | 32mm bed finished to receive ceramic tiles to surfaces of Landings (m.s)  | SM   | 101  |      |        |
| C    | 25 x 300 mm wide treads to receive ceramic tiles (m.s)  | LM   | 437  |      |        |
| D    | 20 x 150mm risers to receive ceramic tiles (m.s)  | LM   | 460  |      |        |
|      | <u>Ceramic Floor tiles</u>  |      |      |      |        |
|      | <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |      |      |      |        |
| E    | Supply and Fix Ceramic tiles, on prepared bed(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval.   | SM   | 2689 |      |        |
| F    | Ditto Non Slip Ceramic Tiles  | SM   | 2385 |      |        |
| G    | Ditto 100mm wide Wall Skirtings   | LM   | 7535 |      |        |
| H    | Non Slip Ceramic Tiles to surfaces of Landings  | SM   | 101  |      |        |
| J    | Non Slip Ceramic Tiles to 300 mm wide treads  | LM   | 437  |      |        |
| K    | Non Slip Ceramic Tiles to 150mm risers  | LM   | 460  |      |        |
|      | <u>Wet areas waterproofing - Kitchens, Toilets etc.</u>   |      |      |      |        |
|      | Liquid membrane - High build bitumen/ rubber latex emulsion with excellent adhesion, liquid applied to form a seamless flexible water proof/ vapour proof membrane as <b>as per the manufacturer's printed instructions to; solid content =65%, Rubber Content=10% in dried film)</b> |      |      |      |        |
| L    | To floors and walls   | SM   | 2385 |      |        |
|      | <b>Staircase soffit finishes</b>  |      |      |      |        |
|      | <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |      |      |      |        |
| M    | Soffits of staircase landing  | SM   | 101  |      |        |
| N    | Ditto to sloping soffites exceeding 15° from horizontal   | SM   | 154  |      |        |
| P    | Staircase string 300mm extreme girth and cut to profile of steps  | LM   | 268  |      |        |
|      | <b>Paint works</b>  |      |      |      |        |
|      | <u>Prepare, skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u>   |      |      |      |        |
| Q    | Soffits of staircase landing  | SM   | 101  |      |        |
| R    | Ditto to sloping soffites exceeding 15° from horizontal   | SM   | 154  |      |        |
| S    | Staircase string 300mm extreme girth and cut to profile of steps  | LM   | 268  |      |        |
|      | <b>Carried to Collection</b>  |      |      |      |        |

| Item | Description   | Unit | QTY  | Rate | Amount |
|------|---|------|------|------|--------|
|      | <p><b><u>Ceiling finishes</u></b></p> <p><u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u></p> <p>A Soffits of Concrete surfaces</p> <p><u>Painting and Decoration</u></p> <p><u>Prepare, skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u></p> <p>B Plastered ceilings</p> | SM   | 6858 |      |        |
|      | <b>Carried to Collection</b>  |      |      |      |        |

| Item | Description                         | Unit              | QTY | Rate | Amount |
|------|-------------------------------------|-------------------|-----|------|--------|
|      | <b>COLLECTION</b>                   |                   |     |      |        |
|      | Total brought forward from page no: |                   |     |      |        |
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|      | <b>ELEMENT NO. 7</b>                | <b>Carried to</b> |     |      |        |
|      | <b>INTERNAL FINISHES</b>            |                   |     |      |        |

| Item | Description   | Unit | QTY | Rate | Amount |
|------|---|------|-----|------|--------|
|      | <p align="center"><b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b></p> <p align="center"><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT NO 8- BALUSTRADING AND RAILING</b></p> <p><u>Balustrades and staircase railings</u></p>                              |      |     |      |        |
| A    | 900mm high mild Steel balustrade; comprising 60 x 10mm mild Steel balusters at 900mm centres; bolted to base plate and tread (m.s), with 7No. 25mm diameter horizontal bars, and 75x4mm diameter CHS mild Steel handrail part welded into 60x10mm balustrades; to Architects drawings | LM   | 82  |      |        |
| B    | 50mm diameter x 3mm CHS handrail supported by 50 x 50 x 3mm thick SHS balusters anchored to slab with and including w/steel bolts and plates at 1800mm centres smooth welded 100mm high (Staircase)   | LM   | 92  |      |        |
|      | <u>Prepare, prime and apply one undercoat and two finishing coats first quality gloss oil paint on</u>  |      |     |      |        |
| C    | General metal surfaces of balustrading (both sides measured overall)  | SM   | 117 |      |        |
|      | <p><b><u>ELEMENT NO. 8</u></b>                      Carried to the</p> <p><b><u>BALUSTRADE AND RAILING</u></b>      Main summary</p>  |      |     |      |        |

| Item | Description  | Unit | QTY | Rate | Amount |
|------|--|------|-----|------|--------|
|      | <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b>   |      |     |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>  |      |     |      |        |
|      | <b>ELEMENT NO 9 - JOINERY FITTINGS</b>   |      |     |      |        |
|      | Allow for providing materials, labour and construct fixtures and fittings as per Architects drawings of the following JOINERY FITTINGS AND FIXTURES complete with associated iron mongery;   |      |     |      |        |
|      | NOTE: All blockboard, MDF boards,etc in joinery works shall be lipped with hardwood lipping all round before fixing.   |      |     |      |        |
|      | <u>High level cupboards</u>  |      |     |      |        |
|      | <u>400mm Wide high level kitchen cupboards in 18mm laminated mdf sides &amp; shelves complete with doors, top, bottom &amp; divisions with and including all necessary ironmongery; to Architect's details</u>   |      |     |      |        |
| A    | High level storage cupboard units 600mm high x 300mm deep  | LM   | 140 |      |        |
| B    | Ditto 600mm high x 300mm deep  | LM   | 14  |      |        |
|      | <u>Low level kitchen cupboards</u>   |      |     |      |        |
|      | <u>Low level kitchen worktops with 600x600x10mm porcelain tiles top on 100mm thick reinforced concrete slab with A142 BRC mesh, formwork to soffits and slab edges, plater to soffits of slab, screed to top slab, 100mm thick plastered steeper walls, including 300x300x6mm thick ceramic wall tiles on both sides of the wall: 100mm plastered mass concrete plinths in concrete class 15MPa: 18mm laminated mdf sides &amp; shelves complete with doors, shelves, drawers, cutting tiles for kitchen sink (m.s) &amp; all necessary ironmongery; to Architect's details and approval</u> |      |     |      |        |
| C    | Low level kitchen cupboards below concrete worktop total girth grouped together 850mm high x 550mm deep  | LM   | 168 |      |        |
| D    | Ditto 1850mm long x 850mm high x 550mm deep  | LM   | 19  |      |        |
|      | <u>Bedroom Wardrobes</u>   |      |     |      |        |
|      | <u>600mm Wide x 2200mm high wardrobes in 18mm laminated mdf sides, divisions, drawers, shelves ; ; complete with sliding/ side hung doors, shelves, divisions, shoe racks, hanging rails, drawers, &amp; all necessary ironmongery; 100mm plastered mass concrete plinths in concrete class 15MPa ; to Architect's details</u>   |      |     |      |        |
| E    | Bedroom wardrobes size 2200mm high x 600mm deep in bedrooms  | LM   | 135 |      |        |
| F    | Ditto size 2200mm high x 600mm deep in bedrooms  | LM   | 132 |      |        |
|      | <b>Duct doors</b>  |      |     |      |        |
|      | 50mm thick laminated MDF duct doors; complete with frames, ironmongery and all necessary paintwork to:   |      |     |      |        |
| H    | Duct doors size 650mm wide x 2200mm high   | NO.  | 44  |      |        |
| J    | Duct doors size 400mm wide x 2200mm high   | NO.  | 88  |      |        |
|      | <b>ELEMENT NO. 9 Carried to the</b>  |      |     |      |        |
|      | <b>JOINERY &amp; FITTINGS Main summary</b>   |      |     |      |        |

| Item | Description  | Unit | QTY | Rate | Amount |
|------|--|------|-----|------|--------|
|      | <p><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT NO 10 - BUILDERS WORKS IN CONNECTION WITH SERVICES (BWICWS)</b></p> <p><b><u>Plumbing, Drainage and Mechanical Installations</u></b></p> <p>A Inspect all drawings and Bills of Quantities for Plumbing, Drainage and Mechanical Installations and allow for all Builder's work associated with the installations; including cutting away and making good after installing a concealed drainage system; including cutting or leaving all holes notches, mortices, sinkings and chases in both the structure and its coverings; including but not limited to forming recess in masonry</p> <p><b><u>Electrical Services Installations</u></b></p> <p>B Inspect all drawings and Bills of Quantities for Electrical Installations and allow for all Builder's work associated with the Electrical installations, including cutting away for and making good after Electrician installing a concealed conduit system including cutting or leaving all holes notches, mortices, sinkings and chases in both the structure and its coverings; including but not limited to forming recess in masonry</p> | Item |     |      |        |
|      | <p><b>ELEMENT NO. 10</b>                      <b>Carried to the</b></p> <p><b>BUILDERS WORKS IN CONNECTION WITH SERVICES (BWICWS)</b></p> <p><b><u>Main summary</u></b></p>  |      |     |      |        |

| Item   | Description                 | Unit        | QTY | Rate | Amount |
|--|-----------------------------|-------------|-----|------|--------|
| <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (TYPE B G+9)</b> |                             |             |     |      |        |
| <b>BILL NO.1-BUILDERS WORKS<br/>MAIN SUMMARY</b>                       |                             |             |     |      |        |
| 1  | Substructures               |             |     |      |        |
| 2  | Reinforced Concrete Frame   |             |     |      |        |
| 3  | Walling                     |             |     |      |        |
| 4  | Windows                     |             |     |      |        |
| 5  | Doors                       |             |     |      |        |
| 6  | External Finishes           |             |     |      |        |
| 7  | Internal Finishes           |             |     |      |        |
| 8  | Balustrade and Railing      |             |     |      |        |
| 9  | Joinery and Fittings        |             |     |      |        |
| 10   | Builders Works              |             |     |      |        |
| <b><u>TOTAL FOR 1NO. TYPE B (G+9) BLOCK</u></b>                        |                             |             |     |      |        |
|  | MULTIPLY BY 10.NO OF BLOCKS | <b>X 10</b> |     |      | 10.00  |
| <b><u>TOTAL FOR TYPE B (G+9) BLOCK(S) CARRIED TO GRAND SUMMARY</u></b> |                             |             |     |      |        |



**CLUB HOUSE**

| ITEM | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|------|--|------|-----|------|--------|
|      | <b>PROPOSED CLUB HOUSE</b>   |      |     |      |        |
|      | <b>BILL NO.1 BUILDERS WORKS</b>  |      |     |      |        |
|      | <b>ELEMENT NO 1 - SUBSTRUCTURES (ALL PROVISIONAL)</b>  |      |     |      |        |
|      | <b>Excavations including trimming sides and bottoms of excavations; maintaining and supporting sides; and keeping free from water, mud and fallen material; with and including destruction of termites nests within site of works,take out and destroy queens, imp</b> |      |     |      |        |
|      | <u>Site Clearance</u>  |      |     |      |        |
| A    | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas.  | SM   | 418 |      |        |
| B    | Bulk excavation to reduce levels depth not exceeding 1.5m commencing from existing ground level  | CM   | 627 |      |        |
| C    | Excavate for Strip foundations depth not exceeding 1.50 metres starting from Stripped level  | CM   | 67  |      |        |
| D    | Excavate for column bases depth not exceeding 1.5m starting from reduced Levels  | CM   | 41  |      |        |
| E    | Extra over all type of excavation for excavating in soft rock  | CM   | 5   |      |        |
| F    | Ditto excavation in hard rock class I  | CM   | 5   |      |        |
|      | <b>Disposal of water</b>   |      |     |      |        |
| G    | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary  | Item |     |      |        |
|      | <b>Planking and strutting</b>  |      |     |      |        |
| H    | Allow for maintaining and upholding the sides of excavations and keeping excavations clear of all fallen materials, rubbish etc  | Item |     |      |        |
|      | <b>Carried to collection</b>   |      |     |      |        |

|   |   |    |     |  |  |
|---|---|----|-----|--|--|
|   | <b><u>Disposal of excavated material</u></b>  |    |     |  |  |
| A | Return, fill and ram selected excavated material around foundations.  | CM | 589 |  |  |
| B | Load, wheel and cart away surplus excavated material away from site   | CM | 147 |  |  |
|   | <b>Fillings</b>   |    |     |  |  |
| C | Make up levels using approved imported materials: compacted in layers not exceeding 300mm thick with a 15ton roller: to the satisfaction of the Structural Engineer.  | CM | 373 |  |  |
| D | 300mm thick hardcore bed: hand packed : compacted in layers not exceeding 150mm thick: to the satisfaction of the Structural Engineer: including 50mm Thick murrum or "equal and approved" blinding to surfaces of hardcore                           | SM | 418 |  |  |
| E | 50 mm Thick Murrum Blinding to surfaces of hadcore<br><b>Anti - termite to treatment</b>  | SM | 418 |  |  |
| F | Approved anti-termite treatment, with ten-year guarantee, sprayed to surfaces of hardcore strictly in accordance with manufacturer's instructions.  | SM | 418 |  |  |
|   | <b>Damp-proof membrane</b>  |    |     |  |  |
| G | 1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps); 1 No. layer: bedded in and including cement and sand (1:3) mortar | SM | 418 |  |  |
|   | <b>Concrete Blinding</b>  |    |     |  |  |
|   | <b>In situ concrete Class 15MPa: vibrated:</b>  |    |     |  |  |
| H | 50 mm Thick under column bases  | SM | 83  |  |  |
| I | Ditto strip foundation  | SM | 57  |  |  |
|   | <b>In- situ vibrated reinforced concrete Class 25MPa: in:</b>   |    |     |  |  |
| J | Column bases  | CM | 35  |  |  |
| K | Columns   | CM | 5   |  |  |
| L | Strip foundation  | CM | 11  |  |  |
| M | 100mm thick surface bed   | SM | 418 |  |  |
| N | Ground beams  | CM | 7   |  |  |
| O | Concrete steps & Staircase footing  | CM | 7   |  |  |
|   | <b>Carried to collection</b>  |    |     |  |  |

|   |   |    |      |  |
|---|---|----|------|--|
|   | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b>  |    |      |  |
| A | Assorted reinforcement  | Kg | 5540 |  |
|   | <b>Mesh fabric reinforcement to K/EAS 412;2 (2019) BRC A142;200 x 200mm, weighing 2.22kg/m<sup>2</sup> (measured net - no allowance) for laps; in two layers - top &amp; bottom; including bends, tying wire and spacer blocks)</b>                     |    |      |  |
| B | In Surface floor bed  | SM | 418  |  |
|   | <u>Modular steel frame with steel plates covering formwork and/or marine board formwork: to:</u>  |    |      |  |
| C | Sides of column bases   | SM | 82   |  |
| D | Ditto strip footing   | SM | 38   |  |
| E | Vertical sides of columns   | SM | 136  |  |
| F | Edge of slab, over 150mm but not exceeding 225mm girth  | LM | 137  |  |
| G | Ditto; but to edges of risers   | LM | 98   |  |
| H | Vertical sides to ground beams  | SM | 65   |  |
|   | <b>Foundation Walling</b>   |    |      |  |
|   | <b>Natural quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</b>                |    |      |  |
| I | 200mm thick walls in foundations  | SM | 296  |  |
|   | <b><u>Pavings</u></b>   |    |      |  |
| J | Supply and lay 600 x 600 x 50mm reinforced concrete precast paving slabs around the building including laying, spreading and compacting 100mm thick approved sand bed blinding, on and including 150mm thick compacted hardcore to Engineer's approval. | SM | 82   |  |
|   | <b><u>Plinth</u></b>  |    |      |  |
|   | <b><u>25mm Thick cement and sand (1:3) rendering on concrete or masonry ; wood float finished; to</u></b>   |    |      |  |
| K | Plinths externally  | SM | 62   |  |
|   | <b>Two coats black bitumastic paint on:</b>   |    |      |  |
| L | Rendered surfaces   | SM | 62   |  |
|   | <b>Planters</b>   |    |      |  |
| M | 200mm thick masonry planter walls complete with foundations   | LM | 44   |  |
|   | <b>Carried to collection</b>  |    |      |  |

**COLLECTION**

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**ELEMENT NO. 1**  
**SUBSTRUCTURES**

**Carried to**  
**Main summary**

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**ELEMENT No 2 - R.C FRAME**

In situ concrete class 25MPa: vibrated: reinforced

|   |  |    |       |
|---|--|----|-------|
| A | Columns  | CM | 20    |
| B | Ring beam  | CM | 27    |
| C | 150mm thick Ramp   | SM | 20    |
| D | 150mm Thick suspended horizontal slab  | SM | 518   |
| E | 175mm Thick suspended horizontal slab  | SM | 108   |
| F | 150 mm thick landing   | SM | 8     |
| G | Staircases   | CM | 5     |
| H | 200 x 200 x 225mm decorative concrete/plaster moulds with approved reinforcement mesh/bars   | LM | 242   |
|   | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b> |    |       |
| I | Assorted reinforcement bars  | Kg | 15856 |
|   | <u>Modular steel frame with steel plates covering formwork and/or marine board formwork: to</u>  |    |       |
| J | Sides and soffites of beams  | Sm | 270   |
| K | To vertical sides of columns   | SM | 294   |
| L | Edges of steps not exceeding 150mm girth   | LM | 1     |
| M | Soffits of suspended slabs   | SM | 627   |
| N | Edges of slab over 150mm but not exceeding 225mm girth   | LM | 242   |
| O | To sloping soffites of staircases  | SM | 19    |
| P | Soffits of landings  | SM | 8     |
| Q | Riser of steps over 150 mm but not exceeding 225 mm girth  | LM | 64    |
| R | Staircase string 300mm extreme girth and cut to profile of steps   | LM | 28    |
| S | Edges of landing over 150 but ot exceeding 225mm high  | LM | 11    |

**ELEMENT NO. 2**

**Carried to**

**R.C FRAME**

**Main summary**

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**ELEMENT No 3-WALLING**

**WALLING**

**External Walling**

*Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;*

|   |  |    |     |
|---|--|----|-----|
| A | 200mm thick walling Externally   | Sm | 307 |
| B | 200mm thick parapet walling  | Sm | 104 |
| C | 400mm thick walling Externally   | Sm | 344 |
| D | Leave 150 x 600mm high openings in parapet walls and make good edges and reveals to Architect's approval | No | 100 |
| E | 200 x 200 x 225mm wide façade features / moulds to Architect's approval                                  | No | 100 |

**Internal Walling**

*Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;*

|   |   |    |     |
|---|---|----|-----|
| F | 200mm thick walling   | Sm | 348 |
| G | 150mm thick walling   | Sm | 262 |
| H | Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar | Lm | 28  |
| I | Ditto to 400mm thick walling  | Lm | 81  |
| J | Ditto to 150mm thick walling  | Lm | 47  |

**Lintols**

|   |  |    |     |
|---|--|----|-----|
| K | 100mm x 200mm Deep lintols in reinforced concrete class 20MPa with and including 4No T10 and T8 stirups at 200mm centres; complete with formwork | Lm | 105 |
|---|--|----|-----|

**Coping**

|   |   |    |     |
|---|---|----|-----|
| L | 300 x 100mm insitu reinforced concrete class 20Mpa coping, throated and weathered and jointing to columns with cement sand 1:4 mortar | Lm | 122 |
|---|---|----|-----|

**Pergola**

|   |   |    |    |
|---|---|----|----|
| M | Supply and fix Pergolla in 150x50x4mm thick RHS members spaced at 200mm c/c complete with 100x100x5mm thick SHS posts bolted to concrete foundations to details; apply 3coats of paint to steel members | SM | 22 |
|---|---|----|----|

**ELEMENT NO. 3**

**Carried to**

**WALLING**

**Main summary**

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**ELEMENT NO 4-WINDOWS**

**METAL WORK**

**PURPOSE - MADE UNITS**

Supply, fabricate and fix the following purpose made small pane mild steel casement windows to be fabricated from approved mild steel sections (atleast 14g 2mm thick ) comprising of frame and casement incorporating permanent hooded high level ventilation panels infilled with mosquito gauze : window supplied complete with and including 12mm solid square burglar proofing bars fixed at 200mm centres both ways and metal fixing lugs including building into wall and making good, and all necessary iron mongery viz hinges, fasteners, and hasp including shop priming window with red oxide primer before delivery to site:-

A prime cost sum of Kshs 4,500 per Sqm has been allowed for fabrication of the above specified Steel casement Windows by AHP juakali artisans as approved by the Project Manager/Architect.

The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.

|   |   |    |    |
|---|---|----|----|
| A | Window, overall size 1800 X 2300mm high to Architects Details | NO | 23 |
| B | Ditto Size 900 x 2300mm high                                  | NO | 4  |
| C | Ditto Size 800 x 2300mm high                                  | NO | 3  |

**Glazing**

|   |   |    |     |
|---|---|----|-----|
| D | 4mm Thick clear sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with premium putty | SM | 101 |
| E | Ditto; obscure  | SM | 8   |

**Painting and Decorations**

**On Metal work**

**Prepare and apply aerosol spray painting in two finishing coats of first grade paint as per the manufacturer's printed instructions to: -**

|   |                                    |    |     |
|---|------------------------------------|----|-----|
| F | General window and grille surfaces | SM | 218 |
|---|------------------------------------|----|-----|

**Carried to Collection**



|   |  |                       |    |  |  |
|---|--|-----------------------|----|--|--|
|   | <b><u>Precast concrete window cill finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in pigmented cement and sand (1:3) mortar</u></b> |                       |    |  |  |
| A | 150 x 25mm thick precast concrete window sill  | LM                    | 49 |  |  |
|   | <b>Window board</b>  |                       |    |  |  |
| B | 150mm wide x 25mm thick window board in softwood timber plugged to the wall  | LM                    | 49 |  |  |
|   | <b>Prepare and apply one coat first quality aluminium wood primer before fixing: on wood: to</b>   |                       |    |  |  |
| C | Surfaces exceeding 100mm but not exceeding 200 mm girth  | LM                    | 49 |  |  |
|   | <b>Prepare and apply three coats of first quality polyurethane clear varnish: on wood: to</b>  |                       |    |  |  |
| D | Window board: surfaces exceeding 100mm but not exceeding 200 mm girth  | LM                    | 49 |  |  |
|   | <b><u>Curtain rods;</u></b>  |                       |    |  |  |
| B | 1.5mm thick, 20mm thick diameter twin powdercoated mild steel rod complete accessories to approval   | LM                    | 80 |  |  |
|   | <b>Carried to collection</b>   |                       |    |  |  |
|   | <b>COLLECTION</b>  |                       |    |  |  |
|   | Total brought forward from page no:  |                       |    |  |  |
|   | Total brought forward from page no:  |                       |    |  |  |
|   | <b><u>ELEMENT NO. 4</u></b>  | <b>Carried to the</b> |    |  |  |
|   | <b><u>WINDOWS</u></b>  | <b>Main summary</b>   |    |  |  |

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**ELEMENT NO 5-DOORS**

**External Doors**

**Glazed mild steel casement sliding doors**

**Heavy gauge purpose made mild steel door comprising 40 x 25 x3mm stiles, top and bottom stiles, 4 No Intermediate rails, 1.5mm steel sheet both sides welded in place and 5mm thick clear glazing, all primed with red oxide and spray painted with 2 coats of first quality gloss oil paint; complete with hinges, stays, 5lever locks, sliding gear, fasteners and necessary seremetals assembled and fixed to opening including cutting and pinning lugs to concrete or block work surround and bedding frame in cement and sand mortar (1:3).**

A Double Sliding Door overall size 1800 x 2850mm high NO 10

B Bifold door Size 3000 x 2850mm high NO 1

**Internal Doors**

**Flush timber doors**

**50 mm thick Solid cored flush doors with plywood facing to receive painting (m.s) all to Architects details, specifications and approval**

C Door size 900mm x 2100mm high comprising of 1 No opennable leaf size 800 x 2100mm high NO 13

D Ditto Size 800 x 2100mm high comprising of 1 No opennable leaf size 700 x 2100mm high NO 12

E Ditto Size 1000 x 2100mm high comprising of 1 No opennable leaf size 900 x 2100mm high NO 4

**50mm thick approved hardwood PANEL doors with 12.5mm thick Mahogany hardwood lipping to Architect's details, specifications and approval**

**A prime cost sum at the rate indicated below has been allowed for fabrication of the above specified Hardwood panelled door leaves by AHP juakali artisans as approved by the Project Manager/Architect.**

**The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.**

Door size 1800 x 2400mm high ( PC Rate Kshs 49,200) NO 2

**Frames and frame finishes in mahogany timber:**

F 25 x 25mm quadrant beading (PC Rate Kshs 75) LM 172

G 25 x 50mm architrave with two labours, plugged (PC Rate Kshs 150) LM 172

H 150mm x 50mm frame with three labours; chamfered edges; plugged (PC Rate Kshs 1400) LM 172

**Carried to collection**

|   |   |                     |     |  |  |
|---|---|---------------------|-----|--|--|
|   | <u>Painting and decorating</u>  |                     |     |  |  |
|   | <u>Prepare and apply one coat aluminium wood primer to:-</u>  |                     |     |  |  |
| A | Surfaces not exceeding 100mm girth  | LM                  | 343 |  |  |
| B | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 172 |  |  |
|   | <u>Prepare Knot, prime, stop and apply one undercoat and two finishing coats first grade timber quality paint to wood surfaces as per the manufacturer's printed instructions</u> |                     |     |  |  |
| C | General timber surfaces   | SM                  | 124 |  |  |
| D | Surfaces not exceeding 100mm girth  | LM                  | 343 |  |  |
| E | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 172 |  |  |
|   | <u>Prepare, prime and apply one undercoat and two finishing coats first quality gloss oil paint on as per the manufacturer's printed instructions to:-</u>                        |                     |     |  |  |
| F | General surfaces of metal doors   | SM                  | 120 |  |  |
|   | <b>Ironmongery</b>  |                     |     |  |  |
|   | <b>Supply and fix the following ironmongery to timber complete with matching screws and keys to the approval of the Architect</b>   |                     |     |  |  |
| G | 100mm pressed heavy duty steel Butt Hinges  | Pairs               | 50  |  |  |
| H | 3 Lever Door Lock with handles as per Union   | NO                  | 31  |  |  |
| I | Door fixing cramps  | NO                  | 198 |  |  |
| J | Approved male/female signage  | NO                  | 4   |  |  |
|   | <b>Carried to Collection</b>  |                     |     |  |  |
|   | <b>COLLECTION</b>   |                     |     |  |  |
|   | Total brought forward from page no:   |                     |     |  |  |
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|   | <b><u>ELEMENT NO. 5</u></b>   | <b>Carried to</b>   |     |  |  |
|   | <b><u>DOORS</u></b>   | <b>Main summary</b> |     |  |  |

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**ELEMENT NO 6 - EXTERNAL FINISHES**

**EXTERNAL WALL FINISHES**

**External Render**

Cement and sand (1:3) render:wood floated: on concrete or blockwork: to

|   |   |    |     |
|---|---|----|-----|
| A | 15mm thick to parapet walling externally  | SM | 754 |
| B | Ditto to surfaces of beams and columns  | SM | 256 |
| C | Extra over vertical and horizontal key pointing in 10 mm rod in cement and sand mix (1:3) mortar including one coat of Bituminous paint | SM | 50  |

**External Painting**

Prepare and apply one coat Alkali Resistant primer followed by two finishing coats of silicon exterior Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to

|   |  |    |     |
|---|--|----|-----|
| D | Masonry surfaces externally-Beam, Column and Slab Moulds | SM | 754 |
| E | Ditto to surfaces of beams and columns                   | SM | 256 |

**FLAT ROOF FINISHES**

**Cement and sand (1:4) screeded beds: on concrete: complete with coloured pigmentation additives and hardener to:**

|   |  |    |     |
|---|--|----|-----|
| F | 50mm average waterproofed lightweight screed laid to falls and crossfalls to roof slabs -upper roof including gutter bases | SM | 246 |
|---|--|----|-----|

Prepare and apply to vertical/horizontal surfaces 4mm thick APP/EPDM water proofing or other equal and approved membrane with surface finish weighing 4kg/sm; laid on primer with torch-on process ;by an approved specialist all in accordance with the manufacturers instructions including provision of a written ten (10) year anti leak guarantee. \_

|   |  |     |     |
|---|--|-----|-----|
| G | 4mm thick APP membrane applied to roof slabs | SM  | 246 |
| H | Ditto to skirting 200mm high                 | LM  | 166 |
| I | Dress membrane around 100mm rainwater outlet | No. | 18  |

The Following Flat roof concrete tiles fixed with approved adhesive, laid and jointed with waterproofing bituminous compound

|   |  |    |     |
|---|--|----|-----|
| J | 20mm thick interlocking Concrete tiles of size 225 x 225mm | SM | 275 |
|---|--|----|-----|

|                          |                     |  |  |  |  |
|--------------------------|---------------------|--|--|--|--|
| <b>ELEMENT NO. 6</b>     | <b>Carried to</b>   |  |  |  |  |
| <b>EXTERNAL FINISHES</b> | <b>Main summary</b> |  |  |  |  |

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**ELEMENT NO 7 - INTERNAL FINISHES**

**Internal Wall Finishes**

15 mm thick Cement and sand (1:3) backings on blockwork to receive ceramic wall tiles:to:

A Internal wall surfaces- Wet areas

SM

289

Ceramic wall tiles

Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories

B Supply and Fix approved ceramic wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces

SM

289

15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-

C Concrete/masonry surfaces **Internally**

SM

1684

D Ditto to window cills, door Jambs Externally and Surfaces not exceeding 200mm girth

LM

147

**Painting and Decoration**

Prepare, Skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to

E Plastered concrete/masonry surface

SM

1684

F Ditto to window cills, door Jambs Externally and Surfaces not exceeding 200mm girth

LM

147

**Carried to Collection**

| <b><u>Floor Finishes</u></b>   |                                 |    |     |  |  |
|--|---------------------------------|----|-----|--|--|
| <b><u>32 mm thick Cement and sand (1:3) backing on concrete surfaces, prepared to receive approved floor finish to:</u></b>  |                                 |    |     |  |  |
| A  | Receive ceramic floor tiles     | SM | 44  |  |  |
| B  | Receive ceramic floor tiles     | SM | 574 |  |  |
| C  | 300 mm wide treads of steps     | LM | 97  |  |  |
| D  | 150mm high risers of steps      | LM | 98  |  |  |
| E  | Receive rubber flooring         | SM | 86  |  |  |
| F  | Receive timber flooring         | SM | 32  |  |  |
| <b><u>Ceramic Floor tiles</u></b>  |                                 |    |     |  |  |
| <i>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</i>   |                                 |    |     |  |  |
| Supply and Fix Ceramic tiles, on prepared bed(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval.                            |                                 |    |     |  |  |
| G  | Floor Surfaces                  | SM | 44  |  |  |
| H  | Ditto 100mm wide Wall Skirtings | LM | 80  |  |  |
| <b><u>Porcelain Floor tiles</u></b>  |                                 |    |     |  |  |
| <i>Allow a Prime Cost supply rate of Ksh. 1500 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</i>   |                                 |    |     |  |  |
| Supply and Fix porcelain wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces |                                 |    |     |  |  |
| I  | Floor Surfaces                  | SM | 574 |  |  |
| J  | Ditto 100mm wide Wall Skirtings | LM | 566 |  |  |
| <b><u>Timber Floor Finish</u></b>  |                                 |    |     |  |  |
| <u>Supply and Fix approved mahogany timber flooring; with approved glue ; varnish to approval ; secret nailing : on backing screeds with timber strips (m.s.) :- all to Architect's approval:to:</u>   |                                 |    |     |  |  |
| K  | Floor Surfaces                  | SM | 32  |  |  |
| L  | Ditto 100mm wide Wall Skirtings | LM | 25  |  |  |
| <b>Carried to Collection</b>   |                                 |    |     |  |  |

|   |  |    |    |  |
|---|--|----|----|--|
|   | <u>Rubber Floor Tiles</u>  |    |    |  |
|   | <u>Supply and Fix approved Rubber Floor Tiles; bedded and jointed in matching coloured proprietary grout on prepared on prepared backings(m.s); : including pvc spacers and expansion joint as necessary: all to Architect's approval:to:</u>              |    |    |  |
| A | Floor Surfaces   | SM | 86 |  |
| B | Ditto 100mm wide Wall Skirtings  | LM | 38 |  |
|   | <b>Staircase finishes</b>  |    |    |  |
|   | <b><u>32 mm thick Cement and sand (1:3) backing on concrete surfaces,prepared to receive ceramic floor tiles to:</u></b>   |    |    |  |
| C | 300 mm wide treads of steps  | LM | 59 |  |
| D | 150mm high risers of steps   | LM | 64 |  |
| E | Landing<br><u>Ceramic staircase tiles</u>  | SM | 8  |  |
|   | <i>Allow a Prime Cost supply rate of Ksh. 1500 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</i>   |    |    |  |
|   | Supply and Fix ceramic wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting: including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces |    |    |  |
| F | 300 mm wide treads of steps  | LM | 59 |  |
| G | 150mm high risers of steps   | LM | 64 |  |
| E | Landing  | SM | 8  |  |
|   | <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>  |    |    |  |
| H | Soffits of staircase landing   | SM | 8  |  |
| I | Ditto to sloping soffites exceeding 15° from horizontal  | SM | 19 |  |
| J | Staircase string 300mm extreme girth and cut to profile of steps   | LM | 28 |  |
|   | <b><u>Paint works</u></b>  |    |    |  |
|   | <u>Prepare, Skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u>                          |    |    |  |
| K | Soffits of staircase landing   | SM | 8  |  |
| L | Ditto to sloping soffites exceeding 15° from horizontal  | SM | 19 |  |
| M | Staircase string 300mm extreme girth and cut to profile of steps   | LM | 28 |  |
|   | <b>Carried to Collection</b>   |    |    |  |

|   |   |    |     |  |  |
|---|---|----|-----|--|--|
|   | <b><u>Ceiling finishes</u></b>  |    |     |  |  |
|   | <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |    |     |  |  |
| A | Soffits of Concrete surfaces  | SM | 627 |  |  |
|   | <u>Painting and Decoration</u>  |    |     |  |  |
|   | <u>Prepare, Skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u>   |    |     |  |  |
| B | Plastered ceilings  | SM | 627 |  |  |
|   | <u>Gypsum boards</u>  |    |     |  |  |
| C | 12.5mm approved Moisture resistant Suspended gypsum plasterboard ceiling : on and including pressed 50 x 50mm aluminium suspended branding system at 600mm centres both ways with branding end trims as specified : allow for all necessary timber stiffener or bearers where directed: allow end trims as directed including all cutting and trimming to light fittings, or other equipments as required (all quantities measured flat overall over light fittings): allow for all vertical and horizontal trims: allow where necessary for welded mild steel supports complete with bolts and welded connections :fixing with self tapping screws; taped and filled joints : complete with Modified pre-formed polyurethane decorative mouldings and cornices : including 50 x 50mm shadow gap between wall and gypsum ceiling and; 15 x 15mm shadow gap between grid and gypsum ceiling; all to Architect's details and patterns | SM | 350 |  |  |
| D | 100 x 20mm gypsum cornice with two labours  | LM | 189 |  |  |
|   | <u>Prepare, Skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u>   |    |     |  |  |
| E | Gypsum ceilings   | SM | 350 |  |  |
| F | Ditto cornice   | LM | 189 |  |  |
|   | <b>Carried to Collection</b>  |    |     |  |  |



**COLLECTION**

Total brought forward from page no:

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**ELEMENT NO. 7**  
**INTERNAL FINISHES**

**Carried to**

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**ELEMENT NO 8- BALUSTRADING AND RAILING**

Balustrades and staircase railings

|   |   |    |    |
|---|---|----|----|
| A | 900mm high mild Steel balustrade; comprising 60 x 10mm mild Steel balusters at 900mm centres; bolted to base plate and tread (m.s), with 7No. 25mm diameter horizontal bars, and 75x4mm diameter CHS mild Steel handrail part welded into 60x10mm balustrades; to Architects drawings | LM | 20 |
|---|---|----|----|

Prepare, prime and apply one undercoat and two finishing coats first quality gloss oil paint on

|   |  |    |    |
|---|--|----|----|
| B | General metal surfaces of balustrading (both sides measured overall) | SM | 49 |
|---|--|----|----|

**ELEMENT NO. 8 BALUSTRADING AND RAILING Carried to the Main summary**

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**ELEMENT NO 9 - ROOFING**

|   |   |    |     |
|---|---|----|-----|
| A | <b>28 gauge ITS Roofing sheets;</b> laid on timber structure and including fixing clips and brackets and fixing to timber rafters at 600mm centres(m/s) | SM | 120 |
| B | Gauge 28 galvanized 450 mm Ridge cap and hip cap to match roof covering   | LM | 10  |
| C | Gauge 28 galvanized iron Ditto hip cap  | LM | 18  |

**STRUCTURAL STEEL CONSTRUCTION**

**1. Prices shall include for unloading, hoisting and fixing in position including requisite staging for erection.**

**2. Allow for factory priming in lead oxide and touching up the priming on site later**

**3. Prices should allow for fillet weld and welded connections**

**The following in Steel Trusses including hoisting and fixing in position 2.8m above ground floor**

|   |   |    |     |
|---|---|----|-----|
| D | 50 x 50 x 3mm Thick SHS purlins   | Kg | 463 |
| E | 50 x 50 x 3mm. Thick SHS external members                                       | Kg | 638 |
| F | 50 x 25 x 3mm. Thick RHS internal members                                       | Kg | 765 |
| G | 26-gauge prepainted G.I./Aluzinc box roof gutters with 100mmx75mm cross-section | LM | 45  |
| N | Extra over rainwater gutter for 100mm diameter downpipe outlet                  | no | 6   |
| O | Ditto stopped end   | no | 6   |
| P | Ditto bend  | no | 6   |

Wrot softwood Fascia board

|   |  |    |    |
|---|--|----|----|
| G | 250mm x 25mm Fascia/ barge boards nailed to end of rafters | LM | 45 |
|---|--|----|----|

Painting Wood

Knot, prime, stop and paint three coats of gloss oil paint as Crown or other equal and approved to:

|   |                                      |    |    |
|---|--------------------------------------|----|----|
| H | Fascia or verge; girth 225mm - 300mm | LM | 45 |
|---|--------------------------------------|----|----|

**Carried to Collection**

|   |  |    |    |  |
|---|--|----|----|--|
|   | <b>Rain water goods</b>  |    |    |  |
|   | <u>Supply and fix the following in UPVC: to BS 4515 with fittings fixed to manufacturer's instruction and BS 5572: manufactured by "Doshi Kenya Ltd" or other equal and approved: tenderer must allow in the pipework for pipe fixing clips or holderbats, plugged and screwed</u> |    |    |  |
| A | 110mm Diameter <b>down pipe:</b> Grey uPVC with and including swan neck offset and shoes: holder bats at 1500mm centres: including water-tight connections to mild steel gutters   | LM | 18 |  |
| B | Extra over ditto for swan neck   | no | 6  |  |
| C | Ditto horse shoe   | no | 6  |  |
|   | <b>Carried to collection</b>   |    |    |  |
|   | <b>COLLECTION</b>  |    |    |  |
|   | Total brought forward from page no:  |    |    |  |
|   | Total brought forward from page no:  |    |    |  |
|   | <b>ELEMENT NO. 9 ROOFING Carried to the Main summary</b>   |    |    |  |

|   |   |  |    |
|---|---|--|----|
| <b>PROPOSED CLUB HOUSE</b>  |   |  |    |
| <b>ELEMENT NO 10 - JOINERY FITTINGS</b>   |   |  |    |
| Allow for providing materials, labour and construct fixtures and fittings as per Architects drawings of the following JOINERY FITTINGS AND FIXTURES complete with associated iron mongery;  |   |  |    |
| NOTE: All blockboard, MDF boards,etc in joinery works shall be lipped with hardwood lipping all round before fixing.  |   |  |    |
| <u>High level cupboards</u>   |   |  |    |
| <u>400mm Wide high level kitchen cupboards in 18mm laminated mdf sides &amp; shelves complete with doors, top, bottom &amp; divisions with and including all necessary ironmongery; to Architect's details</u>  |   |  |    |
| A   | High level storage cupboard units 600mm high x 300mm deep   | LM                                     | 8  |
| <u>Low level kitchen cupboards</u>  |   |  |    |
| <u>Low level kitchen worktops with 600x600x8mm porcelain tiles top on 100mm thick reinforced concrete slab with A142 BRC mesh, formwork to soffits and slab edges, plater to soffits of slab, screed to top slab, 100mm thick plastered steeper walls, including 300x300x6mm thick ceramic wall tiles on both sides of the wall: 100mm plastered mass concrete plinths in concrete class 15MPa: 18mm laminated mdf sides &amp; shelves complete with doors, shelves, drawers, cutting tiles for kitchen sink (m.s) &amp; all necessary ironmongery; to Architect's details and approval</u> |   |  |    |
| B   | Low level kitchen cupboards below concrete worktop total girth grouped together 850mm high x 550mm deep | LM                                     | 8  |
| <b><u>Vanity tops</u></b>   |   |  |    |
| <u>600mm wide vanity tops with 600x600x8mm porcelain tiles top on 75mm thick reinforced concrete class 20MPa slab, 100mm plastered mass concrete plinths in concrete class 15MPa: cutting tiles for sink (m.s) ; to Architect's details</u>   |   |  |    |
| C   | 11000mm long  | LM                                     | 8  |
| <b><u>Lockers</u></b>   |   |  |    |
| <u>400mm wide shelves in 18mm thick laminated MDF boards sides &amp; shelves complete with doors, shelves, divisions, drawers, frames, bearers, malpa hinges, aluminium D-handles &amp; all necessary ironmongery; to Architect's details</u>   |   |  |    |
| D   | 12000mm long x 2100mm high-Lockers  | LM                                     | 12 |
| <b><u>Reception desk</u></b>  |   |  |    |
| <u>800mm wide reception desk tops with 20mm granite top on 20mm thick blockboard, 25x25x3mm thick mild steel framework &amp; 18mm thick laminated MDF sides &amp; shelves complete with doors, shelves, drawers &amp; all necessary ironmongery; to Architect's details</u>   |   |  |    |
| E   | 3000mm long   | LM                                     | 3  |
| <b>ELEMENT NO. 10<br/>JOINERY &amp; FITTINGS</b>  |   | <b>Carried to the<br/>Main summary</b> |    |

**PROPOSED CLUB HOUSE**

**BILL NO.1-BUILDERS WORKS**

**MAIN SUMMARY**

**AMOUNT (KSHS)**

1 **Substructures**

2 **Reinforced Concrete Frame**

3 **Walling**

4 **Windows**

5 **Doors**

6 **External Finishes**

7 **Internal Finishes**

8 **Balustrading and Railing**

9 **Roofing**

10 **Joinery fittings**

**TOTAL FOR CLUB HOUSE CARRIED TO GRAND SUMMARY**

**SCHOOL**

| Item | DESCRIPTION  | Unit | QTY   | Rate | Amount |
|------|--|------|-------|------|--------|
|      | <b><u>PROPOSED PRIMARY SCHOOL</u></b><br><b>BILL NO.1-BUILDERS WORKS</b><br><b>ELEMENT NO 1 - SUBSTRUCTURES (ALL PROVISIONAL)</b><br><b>Notes.</b><br><b>This element includes all structural works up to and including ground floor slab</b><br><b>Tenderer to allow for working space in his rates.</b><br><br><b>Excavations including trimming sides and bottoms of excavations; maintaining and supporting sides; and keeping free from water, mud and fallen material; with and including destruction of termites nests within site of works,take out and destroy queens, imp</b><br><br><u>Site Clearance</u> |      |       |      |        |
| A    | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas.  | SM   | 1,598 |      |        |
| B    | Excavate average 300mm deep to remove top vegetable soil, load, remove from site and dump in designated local authority dump site.   | Cm   | 479   |      |        |
| D    | Excavate for Strip foundations depth not exceeding 1.50 metres starting from Reduced ground levels.  | Cm   | 307   |      |        |
| E    | Excavate for column bases depth not exceeding 1.5m starting from reduced Levels  | Cm   | 616   |      |        |
| F    | Extra over excavation for excavating in all classes of rock  | Cm   | 92    |      |        |
| G    | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary  | Item | 1     |      |        |
| H    | Allow for maintaining and upholding the sides of excavations and keeping excavations clear of all fallen materials, rubbish etc  | Item | 1     |      |        |
|      | <b>Carried to collection</b>   |      |       |      |        |



| Item | DESCRIPTION   | Unit | QTY   | Rate | Amount |
|------|---|------|-------|------|--------|
|      | <u>Disposal</u>   |      |       |      |        |
| A    | Return, fill and ram selected excavated material around foundations.  | CM   | 462   |      |        |
| B    | Load,wheel and cart away surplus excavated material away from site  | CM   | 553   |      |        |
|      | <b>Backfill</b>   |      |       |      |        |
| C    | Make up levels using approved imported materials: compacted in layers not exceeding 300mm thick with a 15ton roller: to the satisfaction of the Structural Engineer.  | CM   | 1,119 |      |        |
|      | <b>Hardcore as described</b>  |      |       |      |        |
| D    | 300mm thick hardcore bed: hand packed : compacted in layers not exceeding 150mm thick: to the satisfaction of the Structural Engineer: including 50mm Thick murrum or "equal and approved" blinding to surfaces of hardcore | SM   | 1,598 |      |        |
|      | <b>Anti - termite to treatment</b>  |      |       |      |        |
| E    | Approved anti-termite treatment, with ten-year guarantee, sprayed to surfaces of hardcore strictly in accordance with manufacturer's instructions.  | SM   | 1,598 |      |        |
|      | <b>Damp-proof membrane</b>  |      |       |      |        |
| F    | 1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)  | SM   | 1,598 |      |        |
|      | <b>Insitu concrete Class 15MPa: vibrated:</b>   |      |       |      |        |
| G    | Plain concrete class 15 in 50 mm Thick under column bases   | SM   | 411   |      |        |
| H    | Plain concrete class 15 in 50 mm Thick under strip foundation   | SM   | 205   |      |        |
| I    | 50 mm Thick Murrum Blinding to surfaces of hadcore  | SM   | 1,598 |      |        |
|      | <b>In- situ vibrated reinforced concrete Class 25MPa: in:</b>   |      |       |      |        |
| J    | Column bases  | CM   | 196   |      |        |
| K    | Columns   | CM   | 14    |      |        |
| L    | Strip foundation  | CM   | 82    |      |        |
| M    | 100mm thick surface bed   | SM   | 1,598 |      |        |
|      | <b>Carried to collection</b>  |      |       |      |        |

| Item | DESCRIPTION   | Unit | QTY   | Rate | Amount |
|------|---|------|-------|------|--------|
|      | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b>  |      |       |      |        |
| A    | Assorted reinforcement  | Kg   | 6,577 |      |        |
|      | <b>Mesh fabric reinforcement to K/EAS 412;2 (2019) BRC A142;200 x 200mm, weighing 2.22kg/m<sup>2</sup> (measured net - no allowance) for laps; in two layers - top &amp; bottom; including bends, tying wire and spacer blocks)</b>                     |      |       |      |        |
| B    | Mesh reference A142 weighing 2.22 kilogrammes per square metre in floor beds.   | SM   | 1,598 |      |        |
|      | <u>Modular steel frame with steel plates covering formwork and/ or marine board formwork: to:</u>   |      |       |      |        |
| C    | Vertical sides to columns   | SM   | 210   |      |        |
| D    | Edge of slab, over 150mm but not exceeding 225mm girth  | LM   | 330   |      |        |
|      | <b>SUBWALL</b>  |      |       |      |        |
|      | <b>Natural quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</b>                |      |       |      |        |
| E    | 200mm thick walls in foundations  | SM   | 1,000 |      |        |
|      | <b>Pavings</b>  |      |       |      |        |
| F    | Supply and lay 600 x 600 x 50mm reinforced concrete precast paving slabs around the building including laying, spreading and compacting 100mm thick approved sand bed blinding, on and including 150mm thick compacted hardcore to Engineer's approval. | SM   | 198   |      |        |
|      | <b>Plinth</b>   |      |       |      |        |
| G    | 1:4 cement/sand render to plinth  | SM   | 198   |      |        |
| H    | Black bituminous paint to rendered plinth   | SM   | 198   |      |        |
|      | <b>Carried to collection</b>  |      |       |      |        |

| Item | DESCRIPTION                         | Unit | QTY   | Rate | Amount |
|------|-------------------------------------|------|-------|------|--------|
|      | <b>COLLECTION</b>                   |      |       |      |        |
|      | Total brought forward from page no: |      | SCH/1 |      |        |
|      | Total brought forward from page no: |      | SCH/2 |      |        |
|      | Total brought forward from page no: |      | SCH/3 |      |        |
|      | <b><u>ELEMENT NO. 1</u></b>         |      |       |      |        |
|      | <b><u>SUBSTRUCTURES</u></b>         |      |       |      |        |
|      | Carried to<br>Main summary          |      |       |      |        |

| Item  | DESCRIPTION  | Unit                | QTY    | Rate | Amount |
|---|--|---------------------|--------|------|--------|
| <b>PROPOSED PRIMARY SCHOOL</b>  |  |                     |        |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>   |  |                     |        |      |        |
| <b>ELEMENT No 2 - R.C FRAME</b>   |  |                     |        |      |        |
| <i>In- situ vibrated reinforced concrete Class 25MPa: in:</i>   |  |                     |        |      |        |
| A   | Columns  | CM                  | 67     |      |        |
| B   | Ring beam  | CM                  | 200    |      |        |
| C   | Ramp   | SM                  | 392    |      |        |
| D   | Stairs   | CM                  | 36     |      |        |
| F   | 150mm thick suspended slabs                                      | SM                  | 1,022  |      |        |
| <b>Hollow Pot slab</b>  |  |                     |        |      |        |
| 230x380x300mm Thick hollow pot slabs including A142 BRC Mesh laid centrally and horizontally in 70mm thick concrete topping; 150mm thick reinforced concrete ribs at spacing of 380mm c/c all to Structural engineers details |  |                     |        |      |        |
| G   | Ditto to Roof Slab   | SM                  | 3,732  |      |        |
|   |  | SM                  | 1,578  |      |        |
| <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b>  |  |                     |        |      |        |
| E   | Assorted reinforcement to Structural Engineer's specifications   | Kg                  | 63,450 |      |        |
| <i>Modular steel frame with steel plates covering formwork and/ or marine board formwork: to:</i>   |  |                     |        |      |        |
| F   | Sides and soffites of beams                                      | Sm                  | 2,407  |      |        |
| G   | Sides of columns   | Sm                  | 1,008  |      |        |
| O   | Soffits of hollow pots / concrete blocks slabs                   | Sm                  | 5,370  |      |        |
| O   | Soffits of insitu cast suspended slabs                           | Sm                  | 1,022  |      |        |
| O   | Sloping Soffits of ramp  | Sm                  | 392    |      |        |
| Q   | To sloping soffites of staircases                                | SM                  | 96     |      |        |
| R   | Soffits of landings  | SM                  | 40     |      |        |
| S   | Riser of steps over 150 mm but not exceeding 225 mm girth        | LM                  | 260    |      |        |
| T   | Staircase string 300mm extreme girth and cut to profile of steps | LM                  | 120    |      |        |
| U   | Edges of landing over 150 but not exceeding 225mm high           | Lm                  | 26     |      |        |
| P   | Edges of suspended slab over 150mm but not exceeding 225mm girth | Lm                  | 1,320  |      |        |
| <b>ELEMENT NO. 2</b>  |  | <b>Carried to</b>   |        |      |        |
| <b>R.C FRAME</b>  |  | <b>Main summary</b> |        |      |        |

| Item   | DESCRIPTION   | Unit | QTY   | Rate | Amount |
|--|---|------|-------|------|--------|
| <b><u>PROPOSED PRIMARY SCHOOL</u></b>  |   |      |       |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |      |       |      |        |
| <b>ELEMENT No 3-WALLING</b>  |   |      |       |      |        |
| <b><u>WALLING</u></b>  |   |      |       |      |        |
| <u>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</u> |   |      |       |      |        |
| A  | 200mm thick walling Externally  | Sm   | 2,401 |      |        |
| B  | 200mm thick Gable walling   | Sm   | -     |      |        |
| C  | 200mm thick walling Internally  | Sm   | 3,226 |      |        |
| D  | 100mm thick walling Internally  | Sm   | 458   |      |        |
| E  | 200mm Thick Parapet walling   | Sm   | 330   |      |        |
| F  | Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar | Lm   | 547   |      |        |
|  | <b><u>ELEMENT NO. 3</u></b><br><b><u>WALLING</u></b>                                  |      |       |      |        |
| <b>Carried to<br/>Main summary</b>   |   |      |       |      |        |

| Item | DESCRIPTION  | Unit | QTY | Rate | Amount |
|------|--|------|-----|------|--------|
|      | <b><u>PROPOSED PRIMARY SCHOOL</u></b><br><br><b>BILL NO.1-BUILDERS WORKS</b><br><br><b>ELEMENT NO 4-WINDOWS</b><br><br><b><u>METAL WORK</u></b><br><br><b><u>PURPOSE - MADE UNITS</u></b><br><br><b><u>Supply, assemble and fix the following purpose-made mild steel casement windows; standard metal section from approved manufacturer complete with frames, transomes, mullions and with and including permanent ventilators comprising "T" bar, gauze and 16 gauge sheet metal hood 50mm high x 50mm projection to full width of window, coupling mullions, approved ironmongery and one coat manufacturer's primer; all welding ground to smooth finish.</u></b><br><br><b>Steel; for glazing with putty, lugs to two jambs, cutting and pinning to concrete or blockwork, fixing to head and sill with screws; plugging</b><br><br><b>A prime cost sum of Kshs 4,500 per Sqm has been allowed for fabrication of the above specified Steel casement Windows by AHP juakali artisans as approved by the Project Manager/Architect.</b><br><br><b>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</b> |      |     |      |        |
| A    | Window, overall size 2400 X 1500mm high to Architects Details  | NO   | 117 |      |        |
|      | Window, overall size 1500 X 1500mm high to Architects Details  | NO   | 24  |      |        |
| B    | Ditto Size 600 x 900mm high (WC/SH)  | NO   | 100 |      |        |
|      | <b><u>Glazing</u></b>  |      |     |      |        |
| C    | 4mm Thick clear sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with putty  | SM   | 475 |      |        |
| D    | Ditto; obscure   | SM   | 54  |      |        |
|      | <b><u>Painting and Decorations</u></b>   |      |     |      |        |
|      | <b><u>On Metal work</u></b>  |      |     |      |        |
|      | <b><u>Prepare and apply aerosol spray painting in two finishing coats of first grade paint as per the manufacturer's printed instructions to: -</u></b>  |      |     |      |        |
| E    | General window and grille surfaces; over 300mm girth internal  | SM   | 529 |      |        |
|      | <b>Carried to Collection</b>   |      |     |      |        |

| Item | DESCRIPTION  | Unit | QTY | Rate | Amount |
|------|--|------|-----|------|--------|
| A    | <p><b><u>Precast concrete window cill finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in pigmented cement and sand (1:3) mortar</u></b></p> <p>150 x 25mm thick Precast concrete window sill</p> <p style="text-align: right;"><b>Carried to collection</b></p> <p style="text-align: center;"><b>COLLECTION</b></p> <p>Total brought forward from page no:</p> <p>Total brought forward from page no:</p> | LM   | 473 |      |        |
|      | <p><b><u>ELEMENT NO. 4</u></b></p> <p><b><u>WINDOWS</u></b></p>  |      |     |      |        |

| Item | DESCRIPTION   | Unit | QTY | Rate | Amount |
|------|---|------|-----|------|--------|
|      | <b><u>PROPOSED PRIMARY SCHOOL</u></b>   |      |     |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>   |      |     |      |        |
|      | <b>ELEMENT NO 5-DOORS</b>   |      |     |      |        |
|      | <b><u>Steel Casement Doors</u></b>  |      |     |      |        |
| A    | Heavy gauge steel casement doors size 900 x 2400mm high comprising 40 x 25 x3mm stiles, top and bottom stiles, 4 No Intermediate rails, 1.5mm steel sheet both sideswelded in place and 5mm thick clear glazing, all primed with red oxide and spray painted 2 coats eggshell gloss paint; complete with hinges, stays, fasteners and necessary seremetals assembled and fixed to opening including cutting and pinning lugs to concrete or block work surround and bedding frame in cement and sand mortar (1:3). (D.01) | NO   | 3   |      |        |
| B    | Ditto Size 1500 x 2400mm high Doubleleaf door   | NO   | 2   |      |        |
|      | <b><u>Frames and frame finishes in cypress Timber</u></b>   |      |     |      |        |
| C    | 25 x 25mm quadrant (PC Rate Kshs 75)  | LM   | 165 |      |        |
| D    | 25 x 50mm architrave with two labours, plugged (PC Rate Kshs 150)   | LM   | 165 |      |        |
| E    | 150mm x 50mm frame with three labours; chamfered edges; plugged (PC Rate Kshs 800)  | LM   | 165 |      |        |
|      | <b>Flush timber doors</b>   |      |     |      |        |
|      | <b>A prime cost sum at the rate indicated below has been allowed for fabrication of the above specified Hardwood panelled door leaves by AHP juakali artisans as approved by the Project Manager/Architect.</b>   |      |     |      |        |
|      | <b>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</b>  |      |     |      |        |
| F    | Supply and fix 1500mm x 2060mm x 50mm thick semi solid cored flush double door Ply wood finished for painting (m/s) both sides; all to Architects Details, specifications and approval (D.03)   | NO   | 30  |      |        |
| G    | Ditto Size 800 x 2060mm high (PC Rate Kshs 3,500)   | NO   | 85  |      |        |
| G    | Ditto Size 900 x 2060mm high (PC Rate Kshs 4,000)   | NO   | 39  |      |        |
|      | <b>Carried to collection</b>  |      |     |      |        |



| Item | DESCRIPTION   | Unit                | QTY    | Rate | Amount |
|------|---|---------------------|--------|------|--------|
|      | <u>Painting and decorating</u>  |                     |        |      |        |
|      | <u>Prepare and apply one coat aluminium wood primer to:-</u>  |                     |        |      |        |
| A    | Surfaces not exceeding 100mm girth  | LM                  | 165    |      |        |
| B    | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 165    |      |        |
|      | <u>Prepare Knot, prime, stop and apply one undercoat and two finishing coats first grade timber quality paint to wood surfaces as per the manufacturer's printed instructions</u> |                     |        |      |        |
| C    | General timber surfaces   | SM                  | 475    |      |        |
| D    | Surfaces not exceeding 200mm girth  | LM                  | 495    |      |        |
|      | <b>Ironmongery</b>  |                     |        |      |        |
|      | <b>Supply and fix the following ironmongery to timber complete with matching screws and keys to the approval of the Architect</b>   |                     |        |      |        |
| E    | 100mm pressed steel Butt Hinges   | Pairs               | 173    |      |        |
| F    | 2 Lever Door Lock with handles as per Union   | NO                  | 115    |      |        |
| G    | Door fixing cramps  | NO                  | 690    |      |        |
|      | <b>Carried to Collection</b>  |                     |        |      |        |
|      | <b>COLLECTION</b>   |                     |        |      |        |
|      | Total brought forward from page no:   |                     | SCH/9  |      |        |
|      | Total brought forward from page no:   |                     | SCH/10 |      |        |
|      | <b>ELEMENT NO. 5</b>  | <b>Carried to</b>   |        |      |        |
|      | <b>DOORS</b>  | <b>Main summary</b> |        |      |        |

| Item   | DESCRIPTION   | Unit | QTY   | Rate | Amount |
|--|---|------|-------|------|--------|
| <b><u>PROPOSED PRIMARY SCHOOL</u></b>  |   |      |       |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |      |       |      |        |
| <b>ELEMENT NO 6 - EXTERNAL FINISHES</b>  |   |      |       |      |        |
| <b>EXTERNAL WALL FINISHES</b>  |   |      |       |      |        |
| <b>External Finish</b>   |   |      |       |      |        |
| <i>Cement and sand (1:4) backings etc</i>  |   |      |       |      |        |
| A  | 15mm thick to beams, Columns, Slab Moulds and walling externally  | SM   | 144   |      |        |
| <b>Keying</b>  |   |      |       |      |        |
| B  | Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand mix (1:3) mortar including one coat Bituminous paint | SM   | 2,587 |      |        |
| <b>External Painting</b>   |   |      |       |      |        |
| <i>Prepare and apply one coat Alkali Resistant primer followed by 3 coats of silicon exterior Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</i> |   |      |       |      |        |
| C  | Columns surfaces externally   | SM   | 144   |      |        |
|  | <b><u>ELEMENT NO. 6</u></b> Carried to  |      |       |      |        |
|  | <b>EXTERNAL FINISHES</b> Main summary   |      |       |      |        |

| Item | DESCRIPTION   | Unit | QTY   | Rate | Amount |
|------|---|------|-------|------|--------|
|      | <b><u>PROPOSED PRIMARY SCHOOL</u></b>   |      |       |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>   |      |       |      |        |
|      | <b>ELEMENT NO 7 - INTERNAL FINISHES</b>   |      |       |      |        |
|      | <b><u>Internal Wall Finishes</u></b>  |      |       |      |        |
|      | <u>Cement and sand (1:4) backings etc</u>   |      |       |      |        |
| A    | 15mm thick to receive Wall tiles tiles - Wet areas  | SM   | 916   |      |        |
|      | <u>15mm (minimum) two coat lime plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |      |       |      |        |
| B    | Concrete/masonry surfaces <b>Internally</b>   | SM   | 7,937 |      |        |
| C    | Ditto to window cills, door Jambs Externally and Surfaces not exceeding 200mm girth   | LM   | 1,357 |      |        |
|      | <u>Ceramic wall tiles</u>   |      |       |      |        |
|      | <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |      |       |      |        |
| D    | Supply and ceramic wall tiles or equal and approved; Bidder to include all materials needed for fixing to completion as selected by the Architect: on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces | SM   | 916   |      |        |
|      | <b><u>Painting and Decoration</u></b>   |      |       |      |        |
|      | <u>Prepare and apply one coat Alkali Resistant primer followed by two finishing coats of silicon exterior Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u>  |      |       |      |        |
| E    | Plastered concrete/masonry surfaces internally  | SM   | 7,937 |      |        |
| F    | Ditto to window cills, door Jambs Externally and Surfaces not exceeding 200mm girth   | LM   | 1,357 |      |        |
|      | <b>Carried to Collection</b>  |      |       |      |        |

| Item | DESCRIPTION  | Unit | QTY   | Rate | Amount |
|------|--|------|-------|------|--------|
|      | <b><u>Floor Finishes</u></b>   |      |       |      |        |
|      | <u>Cement and sand (1:3) screeds, backings, beds etc</u>   |      |       |      |        |
| A    | 32mm bed finished to receive terazzo (m.s)   | SM   | 5,810 |      |        |
|      | Ditto for Ramp   | SM   | 392   |      |        |
| B    | Ditto to receive ceramic tiles finish  | SM   | 542   |      |        |
|      | <b><u>Staircase finishes</u></b>   |      |       |      |        |
|      | <u>Cement and sand (1:4 ) backings etc</u>   |      |       |      |        |
| C    | 32mm bed finished to receive ceramic tiles to surfaces of Landings (m.s)   | SM   | 40    |      |        |
| B    | 300 mm wide treads to receive ceramic tiles (m.s)  | LM   | 260   |      |        |
| C    | 150mm risers to receive ceramic tiles (m.s)  | LM   | 260   |      |        |
|      | <b><u>Ceramic Floor tiles to Wet Areas</u></b>   |      |       |      |        |
|      | <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>   |      |       |      |        |
| D    | Supply and Fix Ceramic tiles or equal and approved; Bidder to include all materials needed for fixing to completion as selected by the Architect: on prepared bed(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Floor Surfaces | SM   | 542   |      |        |
|      | <b><u>Terazzo Finishes</u></b>   |      |       |      |        |
|      | Prepare 40mm thick terazzo floor finish including polishing  | SM   | 5,810 |      |        |
|      | Ditto for ramp   | SM   | 392   |      |        |
|      | Ditto 25mm thick terazzo skirting 100mm high   | LM   | 2,076 |      |        |
|      | <b><u>Staircase finishes</u></b>   |      |       |      |        |
| C    | 32mm bed finished to receive terazzo to surfaces of Landings (m.s)   | SM   | 40    |      |        |
| H    | Terazzo to 300 mm wide treads  | LM   | 260   |      |        |
| J    | Terazzo to 150mm risers  | LM   | 260   |      |        |
|      | <b>Carried to Collection</b>   |      |       |      |        |

| Item | DESCRIPTION   | Unit | QTY   | Rate | Amount |
|------|---|------|-------|------|--------|
|      | <b><u>Ceiling finishes</u></b>  |      |       |      |        |
|      | <i>15mm (minimum) two coat lime plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</i>   |      |       |      |        |
| A    | Soffites of Concrete surfaces   | SM   | 6,784 |      |        |
|      | <b><u>Painting and Decoration</u></b>   |      |       |      |        |
|      | <i>Prepare, skim and apply Emulsion or universal undercoat followed by 3 coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</i> |      |       |      |        |
| B    | Plastered ceilings  | SM   | 6,784 |      |        |
|      | <b><u>Staircase soffit finishes</u></b>   |      |       |      |        |
|      | <i>15mm (minimum) two coat lime plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</i>   |      |       |      |        |
| C    | Soffits of staircase landing  | SM   | 40    |      |        |
| D    | Ditto to sloping soffites exceeding 15° from horizontal   | SM   | 96    |      |        |
|      | Ditto to ramp   | SM   | 392   |      |        |
| E    | Staircase string 300mm extreme girth and cut to profile of steps  | LM   | 120   |      |        |
|      | Ditto to ramp   | LM   | 120   |      |        |
|      | <b><u>Paint works</u></b>   |      |       |      |        |
|      | <i>Prepare, skim and apply Emulsion or universal undercoat followed by 3 coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</i> |      |       |      |        |
| F    | Soffits of staircase landing  | SM   | 40    |      |        |
| G    | Ditto to sloping soffites exceeding 15° from horizontal   | SM   | 96    |      |        |
|      | Ditto to ramp   | SM   | 392   |      |        |
| H    | Staircase string 300mm extreme girth and cut to profile of steps  | LM   | 120   |      |        |
|      | Ditto to ramp   | LM   | 120   |      |        |
|      | <b>Carried to Collection</b>  |      |       |      |        |

| Item | DESCRIPTION   | Unit | QTY    | Rate | Amount |
|------|---|------|--------|------|--------|
|      | <b>Collection</b>                                     |      |        |      |        |
|      | Total brought forward from page no:                   |      | SCH/12 |      |        |
|      | Total brought forward from page no:                   |      | SCH/13 |      |        |
|      | Total brought forward from page no:                   |      | SCH/14 |      |        |
|      | <b>ELEMENT NO. 7 Carried to<br/>INTERNAL FINISHES</b> |      |        |      |        |

| Item | DESCRIPTION  | Unit | QTY   | Rate | Amount |
|------|--|------|-------|------|--------|
|      | <b>PROPOSED PRIMARY SCHOOL</b>   |      |       |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>  |      |       |      |        |
|      | <b>ROOF FLOOR FINISHES</b>   |      |       |      |        |
|      | <u>Lightweight water proofed screeds</u>   |      |       |      |        |
| D    | 50mm average waterproofed lightweight screed laid to falls and crossfalls to roof slabs -upper roof including gutter bases   | SM   | 1,578 |      |        |
|      | <u>Prepare and apply to vertical/horizontal surfaces 4mm thick APP/EPDM water proofing or other equal and approved membrane with surface finish weighing 4kg/sm; laid on primer with torch-on process ;by an approved specialist all in accordance with the manufacturers instructions including provision of a written ten (10) year anti leak guarantee.</u> |      |       |      |        |
| E    | APP membrane applied to roof slabs - Roof Area   | SM   | 1,578 |      |        |
| F    | Ditto to skirting 200mm high   | LM   | 330   |      |        |
| G    | Dress membrane around 100mm rainwater outlet   | No.  | 16    |      |        |
|      | <u>The Following Flat roof concrete tiles fixed with approved adhesive, laid and jointed with waterproofing bituminous compound</u>  |      |       |      |        |
| E    | 20mm thick interlocking Concrete tiles of size 225 x 225mm   | SM   | 1,578 |      |        |
|      | <b>ELEMENT NO. 8 ROOF FINISHES Carried to the Main summary</b>   |      |       |      |        |

| Item  | DESCRIPTION                      | Unit | QTY                | Rate | Amount |
|---|----------------------------------|------|--------------------|------|--------|
| <b><u>PROPOSED PRIMARY SCHOOL</u></b>                   |                                  |      |                    |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>                         |                                  |      |                    |      |        |
| <b>MAIN SUMMARY</b>                                     |                                  |      |                    |      |        |
| <b>1</b>  | <b>Substructures</b>             |      | <b><u>PAGE</u></b> |      |        |
| <b>2</b>  | <b>Reinforced Concrete Frame</b> |      | <b>SCH/4</b>       |      |        |
| <b>3</b>  | <b>Walling</b>                   |      | <b>SCH/5</b>       |      |        |
| <b>4</b>  | <b>Windows</b>                   |      | <b>SCH/6</b>       |      |        |
| <b>5</b>  | <b>Doors</b>                     |      | <b>SCH/8</b>       |      |        |
| <b>6</b>  | <b>External Finishes</b>         |      | <b>SCH/10</b>      |      |        |
| <b>7</b>  | <b>Internal Finishes</b>         |      | <b>SCH/11</b>      |      |        |
| <b>8</b>  | <b>Roofing Finishes</b>          |      | <b>SCH/15</b>      |      |        |
| <b>8</b>  | <b>Roofing Finishes</b>          |      | <b>SCH/16</b>      |      |        |
| <b><u>TOTAL FOR SCHOOL CARRIED TO GRAND SUMMARY</u></b> |                                  |      |                    |      |        |



# **KINDERGATTEN**

| Item | DESCRIPTION   | Unit | QTY | Rate | Amount |
|------|---|------|-----|------|--------|
|      | <b><u>PROPOSED KINDERGARTEN</u></b>   |      |     |      |        |
|      | <b>BILL NO.6-BUILDERS WORKS</b>   |      |     |      |        |
|      | <b>ELEMENT NO 1 - SUBSTRUCTURES (ALL PROVISIONAL)</b>   |      |     |      |        |
|      | <u>Site Clearance</u>   |      |     |      |        |
| A    | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas.   | SM   | 552 |      |        |
| B    | Excavate average 200mm deep to remove top vegetable soil, load, remove from site and dump in designated local authority dump site.          | SM   | 552 |      |        |
| C    | Excavate to reduced levels in varying depths not exceeding 1.5m deep from existing ground levels.   | Cm   | 828 |      |        |
| D    | Ditto exceeding 1.5m deep but not exceeding 3.0m from existing reduced levels.  | Cm   | 276 |      |        |
| E    | Excavate for column bases foundations depth starting from Reduced ground levels.  | Cm   | 6   |      |        |
| F    | Excavate for Strip foundations depth starting from Reduced ground levels.   | Cm   | 56  |      |        |
| G    | Extra over all type of excavation for excavating in soft rock   | Cm   | 3   |      |        |
| H    | Ditto excavation in hard rock class I   | Cm   | 3   |      |        |
|      | <b>Disposal of water</b>  |      |     |      |        |
| I    | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary | Item |     |      |        |
|      | <b>Planking and strutting</b>   |      |     |      |        |
| J    | Allow for maintaining and upholding the sides of excavations and keeping excavations clear of all fallen materials, rubbish etc             | Item |     |      |        |
|      | <b>Carried to collection</b>  |      |     |      |        |

|   |   |    |       |  |  |
|---|---|----|-------|--|--|
|   | <b><u>Disposal of excavated material</u></b>  |    |       |  |  |
| A | Return, fill and ram selected excavated material around foundations.  | CM | 202   |  |  |
| B | Load, wheel and cart away surplus excavated material to a Local Authority designated dumping site or fill soil heaps as away from site instructed by the Project Engineer.  | CM | 1,131 |  |  |
|   | <b>Fillings</b>   |    |       |  |  |
| C | Make up levels using approved imported materials: compacted in layers not exceeding 300mm thick with a roller: to the satisfaction of the Structural Engineer.  | CM | 789   |  |  |
| D | 300mm thick hardcore bed: hand packed : compacted in layers not exceeding 150mm thick: to the satisfaction of the Structural Engineer   | SM | 526   |  |  |
| E | Labour to form sinking in hardcore; 350mm average x 200 mm deep   | LM | 9     |  |  |
| F | 50 mm Thick Murrum Blinding to surfaces of hadcore  | SM | 526   |  |  |
|   | <b>Anti - termite to treatment</b>  |    |       |  |  |
| G | Approved anti-termite treatment, with ten-year guarantee, sprayed to surfaces of hardcore strictly in accordance with manufacturer's instructions.  | SM | 552   |  |  |
|   | <b>Damp-proof membrane</b>  |    |       |  |  |
| H | 1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps); 1 No. layer: bedded in and including cement and sand (1:3) mortar | SM | 552   |  |  |
|   | <b>Concrete Blinding</b>  |    |       |  |  |
|   | <b>Insitu concrete Class 15MPa: vibrated:</b>   |    |       |  |  |
| I | 50 mm Thick under strip foundation  | SM | 113   |  |  |
| J | 50 mm Thick under column bases  | SM | 20    |  |  |
|   | <b>In- situ vibrated reinforced concrete Class 25MPa: in:</b>   |    |       |  |  |
| K | Column bases  | CM | 6     |  |  |
| L | Columns   | CM | 2     |  |  |
| M | Ground beams  | CM | 8     |  |  |
| N | Strip foundation  | CM | 23    |  |  |
| O | Steps   | CM | 2     |  |  |
| P | 100mm thick surface bed   | SM | 552   |  |  |
| Q | Slab thicknesing 200x300mm thick  | LM | 9     |  |  |
|   | <b>Carried to collection</b>  |    |       |  |  |

|   |   |    |       |  |  |
|---|---|----|-------|--|--|
|   | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b>  |    |       |  |  |
| A | Assorted reinforcement  | KG | 2,514 |  |  |
|   | <b>Mesh fabric reinforcement to K/EAS 412;2 (2019) BRC A142;200 x 200mm, weighing 2.22kg/m<sup>2</sup> (measured net - no allowance) for laps; in two layers - top &amp; bottom; including bends, tying wire and spacer blocks)</b>                     |    |       |  |  |
| B | In floor beds   | SM | 552   |  |  |
|   | <u>Modular steel frame with steel plates covering formwork and/or marine board formwork: to:</u>  |    |       |  |  |
| C | Vertical sides to columns   | SM | 40    |  |  |
| D | Vertical sides to column bases  | SM | 24    |  |  |
| E | Vertical sides to strip footing   | SM | 75    |  |  |
| F | Vertical sides to ground beams  | SM | 75    |  |  |
| G | Edge of slab not exceeding 150mm girth  | LM | 80    |  |  |
| H | Edge of risers not exceeding 150mm girth  | LM | 81    |  |  |
|   | <b>Foundation Walling</b>   |    |       |  |  |
|   | <b>Natural quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</b>                |    |       |  |  |
| I | 200mm thick walls in foundations  | SM | 332   |  |  |
|   | <b><u>Pavings</u></b>   |    |       |  |  |
| J | Supply and lay 600 x 600 x 50mm reinforced concrete precast paving slabs around the building including laying, spreading and compacting 100mm thick approved sand bed blinding, on and including 150mm thick compacted hardcore to Engineer's approval. | SM | 48    |  |  |
|   | <b><u>Plinth</u></b>  |    |       |  |  |
|   | <b><u>25mm Thick cement and sand (1:3) rendering on concrete or masonry ; wood float finished; to</u></b>   |    |       |  |  |
| K | Plinths externally  | SM | 36    |  |  |
|   | <b>Two coats black bitumastic paint on:</b>   |    |       |  |  |
| L | Rendered surfaces   | SM | 36    |  |  |
|   | <b>Carried to collection</b>  |    |       |  |  |

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|--|---|--|--|--|--|
|  | <p><b>COLLECTION</b></p> <p>Total brought forward from page no: 1</p> <p>Total brought forward from page no: 2</p> <p>Total brought forward from page no: 3</p> |  |  |  |  |
|  | <p><b><u>ELEMENT NO. 1</u></b><br/><b><u>SUBSTRUCTURES</u></b></p>  |  |  |  | <p><b>Carried to</b><br/><b>Main summary</b></p> |

|   |   |    |       |  |  |
|---|---|----|-------|--|--|
|   | <p><b><u>PROPOSED KINDERGARTEN</u></b></p> <p><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT No 2 - R.C FRAME</b></p> <p><i>In situ concrete class 25MPa: vibrated: reinforced</i></p> |    |       |  |  |
| A | Columns   | CM | 2     |  |  |
| B | Ring beam   | CM | 23    |  |  |
| C | Ramp  | SM | 5     |  |  |
|   | <p><b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b></p>     |    |       |  |  |
| D | Assorted reinforcement  | Kg | 3,776 |  |  |
|   | <p><i>Modular steel frame with steel plates covering formwork and/or marine board formwork: to</i></p>  |    |       |  |  |
| E | Sides and soffites of beams   | Sm | 150   |  |  |
| F | Sides of columns  | Sm | 41    |  |  |
|   | <p><b><u>ELEMENT NO. 2</u></b>                      <b>Carried to</b></p> <p><b><u>R.C FRAME</u></b>                              <b>Main summary</b></p>                                 |    |       |  |  |

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|  | <p><b><u>PROPOSED KINDERGARTEN</u></b></p> <p><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT No 3-WALLING</b></p> <p><b><u>WALLING</u></b></p> <p><b><u>External Walling</u></b></p> <p><i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i></p> <p>A 200mm thick walling Externally</p> <p>B 200mm thick Gable walling</p> <p><b><u>Internal Walling</u></b></p> <p><i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i></p> <p>C 200mm thick walling Internally</p> <p>D 150mm thick walling Internally</p> <p>E Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar</p> |    |     |  |  |
|  |   | Sm | 210 |  |  |
|  |   | Sm | 74  |  |  |
|  |   | Sm | 81  |  |  |
|  |   | Sm | 20  |  |  |
|  |   | Lm | 187 |  |  |
|  | <p><b><u>ELEMENT NO. 3</u></b>                      <b>Carried to</b></p> <p><b><u>WALLING</u></b>                                <b>Main summary</b></p>   |    |     |  |  |

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|--|---|----|-----|--|--|
| <b><u>PROPOSED KINDERGARTEN</u></b>  |   |    |     |  |  |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |    |     |  |  |
| <b>ELEMENT NO 4-WINDOWS</b>  |   |    |     |  |  |
| <b><u>MILD STEEL WINDOWS</u></b>   |   |    |     |  |  |
| <p>Supply, fabricate and fix the following purpose made mild steel casement windows to be fabricated from approved mild steel sections (atleast 14g 2mm thick ) comprising of frame and casement incorporating permanent hooded high level ventilation panels infilled with mosquito gauze : window supplied complete with and including 12mm solid square burglar proofing bars fixed at 200mm centres both ways and metal fixing lugs including building into wall and making good, and all necessary iron mongery viz hinges, fasteners, and hasp including shop priming window with red oxide primer before delivery to site:-</p> <p>A prime cost sum of Kshs 4,500 per Sqm has been allowed for fabrication of the above specified Steel casement Windows by AHP juakali artisans as approved by the Project Manager/Architect.</p> <p>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</p> |   |    |     |  |  |
| A  | Window, overall size 2400 X 1500mm high to Architects Details   | NO | 11  |  |  |
| B  | Ditto Size 600 x 900mm high (WC/SH)   | NO | 3   |  |  |
| C  | Ditto size 525 X 1500mm high to Architects Details  | NO | 13  |  |  |
| <b><u>Glazing</u></b>  |   |    |     |  |  |
| C  | 4mm Thick clear sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with premium putty | SM | 50  |  |  |
| D  | Ditto; obscure  | SM | 2   |  |  |
| <b><u>Painting and Decorations</u></b>   |   |    |     |  |  |
| <b><u>On Metal work</u></b>  |   |    |     |  |  |
| <b><u>Prepare and apply aerosol spray painting in two finishing coats of first grade paint as per the manufacturer's printed instructions to: -</u></b>  |   |    |     |  |  |
| E  | General window and grille surfaces; over 300mm girth internal   | SM | 102 |  |  |
| <b>Carried to Collection</b>   |   |    |     |  |  |



|   |   |    |    |  |  |
|---|---|----|----|--|--|
| A | <p><b><u>Precast concrete window cill finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in pigmented cement and sand (1:3) mortar</u></b></p> <p>150 x 25mm thick precast concrete window sill</p> <p><b>Carried to collection</b></p> <p><b>COLLECTION</b></p> <p>Total brought forward from page no: 7</p> <p>Total brought forward from page no: 8</p> | LM | 37 |  |  |
|   | <p><b><u>ELEMENT NO. 4</u></b>                      <b>Carried to the</b></p> <p><b><u>WINDOWS</u></b>                              <b>Main summary</b></p>   |    |    |  |  |

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|---|--|----|----|--|--|
| <b><u>PROPOSED KINDERGARTEN</u></b>   |  |    |    |  |  |
| <b>BILL NO.1-BUILDERS WORKS</b>   |  |    |    |  |  |
| <b>ELEMENT NO 5-DOORS</b>   |  |    |    |  |  |
| <b><u>Steel Casement Doors</u></b>  |  |    |    |  |  |
| <p>Supply, fabricate and fix the following purpose made mild steel casement door comprising 40 x 25 x3mm stiles, top and bottom stiles, 4 No Intermediate rails, 1.5mm steel sheet both sideswelded in place and 5mm thick clear glazing, all primed with red oxide and spray painted with two finishing coats of first grade quality gloss oil paint on ; complete with all necessary ironmongery fasteners and necessary seremetals assembled and fixed to opening including cutting and pinning lugs to concrete or block work sorroung and bedding frame in cement and sand mortar (1:3).</p> |  |    |    |  |  |
| A   | Door size 900 x 2400mm high  | NO | 4  |  |  |
| B   | Ditto Door size 1500 x 2400mm high   | NO | 1  |  |  |
| <i>Frames and frame finishes in cypress Timber</i>  |  |    |    |  |  |
| C   | 25 x 25mm quadrant (PC Rate Kshs 75)   | LM | 38 |  |  |
| D   | 25 x 50mm architrave with two labours, plugged (PC Rate Kshs 150)                  | LM | 38 |  |  |
| E   | 150mm x 50mm frame with three labours; chamfered edges; plugged (PC Rate Kshs 800) | LM | 38 |  |  |
| <b>Flush timber doors</b>   |  |    |    |  |  |
| <b>50 mm thick Semi Solid cored flush doors with plywood facing to receive painting (m.s) all to Architects details, specifications and approval</b>  |  |    |    |  |  |
| <b>A prime cost sum at the rate indicated below for fabrication of the above specified Timber Flush door leaves by AHP juakali artisans as approved by the Project Manager/Architect.</b>   |  |    |    |  |  |
| <b>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</b>  |  |    |    |  |  |
| F   | Door size 900mm x 2060mm (PC Rate Kshs 4,000)                                      | NO | 4  |  |  |
| G   | Ditto Size 800 x 2060mm high (PC Rate Kshs 3,500)                                  | NO | 4  |  |  |
| <b>Carried to collection</b>  |  |    |    |  |  |

|   |   |                     |    |  |  |
|---|---|---------------------|----|--|--|
|   | <u>Painting and decorating</u>  |                     |    |  |  |
|   | <u>Priming back of frame with an aluminium or equivalent and approved wood primer</u>   |                     |    |  |  |
| A | Surfaces not exceeding 100mm girth  | LM                  | 76 |  |  |
| B | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 38 |  |  |
|   | <u>Prepare Knot, prime, stop and apply one undercoat and two finishing coats first grade timber quality paint to wood surfaces as per the manufacturer's printed instructions</u> |                     |    |  |  |
| C | General timber surfaces   | SM                  | 26 |  |  |
| D | Surfaces not exceeding 200mm girth  | LM                  | 38 |  |  |
| E | Architraves: not exceeding 100 mm girth   | LM                  | 38 |  |  |
| F | Quadrant beading : not exceeding 100 mm girth   | LM                  | 38 |  |  |
|   | <b>Ironmongery</b>  |                     |    |  |  |
|   | <b>Supply and fix the following ironmongery to timber complete with matching screws and keys to the approval of the Architect</b>   |                     |    |  |  |
|   | <u>Supply and Fix the following ironmongery to the approval of the Architect</u>  |                     |    |  |  |
| G | 100mm pressed steel Butt Hinges   | Pairs               | 12 |  |  |
| H | Stainless steel 2 Lever Door Lock with handles  | NO                  | 8  |  |  |
| I | Door fixing cramps  | NO                  | 8  |  |  |
|   | <b>Carried to Collection</b>  |                     |    |  |  |
|   | <b>COLLECTION</b>   |                     |    |  |  |
|   | Total brought forward from page no: 9   |                     |    |  |  |
|   | Total brought forward from page no: 10  |                     |    |  |  |
|   | <b>ELEMENT NO. 5</b>  | <b>Carried to</b>   |    |  |  |
|   | <b>DOORS</b>  | <b>Main summary</b> |    |  |  |



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|   | <p><b><u>PROPOSED KINDERGARTEN</u></b></p> <p><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT NO 7 - INTERNAL FINISHES</b></p> <p><b><u>Internal Wall Finishes</u></b></p> <p><u>Cement and sand (1:3) backings</u></p>   |    |     |  |  |
| A | <p>15mm thick to receive ceramic Wall tiles</p> <p><u>Ceramic wall tiles</u></p> <p><u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u></p>  | SM | 54  |  |  |
| B | <p>Supply and Fix approved ceramic wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces</p> <p><u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u></p> | SM | 54  |  |  |
| C | <p>Concrete/masonry surfaces</p>  | SM | 431 |  |  |
| D | <p>Ditto to door Jambs Externally and Surfaces not exceeding 200mm girth</p> <p><b><u>Painting and Decoration</u></b></p> <p><u>Prepare, Skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u></p>  | LM | 206 |  |  |
| E | <p>Plastered concrete/masonry surfaces internally</p>   | SM | 431 |  |  |
| F | <p>Ditto to window cills, door Jambs Externally and Surfaces not exceeding 200mm girth</p>  | LM | 206 |  |  |
|   | <p><b>Carried to Collection</b></p>   |    |     |  |  |

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|---|---|----|-----|--|--|
|   | <b><u>Floor Finishes</u></b>  |    |     |  |  |
|   | <u>Cement and sand (1:3) screeds, backings, beds etc</u>  |    |     |  |  |
| A | 32mm bed finished to receive Floor Tiles (m.s)  | SM | 487 |  |  |
| B | 32mm Thick coloured cement sand screed mix 1:3 finished with red oxide to approval  | SM | 5   |  |  |
|   | <b>Steps finishes</b>   |    |     |  |  |
|   | <u>Cement and sand (1:4 ) backings etc</u>  |    |     |  |  |
| C | 25 x 300 mm wide treads to receive ceramic tiles (m.s)  | LM | 80  |  |  |
| D | 20 x 150mm risers to receive ceramic tiles (m.s)  | LM | 81  |  |  |
|   | <u>Ceramic Floor tiles</u>  |    |     |  |  |
|   | <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |    |     |  |  |
| E | Supply and Fix Ceramic tiles, on prepared bed(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. | SM | 487 |  |  |
| F | Ditto Non Slip Ceramic Tiles  | SM | 0   |  |  |
| G | Ditto 100mm wide Wall Skirtings   | LM | 259 |  |  |
|   | <b>Steps finishes</b>   |    |     |  |  |
| H | Non Slip Ceramic Tiles to 300 mm wide treads  | LM | 80  |  |  |
| I | Non Slip Ceramic Tiles to 150mm risers  | LM | 81  |  |  |
|   | <b>Carried to Collection</b>  |    |     |  |  |

|   |   |    |     |  |  |
|---|---|----|-----|--|--|
|   | <b>Ceiling finishes</b>   |    |     |  |  |
|   | <u>Chipboard ceiling</u>  |    |     |  |  |
| A | Supply and fix 6mm thick chipboard ceiling on timber brandering (m.s)   | SM | 492 |  |  |
|   | <u>Painting and Decoration</u>  |    |     |  |  |
|   | <u>Prepare, skim and apply Emulsion or universal undercoat followed by 3 coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u> |    |     |  |  |
| B | Chipboard Ceiling   | SM | 492 |  |  |
|   | <b>Timber brandering</b>  |    |     |  |  |
|   | <u>Sawn cypress timber</u>  |    |     |  |  |
| C | 50x50mm brandering at 600mm c/c   | SM | 492 |  |  |
|   | <b>Carried to Collection</b>  |    |     |  |  |

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|  | <p><b>COLLECTION</b></p> <p>Total brought forward from page no: 12</p> <p>Total brought forward from page no: 13</p> <p>Total brought forward from page no: 14</p> |  |  |  |  |
|  | <p><b><u>ELEMENT NO. 7</u> Carried to</b><br/><b>INTERNAL FINISHES</b></p>   |  |  |  |  |



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|---|---|----|-------|--|--|
|   | <p><b>PROPOSED KINDERGARTEN</b></p> <p><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT NO 8 - ROOFING</b></p> <p><b><u>ROOF STRUCTURE (GABLE ROOF)</u></b></p> <p><b><u>Note: All structural timber to be celcured [factory impregnated]</u></b></p> <p><b><u>Note:All timber members are jointed using galvanised nails and timber plates.</u></b></p> <p><u>First grade sawn cypress: Approved structural grade: with and including all jointing and connections as necessary: in roof trusses</u></p> <p><u>(All timber work is provisional)</u></p> |    |       |  |  |
| A | 150 x 50 mm wall plate: fixed to masonry blocks: including hoop iron at 900mm centres   | LM | 104   |  |  |
| B | 150 x 50 mm ridge board   | LM | 111   |  |  |
| C | 100 x 50 rafters  | LM | 1,316 |  |  |
| D | 100 x 50 mm Purlins   | LM | 592   |  |  |
| E | 200 x 25 mm Fascia and barge boards   | LM | 104   |  |  |
|   | <b><u>ROOF COVERING</u></b>   |    |       |  |  |
| F | Gauge 30 prepainted Galvanised Corrugated Iron roofing sheets as MRM or other equal and approved:200mm head laps:2 corrugations side laps nailed to purlins with galvanised nails c/w matching rubber washers   | SM | 658   |  |  |
| G | Ditto: ridge caps : 200mm overlap   | LM | 56    |  |  |
|   | <b><u>RAIN WATER GOODS</u></b>  |    |       |  |  |
| H | PVC Gutters size 200mm dia fixed to fascia boards (m/s) with and including approved steel brackets at 1000mm centres  | LM | 104   |  |  |
| I | Ditto: 100mm diameter offset  | NO | 14    |  |  |
| J | Ditto: 100mm diameter downpipe fixed to the wall using brackets   | NO | 46    |  |  |
| K | Ditto: 100mm diameter shoe  | NO | 14    |  |  |
|   | <b>ELEMENT NO. 8 ROOFING Carried to the Main summary</b>  |    |       |  |  |

| <b><u>PROPOSED KINDERGARTEN</u></b>                           |                           |  |                    |                             |
|---|---------------------------|--|--------------------|-----------------------------|
| <b>BILL NO.1-BUILDERS WORKS</b>                               |                           |  |                    |                             |
|   | <b>MAIN SUMMARY</b>       |  | <b><u>PAGE</u></b> | <b><u>AMOUNT (KSHS)</u></b> |
| 1   | Substructures             |  | K/4                |                             |
| 2   | Reinforced Concrete Frame |  | K/5                |                             |
| 3   | Walling                   |  | K/6                |                             |
| 4   | Windows                   |  | K/8                |                             |
| 5   | Doors                     |  | K/10               |                             |
| 6   | External Finishes         |  | K/11               |                             |
| 7   | Internal Finishes         |  | K/15               |                             |
| 8   | Roofing                   |  | K/16               |                             |
| <b><u>TOTAL FOR KINDERGARTEN CARRIED TO GRAND SUMMARY</u></b> |                           |  |                    |                             |

**COMMERCIAL CENTRE**

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|--|---|------|-----|------|--------|
| <b><u>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</u></b> |   |      |     |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |      |     |      |        |
| <b>ELEMENT NO 1 - SUBSTRUCTURES (ALL PROVISIONAL)</b>  |   |      |     |      |        |
| <i>Site Clearance</i>  |   |      |     |      |        |
| A  | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas.   | SM   | 313 |      |        |
| B  | Excavate average 200mm deep to remove top vegetable soil, load, remove from site and dump in designated local authority dump site.          | SM   | 313 |      |        |
| C  | Excavate to reduced levels in varying depths not exceeding 1.5m deep from existing ground levels.   | Cm   | 140 |      |        |
| D  | Excavate for Strip foundations depth not exceeding 1.50 metres starting from Reduced ground levels.   | Cm   | 246 |      |        |
| E  | Excavate for column bases depth not exceeding 1.5m starting from reduced Levels   | Cm   | 20  |      |        |
| F  | Extra over all type of excavation for excavating in soft rock   | Cm   | 26  |      |        |
| <b>Disposal of water</b>   |   |      |     |      |        |
| G  | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary | Item | 1   |      |        |
| <b>Planking and strutting</b>  |   |      |     |      |        |
| H  | Allow for maintaining and upholding the sides of excavations and keeping excavations clear of all fallen materials, rubbish etc             | Item | 1   |      |        |
| <b>Carried to collection</b>   |   |      |     |      |        |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|------|---|------|-----|------|--------|
|      | <u>Disposal of excavated material</u>   |      |     |      |        |
| A    | Return, fill and ram selected excavated material around foundations.  | CM   | 227 |      |        |
| B    | Load, wheel and cart away surplus excavated material to a Local Authority designated dumping site or fill soil heaps as away from site instructed by the Project Engineer.  | CM   | 37  |      |        |
|      | <b>Fillings</b>   |      |     |      |        |
| C    | Make up levels using approved imported materials: compacted in layers not exceeding 300mm thick with a roller: to the satisfaction of the Structural Engineer.  | CM   | 151 |      |        |
| D    | 300mm thick hardcore bed: hand packed : compacted in layers not exceeding 150mm thick: to the satisfaction of the Structural Engineer   | SM   | 313 |      |        |
| E    | 50 mm Thick Murram Blinding to surfaces of hadcore  | SM   | 313 |      |        |
|      | <b>Anti - termite to treatment</b>  |      |     |      |        |
| F    | Approved anti-termite treatment, with ten-year guarantee, sprayed to surfaces of hardcore strictly in accordance with manufacturer's instructions.  | SM   | 313 |      |        |
|      | <b>Damp-proof membrane</b>  |      |     |      |        |
| G    | 1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps); 1 No. layer: bedded in and including cement and sand (1:3) mortar | SM   | 313 |      |        |
|      | <b>Concrete Blinding</b>  |      |     |      |        |
|      | <b>In situ concrete class 15/20 mm aggregates: vibrated:</b>  |      |     |      |        |
| H    | 50 mm Thick under column bases  | SM   | 34  |      |        |
| J    | 50 mm Thick under strip foundation  | SM   | 164 |      |        |
|      | <b>In- situ vibrated reinforced concrete Class 25 (20mm aggregates): in:</b>  |      |     |      |        |
| K    | Column bases  | CM   | 14  |      |        |
| L    | Columns   | CM   | 2   |      |        |
| M    | Strip foundation  | CM   | 33  |      |        |
| N    | 100mm thick surface bed   | SM   | 312 |      |        |
|      | <b>Carried to collection</b>  |      |     |      |        |

| ITEM | DESCRIPTION  | UNIT | QTY   | RATE | AMOUNT |
|------|--|------|-------|------|--------|
|      | <b>Ribbed reinforcement steel bars to BS4449: 2005: Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b>   |      |       |      |        |
| A    | Assorted reinforcement   | Kg   | 3,650 |      |        |
|      | <b>Mesh fabric reinforcement to BS 4483 BRC A142;200 x 200mm, weighing 2.22kg/m<sup>2</sup> (measured net - no allowance) for laps; in two layers - top &amp; bottom; including bends, tying wire and spacer blocks)</b> |      |       |      |        |
| B    | In floor beds.   | SM   | 312   |      |        |
|      | <u>Modular steel frame with 5mm thick steel plates covering formwork and/or marine board formwork: to:</u>   |      |       |      |        |
| C    | Vertical sides of columns  | SM   | 41    |      |        |
| D    | Vertical sides of column bases   | SM   | 54    |      |        |
| E    | Edge of slab not exceeding 150mm girth   | LM   | 172   |      |        |
|      | <b>Foundation Walling</b>  |      |       |      |        |
|      | <b>Natural quarry stones rough dressed; bedded in and including cement and sand (1:4) mortar; reinforced with and including 45 mm wide hoop iron gauge in alternate courses: in:</b>                                     |      |       |      |        |
| F    | 200mm thick walls in foundations   | SM   | 356   |      |        |
|      | <b><u>Pavings</u></b>  |      |       |      |        |
| G    | Supply and lay 600 x 600mm medium duty paving blocks round the Building including laying, spreading and compacting 100mm thick approved sand bed blinding to approval.   | SM   | 110   |      |        |
|      | <b><u>Plinth</u></b>   |      |       |      |        |
|      | <b><u>25mm Thick cement and sand (1:4) rendering on concrete or masonry ; wood float finished; to</u></b>  |      |       |      |        |
| H    | Plinths externally   | SM   | 52    |      |        |
|      | <b>Two coats black bitumastic paint on:</b>  |      |       |      |        |
| J    | Rendered surfaces  | SM   | 52    |      |        |
|      | <b>Carried to collection</b>   |      |       |      |        |

| ITEM | DESCRIPTION                         | UNIT | QTY  | RATE | AMOUNT |
|------|-------------------------------------|------|------|------|--------|
|      | <b>COLLECTION</b>                   |      |      |      |        |
|      | Total brought forward from page no: |      | CM/1 |      |        |
|      | Total brought forward from page no: |      | CM/2 |      |        |
|      | Total brought forward from page no: |      | CM/3 |      |        |
|      | <b><u>ELEMENT NO. 1</u></b>         |      |      |      |        |
|      | <b><u>SUBSTRUCTURES</u></b>         |      |      |      |        |
|      | <b>Carried to<br/>Main summary</b>  |      |      |      |        |

| ITEM  | DESCRIPTION  | UNIT                | QTY    | RATE | AMOUNT |
|---|--|---------------------|--------|------|--------|
| <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING<br/>PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</b>   |  |                     |        |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>   |  |                     |        |      |        |
| <b>ELEMENT No 2 - R.C FRAME</b>   |  |                     |        |      |        |
| <i>In situ concrete class 25 (20 mm aggregate): vibrated: reinforced</i>  |  |                     |        |      |        |
| A   | Columns  | CM                  | 8      |      |        |
| B   | Beams  | CM                  | 16     |      |        |
| C   | Upper Roof Beams   | CM                  | 16     |      |        |
| D   | 150mm thick suspended slab                                       | SM                  | 312    |      |        |
| E   | 150 mm thick landing   | SM                  | 14     |      |        |
| F   | Staircases   | CM                  | 6      |      |        |
| <b>Ribbed reinforcement steel bars to BS4449: 2005:Grade 500<br/>high tensile strength including bends, hooks, tying wire and<br/>distance blocks to S.E's detail (All provisional)</b> |  |                     |        |      |        |
| G   | Assorted reinforcement   | Kg                  | 11,256 |      |        |
| <i>Modular steel frame with 5mm thick steel plates covering formwork<br/>and/or marine board formwork: to</i>   |  |                     |        |      |        |
| H   | Sides of columns   | Sm                  | 163    |      |        |
| J   | Sides and soffites of beams                                      | Sm                  | 218    |      |        |
| K   | Soffits of suspended solid slabs                                 | Sm                  | 312    |      |        |
| L   | Edges of slab over 150mm but not exceeding 225mm girth           | Lm                  | 172    |      |        |
| M   | Sloping soffites of staircases                                   | SM                  | 54     |      |        |
| N   | Soffits of landings  | SM                  | 14     |      |        |
| P   | Riser of steps over 150 mm but not exceeding 225 mm girth        | LM                  | 90     |      |        |
| Q   | Staircase string 300mm extreme girth and cut to profile of steps | LM                  | 26     |      |        |
| R   | Edges of landing over 150 but not exceeding 225mm high           | Lm                  | 9      |      |        |
| <b><u>ELEMENT NO. 2</u></b>   |  | <b>Carried to</b>   |        |      |        |
| <b><u>R.C FRAME</u></b>   |  | <b>Main summary</b> |        |      |        |



| ITEM   | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |   |                                |    |     |  |  |   |                                |    |     |  |  |   |   |    |     |  |  |  |  |  |  |  |  |
|--|---|------|-----|------|--------|---|--------------------------------|----|-----|--|--|---|--------------------------------|----|-----|--|--|---|---|----|-----|--|--|--|--|--|--|--|--|
| <p align="center"><b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</b></p> <p align="center"><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT No 3-WALLING</b></p> <p><b>WALLING</b></p> <p><b>External Walling</b></p> <p><i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength to B.S 5390;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i></p> <tr> <td data-bbox="76 748 156 779">A</td> <td data-bbox="156 748 957 779">200mm thick walling Externally</td> <td data-bbox="957 748 1054 779">Sm</td> <td data-bbox="1054 748 1177 779">894</td> <td data-bbox="1177 748 1305 779"></td> <td data-bbox="1305 748 1508 779"></td> </tr> <p><b>Internal Walling</b></p> <p><i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength to B.S 5390;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i></p> <tr> <td data-bbox="76 1137 156 1169">B</td> <td data-bbox="156 1137 957 1169">200mm thick walling Internally</td> <td data-bbox="957 1137 1054 1169">Sm</td> <td data-bbox="1054 1137 1177 1169">604</td> <td data-bbox="1177 1137 1305 1169"></td> <td data-bbox="1305 1137 1508 1169"></td> </tr> <tr> <td data-bbox="76 1214 156 1245">C</td> <td data-bbox="156 1196 957 1258">Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar</td> <td data-bbox="957 1227 1054 1258">Lm</td> <td data-bbox="1054 1227 1177 1258">544</td> <td data-bbox="1177 1227 1305 1258"></td> <td data-bbox="1305 1227 1508 1258"></td> </tr> <tr> <td data-bbox="76 1792 156 1865"></td> <td data-bbox="156 1792 957 1865"><b>ELEMENT NO. 3</b><br/><b>WALLING</b></td> <td data-bbox="957 1792 1054 1865"></td> <td data-bbox="1054 1792 1177 1865"></td> <td data-bbox="1177 1792 1305 1865"></td> <td data-bbox="1305 1792 1508 1865"></td> </tr> |   |      |     |      |        | A | 200mm thick walling Externally | Sm | 894 |  |  | B | 200mm thick walling Internally | Sm | 604 |  |  | C | Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar | Lm | 544 |  |  |  | <b>ELEMENT NO. 3</b><br><b>WALLING</b> |  |  |  |  |
| A  | 200mm thick walling Externally  | Sm   | 894 |      |        |   |                                |    |     |  |  |   |                                |    |     |  |  |   |   |    |     |  |  |  |  |  |  |  |  |
| B  | 200mm thick walling Internally  | Sm   | 604 |      |        |   |                                |    |     |  |  |   |                                |    |     |  |  |   |   |    |     |  |  |  |  |  |  |  |  |
| C  | Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar | Lm   | 544 |      |        |   |                                |    |     |  |  |   |                                |    |     |  |  |   |   |    |     |  |  |  |  |  |  |  |  |
|  | <b>ELEMENT NO. 3</b><br><b>WALLING</b>  |      |     |      |        |   |                                |    |     |  |  |   |                                |    |     |  |  |   |   |    |     |  |  |  |  |  |  |  |  |

Carried to  
Main summary

| ITEM | DESCRIPTION   | UNIT                               | QTY | RATE | AMOUNT |
|------|---|------------------------------------|-----|------|--------|
|      | <p align="center"><b><u>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</u></b></p> <p align="center"><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT NO 4-WINDOWS</b></p> <p><b><u>MILD STEEL WINDOWS</u></b></p> <p><b>Supply, fabricate and fix the following purpose made mild steel casement windows to be fabricated from approved mild steel sections (atleast 14g 2mm thick ) comprising of frame and casement incorporating permanent hooded high level ventilation panels infilled with mosquito gauze : window supplied complete with and including 12mm solid square burglar proofing bars fixed at 200mm centres both ways and metal fixing lugs including building into wall and making good, and all necessary iron mongery viz hinges, fasteners, and hasp including shop priming window with red oxide primer before delivery to site:-</b></p> |                                    |     |      |        |
| A    | Window, overall size 600 x 900mm high to Architects Details (WC/SH)   | NO                                 | 16  |      |        |
|      | <b><u>Glazing</u></b>   |                                    |     |      |        |
| B    | 4mm Thick obscure sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with putty   | SM                                 | 9   |      |        |
|      | <b><u>Painting and Decorations</u></b>  |                                    |     |      |        |
|      | <b><u>On Metal work</u></b>   |                                    |     |      |        |
|      | <b><u>Prepare and apply aerosol spray painting in two finishing coats of first grade approved paint as described in</u></b>   |                                    |     |      |        |
| C    | General window and grille surfaces; over 300mm girth internal   | SM                                 | 18  |      |        |
|      | <b><u>Bull-nosed burnt clay, finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in pigmented cement and sand (1:3) mortar</u></b>  |                                    |     |      |        |
| D    | 150 x 25mm thick clay window sill   | LM                                 | 10  |      |        |
|      | <b><u>ELEMENT NO. 4 WINDOWS</u></b>   | <b>Carried to the Main summary</b> |     |      |        |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|--|--|------|-----|------|--------|
| <b><u>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</u></b>   |  |      |     |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |  |      |     |      |        |
| <b>ELEMENT NO 5-DOORS</b>  |  |      |     |      |        |
| <b><u>Roller shutter door</u></b>  |  |      |     |      |        |
| A  | Roller shutter door 1800 x 2400mm high ;<br>comprising of 1800 x 2400 mm high roller shutter in<br>200mm wide gauge 18 mildsteel laths; galvanized iron pipe<br>suspension system inclusive of vertical guide chanel, brackets<br>and brackets in midsteel;2 no 650 x 2000 mm high fixed lights<br>in 75 x 50 mm powder coated frames with all necessary iron<br>mongery, painting all to architects details and approval. | No   | 32  |      |        |
| <b>Flush timber doors</b>  |  |      |     |      |        |
| <b>50 mm thick Semi Solid cored flush doors with plywood<br/>facing to receive painting (m.s) all to Architects details,<br/>specifications and approval</b> |  |      |     |      |        |
| B  | Door size 900mm x 2400mm including fixed fanlight size 900 x<br>300mm high in 4mm clear glass (m.s)  | NO   | 28  |      |        |
| <b>4mm Thick clear sheet glass fixing with timber glazing<br/>beads to timber casements.</b>   |  |      |     |      |        |
| C  | In panes exceeding 0.1 sqm but not exceeding 0.5 square<br>metres.   | SM   | 8   |      |        |
| <i><u>Frames and frame finishes in soft wood Timber</u></i>  |  |      |     |      |        |
| D  | 25 x 25mm quadrant   | LM   | 160 |      |        |
| E  | 25 x 50mm architrave with two labours, plugged   | LM   | 160 |      |        |
| F  | 150 x 50mm frame with three labours; chamfered edges; plugged  | LM   | 160 |      |        |
| <b>Carried to collection</b>   |  |      |     |      |        |

| ITEM | DESCRIPTION   | UNIT                | QTY  | RATE | AMOUNT |
|------|---|---------------------|------|------|--------|
|      | <u>Painting and decorating</u>  |                     |      |      |        |
|      | <u>Priming back of frame with an aluminium or equivalent and approved wood primer</u>   |                     |      |      |        |
| A    | Surfaces not exceeding 100mm girth  | LM                  | 160  |      |        |
| B    | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 160  |      |        |
|      | <u>Prepare Knot, prime, stop and apply one undercoat and two coats first grade quality gloss oil paint to wood surfaces</u>       |                     |      |      |        |
| C    | General timber surfaces   | SM                  | 106  |      |        |
| D    | Surfaces not exceeding 200mm girth  | LM                  | 320  |      |        |
| E    | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 160  |      |        |
|      | <b>Ironmongery</b>  |                     |      |      |        |
|      | <b>Supply and fix the following ironmongery to timber complete with matching screws and keys to the approval of the Architect</b> |                     |      |      |        |
| F    | 100mm pressed steel Butt Hinges   | Pairs               | 42   |      |        |
| G    | Stainless steel 2 Lever Door Lock with handle   | NO                  | 28   |      |        |
| H    | Door fixing cramps  | NO                  | 168  |      |        |
|      | <b>Carried to Collection</b>  |                     |      |      |        |
|      | <b>COLLECTION</b>   |                     |      |      |        |
|      | Total brought forward from page no:   |                     | CM/8 |      |        |
|      | Total brought forward from page no:   |                     | CM/9 |      |        |
|      | <b><u>ELEMENT NO. 5</u></b>   | <b>Carried to</b>   |      |      |        |
|      | <b><u>DOORS</u></b>   | <b>Main summary</b> |      |      |        |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|------|---|------|-----|------|--------|
|      | <b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</b>                           |      |     |      |        |
|      | <b>ELEMENT NO. 7</b>  |      |     |      |        |
|      | <b>ROOF CONSTRUCTION AND FINISHES</b>   |      |     |      |        |
|      | All members are first grade sawn celcured pressure impregnated cypress  |      |     |      |        |
|      | The following trusses spanning at various lengths at 1200mm c/c and 6m from ground level.                               |      |     |      |        |
|      | <b>(All timber work is provisional)</b>   |      |     |      |        |
|      | <b>Truss T1</b>   |      |     |      |        |
| A    | 150 x 50 truss rafters  | LM   | 487 |      |        |
| B    | 150 x 50 mm King post   | LM   | 130 |      |        |
| C    | Ditto struts and ties   | LM   | 556 |      |        |
| D    | Ditto tie beam  | LM   | 324 |      |        |
| E    | 100 x 50 wall plate.  | LM   | 172 |      |        |
| F    | Ditto purlins   | LM   | 441 |      |        |
|      | <b>End of trusses</b>   |      |     |      |        |
|      | <b>ROOF COVERING</b>  |      |     |      |        |
|      | <u>Prepainted 26 Gauge box profile galvanised steel sheet shaped as per architects approval or equally and approved</u> |      |     |      |        |
| G    | Ridge   | LM   | 74  |      |        |
| H    | Roof covering   | SM   | 500 |      |        |
|      | <u>In wrot cypress - prime grade</u>  |      |     |      |        |
|      | 250 x 25mm fascia board   | LM   | 112 |      |        |
| J    | 100 x 20 mm T & G in eaves boarding on blandering   | SM   | 50  |      |        |
| K    | 25 x 100 mm moulded cornice.  | LM   | 169 |      |        |
|      | <b>Roof drainage</b>  |      |     |      |        |
|      | <u>26 Gauge galvanised steel sheet shaped as per architects approval or equally and approved</u>                        |      |     |      |        |
| L    | 150 x 150 mm GI rain water gutter fixed to fascia board with mild steel brackets at 1.50 m centres.                     | LM   | 75  |      |        |
| M    | Extra over ditto for stopped ends   | No   | 6   |      |        |
| N    | Extra over for 100mm diameter outlet  | No   | 6   |      |        |
| P    | 100mm diameter down pipe fixed to walls with mild steel brackets at 1.50 m centres.                                     | LM   | 36  |      |        |
| Q    | Extra over ditto for swan neck offset.  | No   | 6   |      |        |
| R    | Ditto for splash shoe.  | No   | 6   |      |        |
| S    | 12 mm diameter x 150 mm holding down bolt with head, nut and washers.   | No.  | 48  |      |        |
|      | <b>CARRIED FORWARD TO NEXT PAGE</b>   |      |     |      |        |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|------|---|------|-----|------|--------|
|      | <b>BROUGHT FORWARD FROM PREVIOUS PG</b>   |      |     |      |        |
|      | <b>Painting and decorating</b><br><u>Prepare and apply three coats of gloss paint to timber surfaces</u>                                  |      |     |      |        |
| A    | Wood surfaces 200 - 300mm girth   | LM   | 112 |      |        |
|      | <u>Knot, prime, stop and apply one 3 coats of polyurethane varnish to:-</u>   |      |     |      |        |
| B    | Wood general surfaces externally.   | SM   | 50  |      |        |
| C    | Surfaces of timber cornices, 0-100mm girth.   | LM   | 169 |      |        |
|      | <b>Ceiling finishes</b><br>Prepare and install 12mm thick Celotex ceiling or approved equivalent as per architects' details and approval. |      |     |      |        |
| D    |   | SM   | 312 |      |        |
|      | <b>Branding</b><br>50 x 50 mm timber branding spaced 600mm c/c as per architects details and approval                                     |      |     |      |        |
| E    |   | LM   | 588 |      |        |
|      | <b>ELEMENT NO. 6</b> <b>Carried to</b>  |      |     |      |        |
|      | <b>ROOF</b> <b>Main summary</b>   |      |     |      |        |

| ITEM   | DESCRIPTION   | UNIT                | QTY | RATE | AMOUNT |
|--|---|---------------------|-----|------|--------|
| <b><u>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</u></b>   |   |                     |     |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |                     |     |      |        |
| <b>ELEMENT NO 7- EXTERNAL FINISHES</b>   |   |                     |     |      |        |
| <b>EXTERNAL WALL FINISHES</b>  |   |                     |     |      |        |
| <i><u>Cement and sand (1:3) render:wood floated: on concrete or blockwork: to</u></i>  |   |                     |     |      |        |
| A  | 15mm thick beam, columns, slab moulds and walling externally  | SM                  | 205 |      |        |
| B  | Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand mix (1:3) mortar including one coat Bituminous paint | SM                  | 689 |      |        |
| <b>Painting</b>  |   |                     |     |      |        |
| <i><u>Prepare and apply one coat undercoat and two finishing coats of long lasting exterior/ weatherguard paint or other equal and approved exterior quality paint to surfaces as described in:-</u></i> |   |                     |     |      |        |
| C  | Concrete/masonry surfaces externally-Beam, Column and Slab Moulds   | SM                  | 205 |      |        |
| <b><u>ELEMENT NO. 7</u></b>  |   | <b>Carried to</b>   |     |      |        |
| <b>EXTERNAL FINISHES</b>   |   | <b>Main summary</b> |     |      |        |

| ITEM   | DESCRIPTION   | UNIT | QTY   | RATE | AMOUNT |
|--|---|------|-------|------|--------|
| <b><u>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</u></b>   |   |      |       |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |      |       |      |        |
| <b>ELEMENT NO 8 - INTERNAL FINISHES</b>  |   |      |       |      |        |
| <b><u>Internal Wall Finishes</u></b>   |   |      |       |      |        |
| <u>Cement and sand (1:4) backings</u>  |   |      |       |      |        |
| A  | 12mm thick to receive Wall tiles  | SM   | 157   |      |        |
| <u>Ceramic wall tiles</u>  |   |      |       |      |        |
| <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM</u>  |   |      |       |      |        |
| B  | Supply and Fix 200x200x6mm thick ceramic wall tiles Saj Ceramics or equal and approved on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces | SM   | 157   |      |        |
| <u>12mm (minimum) two coat lime plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>    |   |      |       |      |        |
| C  | Concrete/masonry surfaces Internally  | SM   | 2,102 |      |        |
| <b><u>Painting and Decoration</u></b>  |   |      |       |      |        |
| <u>Prepare and apply one undercoat and one finishing coat first quality permaplast emulsion paint manufactured by Crown Solo Paints or equal and approved paint on:-</u> |   |      |       |      |        |
| D  | Plastered concrete/masonry surfaces internally  | SM   | 2,102 |      |        |
| <b>Carried to Collection</b>   |   |      |       |      |        |



| ITEM | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|------|---|------|-----|------|--------|
|      | <b><u>Floor Finishes</u></b>  |      |     |      |        |
| A    | <u>Cement and sand (1:3) screeds, backings, beds etc</u><br>32mm bed finished to receive Floor Tiles (m.s)  | SM   | 550 |      |        |
|      | <u>Ceramic Floor tiles</u><br><u>Allow a Prime Cost supply rate of Ksh. 1000 per SM</u>   |      |     |      |        |
| C    | Supply and Fix 300 x 300x 10mm thick Ceramic tiles, Saj Ceramics or equal and approved; on prepared bed(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. | SM   | 550 |      |        |
| D    | Ditto Non Slip Ceramic Tiles  | SM   | 74  |      |        |
| E    | Ditto 100mm wide Wall Skirtings   | LM   | 388 |      |        |
|      | <b><u>Staircase floor finishes</u></b>  |      |     |      |        |
| F    | <u>Cement and sand (1:4 ) backings etc</u><br>32mm bed finished to receive ceramic tiles to surfaces of Landings (m.s)  | SM   | 14  |      |        |
| G    | 25 x 300 mm wide treads to receive ceramic tiles (m.s)  | LM   | 171 |      |        |
| H    | 20 x 150mm risers to receive ceramic tiles (m.s)  | LM   | 171 |      |        |
|      | <b><u>Staircase floor finishes</u></b>  |      |     |      |        |
| J    | Non Slip Ceramic Tiles to surfaces of Landings)   | SM   | 14  |      |        |
| K    | Non Slip Ceramic Tiles to 300 mm wide treads  | LM   | 171 |      |        |
| L    | Non Slip Ceramic Tiles to 150mm risers  | LM   | 171 |      |        |
|      | <b><u>Staircase soffit finishes</u></b>   |      |     |      |        |
|      | <u>12mm (minimum) two coat lime plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |      |     |      |        |
| C    | Soffits of staircase landing  | SM   | 14  |      |        |
| D    | Ditto to sloping soffites exceeding 15° from horizontal   | SM   | 54  |      |        |
| E    | Staircase string 300mm extreme girth and cut to profile of steps  | LM   | 26  |      |        |
|      | <u>Paint works</u>  |      |     |      |        |
| F    | Soffits of staircase landing  | SM   | 14  |      |        |
| G    | Ditto to sloping soffites exceeding 15° from horizontal   | SM   | 54  |      |        |
| H    | Staircase string 300mm extreme girth and cut to profile of steps  | LM   | 26  |      |        |
|      | <b>Carried to Collection</b>  |      |     |      |        |

| ITEM | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|------|--|------|-----|------|--------|
| A    | <p><u>Ceiling finishes</u></p> <p>Prepare and install Celotex ceiling or approved equivalent as per architects' approval.</p>  | SM   | 312 |      |        |
| A    | <p><b><u>Ceiling finishes</u></b></p> <p><u>12mm (minimum) two coat lime plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u></p> <p>Soffites of Concrete surfaces Externally</p> | SM   | 312 |      |        |
| B    | <p><u>Painting and Decoration</u></p> <p><u>Prepare and apply one undercoat and one finishing coat first quality plastic emulsion paint on:-</u></p> <p>Ceilings</p>   | SM   | 624 |      |        |
|      | <b>Carried to Collection</b>   |      |     |      |        |

| ITEM | DESCRIPTION                         | UNIT | QTY   | RATE | AMOUNT |
|------|-------------------------------------|------|-------|------|--------|
|      | <b>COLLECTION</b>                   |      |       |      |        |
|      | Total brought forward from page no: |      | CM/14 |      |        |
|      | Total brought forward from page no: |      | CM/15 |      |        |
|      | Total brought forward from page no: |      | CM/16 |      |        |
|      | <b>ELEMENT NO. 8</b>                |      |       |      |        |
|      | <b>INTERNAL FINISHES</b>            |      |       |      |        |
|      | <b>Carried to</b>                   |      |       |      |        |

| ITEM | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|------|--|------|-----|------|--------|
|      | <p align="center"><b>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</b></p> <p align="center"><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b>ELEMENT NO 9- BALUSTRADING AND RAILING</b></p> <p><i>Balustrades and staircase railings</i></p> <p>A 1200mm high mild Steel balustrade; comprising 60 x 10mm mild Steel balusters at 900mm centres; bolted to base plate and tread (m.s)with 7No. 25mm diameter horizontal bars, and 75x4mm diameter CHS mild Steel handrail part welded into 60x10mm balustrades; to Architects drawings</p> <p><i>Prepare, prime and apply one undercoat and two finishing coats first quality gloss oil paint on</i></p> <p>B General metal surfaces of ballustrading (both sides measured overall)</p> | LM   | 109 |      |        |
|      | <p><b><u>ELEMENT NO. 9</u></b>                      <b>Carried to the</b><br/> <b><u>BALUSTRADE AND RAILING</u></b>      <b>Main summary</b></p>   |      |     |      |        |
|      | <p align="center"><b><u>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM ( COMMERCIAL BLOCK - 32 Unit-SHOPS)</u></b></p>   |      |     |      |        |

| ITEM     | DESCRIPTION  | UNIT | QTY      | RATE | AMOUNT |
|----------|--|------|----------|------|--------|
|          | <b>MAIN SUMMARY</b>  |      |          |      |        |
| <b>1</b> | <b>Substructures</b>   |      |          |      |        |
| <b>2</b> | <b>Reinforced Concrete Frame</b>                                     |      |          |      |        |
| <b>3</b> | <b>Walling</b>   |      |          |      |        |
| <b>4</b> | <b>Windows</b>   |      |          |      |        |
| <b>5</b> | <b>Doors</b>   |      |          |      |        |
| <b>6</b> | <b>External Finishes</b>   |      |          |      |        |
| <b>7</b> | <b>Internal Finishes</b>   |      |          |      |        |
| <b>8</b> | <b>Balustrade and Railing</b>  |      |          |      |        |
|          | <b><u>TOTAL FOR 1 NO. BLOCK</u></b>                                  |      |          |      |        |
|          | <b>MULTIPLY BY 1.NO OF BLOCK(S)</b>                                  |      | <b>1</b> |      |        |
|          | <b><u>TOTAL FOR 1NO. BLOCK OF SHOPS CARRIED TO GRAND SUMMARY</u></b> |      |          |      |        |

**MIXED USE DEVELOPMENT**

| ITEM | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|------|---|------|-----|------|--------|
| A    | <p style="text-align: center;"><b><u>PROPOSED MIXED USE DEVELOPMENT</u></b></p> <p style="text-align: center;"><b>BILL NO.1-BUILDERS WORKS</b></p> <p><b><u>MARKET</u></b><br/>           Allow a provisional sum of Kenya Shillings 28,000,000 for the construction of a Mixed use development on one level; Approx Area 1000Sqm</p> | SUM  | 1   |      |        |
|      | <b><u>TOTAL CARRIED TO GRAND SUMMARY</u></b>  |      |     |      |        |

# **BASKET BALL PITCH**



| ITEM   | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|--|---|------|-----|------|--------|
| <b><u>PROPOSED APARTMENTS FOR AFFORDABLE HOUSING PROGRAM (BASKET BALL PITCH)</u></b> |   |      |     |      |        |
| <b>BILL NO.8 BUILDERS WORKS</b>  |   |      |     |      |        |
| <b>Oversite Excavation</b>   |   |      |     |      |        |
| A  | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas. | SM   | 925 |      |        |
| B  | Excavate average 200mm deep to remove top vegetable soil, load, remove from site and dump in designated local authority dump site.        | SM   | 925 |      |        |
| C  | Excavate to reduced levels in varying depths not exceeding 1.5m deep from existing ground levels.   | CM   | 324 |      |        |
| D  | Load and cart away excess excavated materials as directed on site.  | CM   | 324 |      |        |
| <b>TOTAL FOR EXCAVATIONS CARRIED TO SUMMARY</b>                                      |   |      |     |      |        |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|------|---|------|-----|------|--------|
|      | <b>ELEMENT NO. 2 - BASKET BALL COURT</b>  |      |     |      |        |
|      | <b>(All provisional)</b>  |      |     |      |        |
|      | <b>Sub-Grade</b>  |      |     |      |        |
| A    | Roll and compact subgrade formation to achieve 98% modified proctors MDD including grading to falls and crossfalls  | SM   | 574 |      |        |
| B    | Imported and approved murram backfill materials to make up levels, well watered, rolled and compacted to 98% MDD at optimum moisture content in layers not exceeding 150mm Thick to Engineer's approval                           | CM   | 201 |      |        |
|      | <b>Sub-Base</b>   |      |     |      |        |
| C    | 150mm thick Compacted gravel 3.5mm in sub-base laid at a slope of 1%well watered and compacted to 98% MDD at optimum moisture content in layers each of 150mm Thick to Engineer's approval  | SM   | 574 |      |        |
|      | <b>FINISHINGS</b>   |      |     |      |        |
| D    | <b>ASPHALT FINISH</b>   |      |     |      |        |
|      | Prepare surface and spray MC-30 as a prime coat cutback bitumen at a rate of 0.8 -1.0 lt/m2 as prime coat.  | SM   | 574 |      |        |
| E    | Prepare primed surfaces, provide and spray K1-60 bitumen emulsion as tack coat at a spray rate of 0.8 - 1.0 lt/m2 as directed by Engineer.  | SM   | 574 |      |        |
| F    | 75mm thick Asphalt concrete for surfacing   | SM   | 574 |      |        |
|      | <b>Channels</b>   |      |     |      |        |
| G    | Provide, lay and joint Channel, 125x150mm flush channel block, laid on and including 450x100mm concrete (1:3:6) bed and 100x200mm haunching behind ancluding any necessary formwork and disposal of surplus material as directed. | LM   | 69  |      |        |
|      | <b>TOTAL FOR BASKET BALL COURTS CARRIED TO SUMMARY</b>  |      |     |      |        |

| ITEM | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|------|--|------|-----|------|--------|
|      | <p><b>ELEMENT NO. 3 - WATER DRAINAGE AROUND THE PITCH</b></p> <p><b>FRENCH DRAIN</b></p> <p><b>Oversite Excavation</b><br/><b>(All excavations Measured Net)</b></p> <p>Excavate for French Drain average depth not exceeding 1500mm Deep, uphold the sides of excavation, keep excavations free from water, trim and compact the bottom of excavation to level and cart away the resultant excavated materials as directed on site as described in:</p> |      |     |      |        |
| A    | Main-drain   | CM   | 97  |      |        |
| B    | Ditto to Sub-drain   | CM   | 5   |      |        |
|      | <p><b>Mass concrete ( class 15/20) in;</b></p> <p><b>50mm Thick Class 15/20 mass concrete blinding to bottom of trenches to receive drain pipe as described in:</b></p>  |      |     |      |        |
| C    | Main-drain   | SM   | 65  |      |        |
|      | <p><b><u>Underground Drain Pipe.</u></b></p> <p>Supply, lay including necessary jointing and connections approved HDPE Perforated Pipe all to approval as decribed in:</p>   |      |     |      |        |
| D    |  |      |     |      |        |
| E    | 200mm Diameter main drain.   | LM   | 108 |      |        |
|      | <p><b><u>Hesian Filter Fabric</u></b></p> <p>Supply and lay approved hesian Filter Fabric to french drains girth 600mm wide.</p>   |      |     |      |        |
| F    |  | LM   | 108 |      |        |
| G    | Ditto girth 300mm wide.  | LM   | 34  |      |        |
|      | <b>Carried to collection</b>   |      |     |      |        |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|------|---|------|-----|------|--------|
|      | <b>Drain Fillings.</b>  |      |     |      |        |
| A    | Approved imported hardcore fillings over perforated underground pipe in main drain.   | CM   | 15  |      |        |
| B    | Ditto above formation level on subdrains.   | CM   | 3   |      |        |
| C    | Supply and place approved 200mm graded aggregates ballast fillings over perforated underground pipe in main drain.  | CM   | 26  |      |        |
| D    | Ditto above formation level on subdrains.   | CM   | 2   |      |        |
| E    | Supply and place approved sand fillings over perforated underground pipe in main drain.   | CM   | 13  |      |        |
| F    | Ditto above formation level on subdrains.   | CM   | 2   |      |        |
|      | <b>Inspection chambers</b>  |      |     |      |        |
| G    | Construct 600 wide x 600 mm long x 1500 mm deep (internal dimensions) storm water manhole, comprising 150 mm thick concrete class 20 bed, 200 mm thick natural stonewalling in cement and sand (1:3) mortar, 150 mm thick concrete class 20 cover slab with requisite reinforcement, 450x 600 mm heavy duty cast iron cover and frame bedded in cement and sand (1:3) mortar; internally plastered & screeded in 15 mm thick lime plaster; 100 mm thick concrete class 20 benching; complete with necessary excavation, formwork and 2 No. connections to pipes not exceeding 200 mm diameter(pipe m/s) | NO.  | 7   |      |        |
|      | <b>Carried to Collection</b>  |      |     |      |        |
|      | <b>Collection:</b><br><br>Brought forward from page BP/3<br><br>Brought forward from page Above   |      |     |      |        |
|      | <b><u>TOTAL FOR WATER DRAINAGE AROUND THE PITCH CARRIED TO SUMMARY</u></b>  |      |     |      |        |
|      | <b><u>ELEMENT NO. 4 - BASKET BALL GOAL POSTS</u></b>  |      |     |      |        |
|      | <b><u>Excavation</u></b>  |      |     |      |        |
| A    | Excavation for Goal post sockets diameter 150mm wide average depth not exceeding 1500 mm from formed level.   | CM   | 2   |      |        |
|      | <b><u>Disposal</u></b>  |      |     |      |        |

| ITEM | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|------|--|------|-----|------|--------|
| B    | Load, wheel and cart away surplus excavated material to a Local Authority designated dumping site or fill soil heaps as away from site instructed by the Project Engineer.                               | CM   | 2   |      |        |
| C    | <b>In- situ vibrated reinforced concrete Class 25 (20mm aggregates): in:</b><br>Socket - bases & stud columns  | CM   | 2   |      |        |
| D    | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b><br>Assorted reinforcement | KG   | 200 |      |        |
| E    | <b>Formwork</b><br>Sawn formwork with one coat of an approved retarding agent to vertical sides of socket bases  | SM   | 8   |      |        |
| F    | <b>Mild steel work in:-</b><br>Anchoring system anchoring in concrete including neoprene caps all as per manufacturer's instructions.  | NO   | 4   |      |        |
| G    | 150mm Diameter x 4mm thick CHS sockets all removable.  | LM   | 30  |      |        |
| H    | <b>Prepare and apply aerosol spray painting in two finishing coats of first grade paint as per the manufacturer's printed instructions to: -</b><br>General metal surfaces                               | LM   | 60  |      |        |
| I    | <b>Goal net and ring</b><br>Standard goal net and ring all to approval welded to steel post.   | NO.  | 2   |      |        |
| J    | 25mm thick fibre glass block board all fixed to approval   | SM   | 4   |      |        |
| K    | Supply and fix 100mm thick polythylene foam padding  | SM   | 4   |      |        |
| L    | Supply and fix 25mm thick rubber tubing all around 150mm diameter vertical posts   | LM   | 6   |      |        |
|      | <b><u>TOTAL FOR GOAL POSTS CARRIED TO SUMMARY</u></b>  |      |     |      |        |

| ITEM     | DESCRIPTION   | UNIT | QTY  | RATE | AMOUNT |
|----------|---|------|------|------|--------|
|          | <b>SUMMARY FOR BILL NO. 08 BASKET BALL PITCH</b>                    |      |      |      |        |
|          | <b>ELEMENT</b>  |      |      |      |        |
| <b>1</b> | <b>EXCAVATIONS</b>  |      | BP/1 |      |        |
| <b>2</b> | <b>BASKET BALL COURT</b>  |      | BP/2 |      |        |
| <b>3</b> | <b>WATER DRAINAGE AROUND PITCH</b>                                  |      | BP/4 |      |        |
| <b>4</b> | <b>BASKET GOAL POSTS</b>  |      | BP/5 |      |        |
|          | <b>TOTAL FOR BASKET BALL PITCH CARRIED FORWARD TO GRAND SUMMARY</b> |      |      |      |        |

**GUARD HOUSE**

| Item  | Description   | Unit | QTY | Rate | Amount |
|---|---|------|-----|------|--------|
| <b><u>PROPOSED GUARD HOUSE</u></b>                    |   |      |     |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>                       |   |      |     |      |        |
| <b>ELEMENT NO 1 - SUBSTRUCTURES (ALL PROVISIONAL)</b> |   |      |     |      |        |
| <i>Site Clearance</i>                                 |   |      |     |      |        |
| A   | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas.   | SM   | 15  |      |        |
| B   | Excavate average 300mm deep to remove top vegetable soil, load, remove from site and dump in designated local authority dump site.          | SM   | 15  |      |        |
| C   | Excavate for Strip foundations depth not exceeding 1.50 metres starting from Reduced ground levels.   | CM   | 10  |      |        |
| D   | Ditto to column bases   | CM   | 2   |      |        |
| E   | Extra over all type of excavation for excavating in soft rock   | CM   | 1   |      |        |
| F   | Ditto excavation in hard rock class I   | CM   | 1   |      |        |
| <b>Disposal of water</b>                              |   |      |     |      |        |
| G   | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary | Item |     |      |        |
| <b>Planking and strutting</b>                         |   |      |     |      |        |
| H   | Allow for maintaining and upholding the sides of excavations and keeping excavations clear of all fallen materials, rubbish etc             | Item |     |      |        |
| <b>Carried to collection</b>                          |   |      |     |      |        |



| Item | Description   | Unit | QTY  | Rate | Amount |
|------|---|------|------|------|--------|
|      | <b><u>Disposal of excavated material</u></b>  |      |      |      |        |
| A    | Load, wheel and cart away surplus excavated material to a Local Authority designated dumping site or fill soil heaps as away from site instructed by the Project Engineer.  | CM   | 1.00 |      |        |
| B    | Return, fill and ram selected excavated material around sides of foundations.   | CM   | 12   |      |        |
|      | <b>Fillings</b>   |      |      |      |        |
| C    | Make up levels using approved imported materials: compacted in layers not exceeding 300mm thick with a roller: to the satisfaction of the Structural Engineer.  | CM   | 0    |      |        |
| D    | 300mm thick hardcore bed: hand packed : compacted in layers not exceeding 150mm thick: to the satisfaction of the Structural Engineer   | SM   | 12   |      |        |
| E    | 50 mm Stone dust/ Murrum blinding to surfaces of hardcore   | SM   | 15   |      |        |
|      | <b>Anti - termite to treatment</b>  |      |      |      |        |
| F    | Approved anti-termite treatment, with ten-year guarantee, sprayed to surfaces of hardcore strictly in accordance with manufacturer's instructions.  | SM   | 15   |      |        |
|      | <b>Damp-proof membrane</b>  |      |      |      |        |
| G    | 1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps); 1 No. layer: bedded in and including cement and sand (1:3) mortar | SM   | 15   |      |        |
|      | <b>Concrete Blinding</b>  |      |      |      |        |
|      | <b>In situ concrete class 15/20 mm aggregates: vibrated:</b>  |      |      |      |        |
| H    | 50 mm thick blinding under column bases   | SM   | 6    |      |        |
| I    | 50 mm thick blinding under strip foundations  | SM   | 8    |      |        |
|      | <b>In- situ vibrated reinforced concrete Class 25 MPa: in:</b>  |      |      |      |        |
| J    | Column bases  | CM   | 2    |      |        |
| K    | Strip foundations   | CM   | 2    |      |        |
| L    | 100mm thick surface bed   | SM   | 15   |      |        |
| M    | Steps   | CM   | 0    |      |        |
|      | <b>In- situ vibrated reinforced concrete Class 25 MPa: in:</b>  |      |      |      |        |
| N    | Columns   | CM   | 1    |      |        |
|      | <b>Carried to collection</b>  |      |      |      |        |

| Item | Description   | Unit | QTY | Rate | Amount |
|------|---|------|-----|------|--------|
|      | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b>  |      |     |      |        |
| A    | Assorted reinforcement  | KGS  | 264 |      |        |
|      | <b>Mesh fabric reinforcement to K/EAS 412;2 (2019) BRC A142;200 x 200mm, weighing 2.22kg/m<sup>2</sup> (measured net - no allowance) for laps; in two layers - top &amp; bottom; including bends, tying wire and spacer blocks)</b>                                       |      |     |      |        |
| B    | In ground floor slab<br><br><u>Modular steel frame with 5mm thick steel plates covering formwork and/or marine board formwork: to:</u>  | SM   | 15  |      |        |
| C    | Sides of column bases   | SM   | 7   |      |        |
| D    | Vertical sides to columns   | SM   | 8   |      |        |
| E    | Edge of slab not exceeding 150mm girth  | LM   | 15  |      |        |
| F    | Edges of risers 75 - 150mm high   | LM   | 14  |      |        |
|      | <b>Foundation Walling</b>   |      |     |      |        |
|      | <b>Natural quarry stones rough dressed; bedded in and including cement and sand (1:4) mortar; reinforced with and including 45 mm wide hoop iron gauge in alternate courses: in:</b>  |      |     |      |        |
| G    | 200mm thick walls in foundations  | SM   | 18  |      |        |
|      | <b><u>Pavings</u></b>   |      |     |      |        |
| H    | Supply and lay 600 x 600mm medium duty paving blocks round the building including laying, spreading and compacting 100mm thick approved sand bed blinding, with and including excavation, 150mm thick compacted hardcore and 50mm thick quarry dust blinding to approval. | SM   | 7   |      |        |
|      | <b><u>Plinth</u></b>  |      |     |      |        |
|      | <b><u>25mm Thick cement and sand (1:4) rendering on concrete or masonry ; wood float finished; to</u></b>   |      |     |      |        |
| J    | Plinths externally  | SM   | 5   |      |        |
|      | <b>Two coats black bitumastic paint on:</b>   |      |     |      |        |
| K    | Rendered surfaces   | SM   | 5   |      |        |
|      | <b>Carried to collection</b>  |      |     |      |        |

| Item | Description                         | Unit | QTY | Rate | Amount |
|------|-------------------------------------|------|-----|------|--------|
|      | <b>COLLECTION</b>                   |      |     |      |        |
|      | Total brought forward from page no: |      |     |      |        |
|      | Total brought forward from page no: |      |     |      |        |
|      | Total brought forward from page no: |      |     |      |        |
|      | <b>ELEMENT NO. 1</b>                |      |     |      |        |
|      | <b>SUBSTRUCTURES</b>                |      |     |      |        |
|      | Carried to<br>Main summary          |      |     |      |        |

| Item   | Description  | Unit         | QTY | Rate | Amount |
|--|--|--------------|-----|------|--------|
| <b><u>PROPOSED GUARD HOUSE</u></b>   |  |              |     |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |  |              |     |      |        |
| <b>ELEMENT No 2 - R.C FRAME</b>  |  |              |     |      |        |
| <b>In- situ vibrated reinforced concrete Class 25 MPa: in:</b>   |  |              |     |      |        |
| A  | Columns  | CM           | 2   |      |        |
| B  | Beams  | CM           | 2   |      |        |
| C  | 150mm thick Roof Slab                                  | SM           | 15  |      |        |
| <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b> |  |              |     |      |        |
| D  | Assorted reinforcement                                 | Kg           | 759 |      |        |
| <i><u>Modular steel frame with 5mm thick steel plates covering formwork and/or marine board formwork: to</u></i>   |  |              |     |      |        |
| E  | Sides of columns                                       | SM           | 27  |      |        |
| F  | Sides and soffites of beams                            | SM           | 16  |      |        |
| G  | Soffits of suspended slabs                             | SM           | 15  |      |        |
| H  | Edges of slab over 150mm but not exceeding 225mm girth | LM           | 15  |      |        |
|  | <b><u>ELEMENT NO. 2</u></b>                            | Carried to   |     |      |        |
|  | <b><u>R.C FRAME</u></b>                                | Main summary |     |      |        |

| Item   | Description  | Unit                | QTY | Rate | Amount |
|--|--|---------------------|-----|------|--------|
| <b><u>PROPOSED GUARD HOUSE</u></b>   |  |                     |     |      |        |
| <b>BILL NO.1-BUILDERS WORKS</b>  |  |                     |     |      |        |
| <b>ELEMENT No 3-WALLING</b>  |  |                     |     |      |        |
| <b><u>WALLING</u></b>  |  |                     |     |      |        |
| <b><u>External Walling</u></b>   |  |                     |     |      |        |
| <i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength ;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i> |  |                     |     |      |        |
| A  | 200mm thick walling Externally   | SM                  | 24  |      |        |
| B  | 150mm thick parapet walling  | SM                  | 6   |      |        |
| <b><u>Internal Walling</u></b>   |  |                     |     |      |        |
| <i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength ;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i> |  |                     |     |      |        |
| C  | 200mm thick walling Internally   | SM                  | 5   |      |        |
| D  | 150mm thick walling Internally   | SM                  | 0   |      |        |
| E  | Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar  | LM                  | 11  |      |        |
| F  | Approved hessian based damp proof course to 150mm thick walling in cement/sand mortar  | LM                  | 0   |      |        |
| <b><u>Precast Concrete Breeze Ventilation Blocks</u></b>   |  |                     |     |      |        |
| G  | 150 x 150mm wide x 50mm thick Pre Cast Concrete flower 3D breeze ventilation blocks bedded and jointed in cement and sand (1:4) mortar           | SM                  | 0   |      |        |
| <b><u>COPING</u></b>   |  |                     |     |      |        |
| H  | 300 x 100mm insitu reinforced concrete class 20Mpa coping, throated and weathered and jointing to columns with cement sand 1:4 mortar            | LM                  | 11  |      |        |
| <b><u>Lintols</u></b>  |  |                     |     |      |        |
| I  | 200mm x 200mm Deep lintols in reinforced concrete class 20MPa with and including 4No T10 and T8 stirups at 200mm centres; complete with formwork | LM                  | 2   |      |        |
| <b><u>ELEMENT NO. 3</u></b>  |  | <b>Carried to</b>   |     |      |        |
| <b><u>WALLING</u></b>  |  | <b>Main summary</b> |     |      |        |

| Item | Description   | Unit | QTY | Rate | Amount |
|------|---|------|-----|------|--------|
|      | <b><u>PROPOSED GUARD HOUSE</u></b>  |      |     |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>   |      |     |      |        |
|      | <b>ELEMENT NO 4-WINDOWS</b>   |      |     |      |        |
|      | <b><u>MILD STEEL WINDOWS</u></b>  |      |     |      |        |
|      | <p>Supply, fabricate and fix the following purpose made small pane mild steel casement windows to be fabricated from approved mild steel sections (atleast 14g 2mm thick ) comprising of frame and casement incorporating permanent hooded high level ventilation panels infilled with mosquito gauze : window supplied complete with and including 12mm solid square burglar proofing bars fixed at 200mm centres both ways and metal fixing lugs including building into wall and making good, and all necessary iron mongery viz hinges, fasteners, and hasp including shop priming window with red oxide primer before delivery to site:-</p> <p>A prime cost sum of Kshs 4,500 per Sqm has been allowed for fabrication of the above specified Steel casement Windows by AHP juakali artisans as approved by the Project Manager/Architect.</p> <p>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</p> |      |     |      |        |
| A    | Window, overall size 1900 X 1500mm high to Architects Details   | NO   | 1   |      |        |
| B    | Ditto Size 650 x 1500mm high (bedroom)  | NO   | 1   |      |        |
| C    | Ditto Size 1000 x 1350mm high (Kitchen)   | NO   | 0   |      |        |
| D    | Ditto Size 600 x 900mm high (WC/SH)   | NO   | 1   |      |        |
|      | <b><u>Glazing</u></b>   |      |     |      |        |
| E    | 4mm Thick clear sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with premium putty   | SM   | 4   |      |        |
| F    | Ditto; obscure  | SM   | 1   |      |        |
|      | <b><u>Painting and Decorations</u></b>  |      |     |      |        |
|      | <b><u>On Metal work</u></b>   |      |     |      |        |
|      | <b><u>Prepare and apply aerosol spray painting in two finishing coats of first grade paint as per the manufacturer's printed instructions to: -</u></b>   |      |     |      |        |
| G    | General window and grille surfaces; over 300mm girth internal   | SM   | 4   |      |        |
|      | <b>Carried to Collection</b>  |      |     |      |        |

| Item | Description  | Unit | QTY | Rate | Amount |
|------|--|------|-----|------|--------|
| A    | <p><b><u>Bull-nosed burnt clay, finishing fair on all exposed surfaces and hoisting and placing in position, bedding, jointing and pointing in pigmented cement and sand (1:3) mortar</u></b></p> <p>150 x 25mm thick clay window sill</p> <p><b><u>Curtain rods;</u></b></p> <p style="text-align: center;"><b>Carried to collection</b></p> <p style="text-align: center;"><b>COLLECTION</b></p> <p>Total brought forward from page no:</p> <p>Total brought forward from page no:</p> | LM   | 3   |      |        |
|      | <p><b><u>ELEMENT NO. 4</u></b>                      <b>Carried to the</b></p> <p><b><u>WINDOWS</u></b>                              <b>Main summary</b></p>  |      |     |      |        |

| Item | Description  | Unit | QTY | Rate | Amount |
|------|--|------|-----|------|--------|
|      | <b><u>PROPOSED GUARD HOUSE</u></b>   |      |     |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>  |      |     |      |        |
|      | <b>ELEMENT NO 5-DOORS</b>  |      |     |      |        |
|      | <b><u>External Doors</u></b>   |      |     |      |        |
|      | <b><u>Flush timber doors</u></b>   |      |     |      |        |
|      | <b>50 mm thick Semi Solid cored flush doors with plywood facing to receive painting (m.s) all to Architects details, specifications and approval</b>   |      |     |      |        |
|      | <b>A prime cost sum at the rate indicated below for fabrication of the above specified Timber Flush door leaves by AHP juakali artisans as approved by the Project Manager/Architect.</b>            |      |     |      |        |
|      | <b>The contractor's unit rate shall include the cost of transport, storage, fixing and all associated accesories in addition to the PC Rate.</b>   |      |     |      |        |
| A    | Door size 900mm x 2400mm High comprising of 1 No Opennable leaf size 800 x 2100mm high including fixed fanlight size 900 x 300mm high in 4mm clear glass ( measured separately) (PC Rate Kshs 4,000) | NO   | 2   |      |        |
| B    | Ditto 800 x 2100mm high comprising of 1No. Opennable leaf size 700 x 2100mm high (PC Rate Kshs 3,500)  | NO   | 0   |      |        |
|      | <b>4mm Thick clear sheet glass fixing with timber glazing beads to timber casements.</b>   |      |     |      |        |
| C    | In panes exceeding 0.1 sqm but not exceeding 0.5 square metres.  | SM   | 1   |      |        |
|      | <i>Frames and frame finishes in soft wood Timber</i>   |      |     |      |        |
| D    | 25 x 25mm quadrant (PC Rate Kshs 75)   | LM   | 5   |      |        |
| E    | 25 x 50mm architrave with two labours, plugged (PC Rate Kshs 150)  | LM   | 8   |      |        |
| F    | 150mm x 50mm transome with three labours; chamfered edges; plugged (PC Rate Kshs 800)  | LM   | 8   |      |        |
| G    | 150mm x 50mm frame with three labours; chamfered edges; plugged (PC Rate Kshs 800)   | LM   | 8   |      |        |
|      | <b>Carried to collection</b>   |      |     |      |        |



| Item | Description   | Unit                | QTY | Rate | Amount |
|------|---|---------------------|-----|------|--------|
|      | <u>Painting and decorating</u>  |                     |     |      |        |
|      | <u>Priming back of frame with an aluminium or equivalent and approved wood primer</u>   |                     |     |      |        |
| A    | Surfaces not exceeding 100mm girth  | LM                  | 13  |      |        |
| B    | Surfaces over 100mm but not exceeding 200mm girth   | LM                  | 15  |      |        |
|      | <u>Prepare Knot, prime, stop and apply one undercoat and two finishing coats first grade timber quality paint to wood surfaces as per the manufacturer's printed instructions</u> |                     |     |      |        |
| C    | General timber surfaces   | SM                  | 9   |      |        |
| D    | Surfaces over 200mm but not exceeding 300mm girth   | LM                  | 15  |      |        |
| E    | Architraves: not exceeding 100 mm girth   | LM                  | 8   |      |        |
| F    | Quadrant beading : not exceeding 100 mm girth   | LM                  | 5   |      |        |
|      | <b>Ironmongery</b>  |                     |     |      |        |
|      | <b>Supply and fix the following ironmongery to timber complete with matching screws and keys to the approval of the Architect</b>   |                     |     |      |        |
| G    | 100mm pressed steel Butt Hinges   | PRS                 | 3   |      |        |
| H    | Stainless steel 3 Lever Mortice Door Lock with handle furniture set;( keyhole escutcheons, cylinder and latch )   | NO                  | 0   |      |        |
| I    | Ditto: but 2 Lever Door Lock with handle  | NO                  | 2   |      |        |
| J    | Door fixing cramps  | NO                  | 0   |      |        |
| K    | Bronze door sign with door numbers as per Architect detail  | NO                  | 2   |      |        |
| L    | Block sign with block type, name and number in exterior quality paint as per Architect detail   | NO                  | 0   |      |        |
|      | <b>Carried to Collection</b>  |                     |     |      |        |
|      | <b>COLLECTION</b>   |                     |     |      |        |
|      | Total brought forward from page no:   |                     |     |      |        |
|      | Total brought forward from page no:   |                     |     |      |        |
|      | <b><u>ELEMENT NO. 5</u></b>   | <b>Carried to</b>   |     |      |        |
|      | <b><u>DOORS</u></b>   | <b>Main summary</b> |     |      |        |

| Item | Description  | Unit                | QTY | Rate | Amount |
|------|--|---------------------|-----|------|--------|
|      | <b><u>PROPOSED GUARD HOUSE</u></b>   |                     |     |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>  |                     |     |      |        |
|      | <b>ELEMENT NO 6 - EXTERNAL FINISHES</b>  |                     |     |      |        |
|      | <b>EXTERNAL WALL FINISHES</b>  |                     |     |      |        |
|      | <b>External Render</b>   |                     |     |      |        |
|      | <u>Cement and sand (1:3) render:wood floated: on concrete or blockwork: to</u>   |                     |     |      |        |
| A    | 15mm thick to beams, Columns, Slab Moulds and walling externally   | SM                  | 7   |      |        |
| B    | Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand mix (1:3) mortar including one coat Bituminous paint  | LM                  | 29  |      |        |
|      | <b>External Painting</b>   |                     |     |      |        |
|      | <u>Prepare and apply one coat Alkali Resistant primer followed by two finishing coats of silicon exterior Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u>   |                     |     |      |        |
| C    | Concrete/masonry surfaces externally-Beam, Column and Slab Moulds  | SM                  | 7   |      |        |
|      | <b>ROOF FINISHES</b>   |                     |     |      |        |
|      | <b>Cement and sand (1:4) screeded beds: on concrete: complete with coloured pigmentation additives and hardener to:</b>  |                     |     |      |        |
| D    | 50mm average waterproofed lightweight screed laid to falls and crossfalls to roof slabs -upper roof including gutter bases   | SM                  | 12  |      |        |
|      | <u>Prepare and apply to vertical/horizontal surfaces 4mm thick APP/EPDM water proofing or other equal and approved membrane with surface finish weighing 4kg/sm; laid on primer with torch-on process ;by an approved specialist all in accordance with the manufacturers instructions including provision of a written ten (10) year anti leak guarantee.</u> |                     |     |      |        |
| E    | 4mm thick APP membrane applied to roof slabs   | SM                  | 12  |      |        |
| F    | Ditto to skirting 200mm high   | LM                  | 11  |      |        |
| G    | Dress membrane around 100mm rainwater outlet   | No.                 | 2   |      |        |
|      | <u>The Following Flat roof concrete tiles fixed with approved adhesive, laid and jointed with waterproofing bituminous compound</u>  |                     |     |      |        |
| H    | 20mm thick interlocking Concrete tiles of size 225 x 225mm   | SM                  | 12  |      |        |
|      | <b>ELEMENT NO. 6</b>   | <b>Carried to</b>   |     |      |        |
|      | <b>EXTERNAL FINISHES</b>   | <b>Main summary</b> |     |      |        |

| Item | Description   | Unit | QTY | Rate | Amount |
|------|---|------|-----|------|--------|
|      | <b><u>PROPOSED GUARD HOUSE</u></b>  |      |     |      |        |
|      | <b>BILL NO.1-BUILDERS WORKS</b>   |      |     |      |        |
|      | <b>ELEMENT NO 7 - INTERNAL FINISHES</b>   |      |     |      |        |
|      | <b><u>Internal Wall Finishes</u></b>  |      |     |      |        |
|      | <u>Cement and sand (1:4) backings</u>   |      |     |      |        |
| A    | 12mm thick to receive Ceramic Wall tiles  | SM   | 0   |      |        |
| B    | To receive ceramic wall tiles (m.s.)  | SM   | 24  |      |        |
|      | <u>Ceramic wall tiles</u>   |      |     |      |        |
|      | <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |      |     |      |        |
| C    | Supply and Fix approved ceramic wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces | SM   | 0   |      |        |
|      | <u>Ceramic wall tiles</u>   |      |     |      |        |
|      | <u>Allow a Prime Cost supply rate of Ksh. 1000 per SM (Rate to include cost of purchase, transport, offload, storage, fixing including all necessary adhesives and accessories</u>  |      |     |      |        |
| D    | Supply and Fix approved ceramic wall tiles on prepared backings(m.s) with proprietary adhesive; jointed and pointed in matching coloured proprietary grouting; including pvc spacers and expansion joint as necessary: all to Architect's approval. - Wall Surfaces | SM   | 24  |      |        |
|      | <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |      |     |      |        |
| E    | Concrete/masonry surfaces   | SM   | 8   |      |        |
|      | <b><u>Painting and Decoration</u></b>   |      |     |      |        |
|      | <u>Prepare, Skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u>                                   |      |     |      |        |
| F    | Plastered concrete/masonry surfaces internally  | SM   | 8   |      |        |
|      | <b>Carried to Collection</b>  |      |     |      |        |
|      | <b><u>Ceiling finishes</u></b>  |      |     |      |        |
|      | <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u>   |      |     |      |        |

| Item | Description   | Unit | QTY | Rate | Amount |
|------|---|------|-----|------|--------|
| A    | Soffits of Concrete surfaces<br><br><u>Painting and Decoration</u><br><br><u>Prepare, skim and apply Emulsion or universal undercoat followed by two finishing coats of soft satin Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</u> | SM   | 12  |      |        |
| B    | Plastered ceilings  | SM   | 12  |      |        |
|      | <b>Carried to Collection</b>  |      |     |      |        |

| Item | Description                         | Unit | QTY | Rate | Amount |
|------|-------------------------------------|------|-----|------|--------|
|      | <b>COLLECTION</b>                   |      |     |      |        |
|      | Total brought forward from page no: |      |     |      |        |
|      | Total brought forward from page no: |      |     |      |        |
|      | Total brought forward from page no: |      |     |      |        |
|      | <u>ELEMENT NO. 7</u> Carried to     |      |     |      |        |
|      | INTERNAL FINISHES Main summary      |      |     |      |        |

| Item  | Description                      | Unit | QTY | Rate | Amount |
|---|----------------------------------|------|-----|------|--------|
| <b><u>PROPOSED GUARD HOUSE</u></b>                                |                                  |      |     |      |        |
| <b>BILL NO.1-BUILDERS WORKS<br/>MAIN SUMMARY</b>                  |                                  |      |     |      |        |
| 1   | <b>Substructures</b>             |      |     |      |        |
| 2   | <b>Reinforced Concrete Frame</b> |      |     |      |        |
| 3   | <b>Walling</b>                   |      |     |      |        |
| 4   | <b>Windows</b>                   |      |     |      |        |
| 5   | <b>Doors</b>                     |      |     |      |        |
| 6   | <b>External Finishes</b>         |      |     |      |        |
| 7   | <b>Internal Finishes</b>         |      |     |      |        |
| <b><u>TOTAL FOR 1NO. GUARD HOUSE</u></b>                          |                                  |      |     |      |        |
| <b>NO. OF BLOCKS</b>  |                                  |      |     |      |        |
| MULTIPLY BY <b>3.NO</b> OF GUARD HOUSE                            |                                  |      |     |      | 3      |
| <b><u>TOTAL FOR 1NO. GUARD HOUSE CARRIED TO GRAND SUMMARY</u></b> |                                  |      |     |      |        |

**GARBAGE RECEPTACLE**

| Item  | Description   | Unit | QTY | Rate | Garbage Receptacles<br>Amount |
|---|---|------|-----|------|-------------------------------|
| <b><u>PROPOSED GARBAGE RECEPTACLE</u></b>             |   |      |     |      |                               |
| <b>BILL NO.1-BUILDERS WORKS</b>                       |   |      |     |      |                               |
| <b>ELEMENT NO 1 - SUBSTRUCTURES (ALL PROVISIONAL)</b> |   |      |     |      |                               |
| <i>Site Clearance</i>                                 |   |      |     |      |                               |
| A   | Clear site of all grass, hedges, shrubs, bushes grub up roots, load and remove from site and dispose at designated local authority areas.   | SM   | 112 |      |                               |
| B   | Excavate average 300mm deep to remove top vegetable soil, load, remove from site and dump in designated local authority dump site.          | SM   | 112 |      |                               |
| C   | Excavate for Strip foundations depth not exceeding 1.50 metres starting from Reduced ground levels.   | CM   | 68  |      |                               |
| D   | Ditto to column bases   | CM   | 4   |      |                               |
| D   | Extra over all type of excavation for excavating in soft rock   | CM   | 7   |      |                               |
| E   | Ditto excavation in hard rock class I   | CM   | 0   |      |                               |
| <b>Disposal of water</b>                              |   |      |     |      |                               |
| F   | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary | Item |     |      |                               |
| <b>Planking and strutting</b>                         |   |      |     |      |                               |
| G   | Allow for maintaining and upholding the sides of excavations and keeping excavations clear of all fallen materials, rubbish etc             | Item |     |      |                               |
| <b>Carried to collection</b>                          |   |      |     |      |                               |



| Item | Description   | Unit | QTY | Rate | Garbage Recyclables Amount |
|------|---|------|-----|------|----------------------------|
|      | <b><u>Disposal of excavated material</u></b>  |      |     |      |                            |
| A    | Load, wheel and cart away surplus excavated material to a Local Authority designated dumping site or fill soil heaps as away from site instructed by the Project Engineer.  | CM   | 2   |      |                            |
| B    | Return, fill and ram selected excavated material around sides of foundations.   | CM   | 70  |      |                            |
|      | <b>Fillings</b>   |      |     |      |                            |
| C    | Make up levels using approved imported materials: compacted in layers not exceeding 300mm thick with a roller: to the satisfaction of the Structural Engineer.  | CM   | 0   |      |                            |
| D    | 300mm thick hardcore bed: hand packed : compacted in layers not exceeding 150mm thick: to the satisfaction of the Structural Engineer   | SM   | 112 |      |                            |
| E    | 50 mm Stone dust/ Murrum blinding to surfaces of hardcore   | SM   | 112 |      |                            |
|      | <b>Anti - termite to treatment</b>  |      |     |      |                            |
| F    | Approved anti-termite treatment, with ten-year guarantee, sprayed to surfaces of hardcore strictly in accordance with manufacturer's instructions.  | SM   | 112 |      |                            |
|      | <b>Damp-proof membrane</b>  |      |     |      |                            |
| G    | 1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps); 1 No. layer: bedded in and including cement and sand (1:3) mortar | SM   | 112 |      |                            |
|      | <b>Concrete Blinding</b>  |      |     |      |                            |
|      | <b>In situ concrete class 15/20 mm aggregates: vibrated:</b>  |      |     |      |                            |
| H    | 50 mm thick blinding under column bases   | SM   | 14  |      |                            |
| I    | 50 mm thick blinding under strip foundations  | SM   | 45  |      |                            |
|      | <b>In- situ vibrated reinforced concrete Class 25 MPa: in:</b>  |      |     |      |                            |
| J    | Column bases  | CM   | 4   |      |                            |
| K    | Strip foundations   | CM   | 9   |      |                            |
| L    | 100mm thick surface bed   | SM   | 112 |      |                            |
| M    | Columns   | CM   | 1   |      |                            |
|      | <b>Carried to collection</b>  |      |     |      |                            |

| Item | Description   | Unit                | QTY | Rate | Garbage Recyclables Amount |
|------|---|---------------------|-----|------|----------------------------|
| A    | <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b><br>Assorted reinforcement  | KGS                 | 812 |      |                            |
| B    | <b>Mesh fabric reinforcement to K/EAS 412;2 (2019) BRC A142;200 x 200mm, weighing 2.22kg/m<sup>2</sup> (measured net - no allowance) for laps; in two layers - top &amp; bottom; including bends, tying wire and spacer blocks)</b><br>In ground floor slab | SM                  | 112 |      |                            |
| C    | <u>Modular steel frame with 5mm thick steel plates covering formwork and/or marine board formwork: to:</u><br>Sides of column bases   | SM                  | 17  |      |                            |
| D    | Sides of Strip foundations  | SM                  | 30  |      |                            |
| E    | Vertical sides to columns   | SM                  | 17  |      |                            |
| F    | Edge of slab not exceeding 150mm girth  | LM                  | 43  |      |                            |
|      | <b>Foundation Walling</b>   |                     |     |      |                            |
|      | <b>Natural quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</b>                    |                     |     |      |                            |
| G    | 200mm thick walls in foundations  | SM                  | 98  |      |                            |
|      | <b>Pavings</b>  |                     |     |      |                            |
| H    | Supply and lay 600 x 600 x 50mm reinforced concrete precast paving slabs around the building including laying, spreading and compacting 100mm thick approved sand bed blinding, on and including 150mm thick compacted hardcore to Engineer's approval.     | SM                  | 45  |      |                            |
|      | <b>Plinth</b>   |                     |     |      |                            |
|      | <b>25mm Thick cement and sand (1:4) rendering on concrete or masonry ; wood float finished; to</b>  |                     |     |      |                            |
| J    | Plinths externally  | SM                  | 30  |      |                            |
|      | <b>Two coats black bitumastic paint on:</b>   |                     |     |      |                            |
| K    | Rendered surfaces   | SM                  | 30  |      |                            |
|      | <b>Carried to collection</b>  |                     |     |      |                            |
|      | <b>COLLECTION</b>   |                     |     |      |                            |
|      | Total brought forward from page no:   |                     |     |      |                            |
|      | Total brought forward from page no:   |                     |     |      |                            |
|      | Total brought forward from page no:   |                     |     |      |                            |
|      | <b>ELEMENT NO. 1</b>  | <b>Carried to</b>   |     |      |                            |
|      | <b>SUBSTRUCTURES</b>  | <b>Main summary</b> |     |      |                            |

| Item   | Description                 | Unit                | QTY | Rate | Garbage Receptacles<br>Amount |
|--|-----------------------------|---------------------|-----|------|-------------------------------|
| <b><u>PROPOSED GARBAGE RECEPTACLE</u></b>  |                             |                     |     |      |                               |
| <b>BILL NO.1-BUILDERS WORKS</b>  |                             |                     |     |      |                               |
| <b>ELEMENT No 2 - R.C FRAME</b>  |                             |                     |     |      |                               |
| <b>In- situ vibrated reinforced concrete Class 25 MPa: in:</b>   |                             |                     |     |      |                               |
| A  | Columns                     | CM                  | 1   |      |                               |
| B  | Beams                       | CM                  | 5   |      |                               |
| <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b> |                             |                     |     |      |                               |
| C  | Assorted reinforcement      | Kg                  | 783 |      |                               |
| <i><u>Modular steel frame with 5mm thick steel plates covering formwork and/or marine board formwork: to</u></i>   |                             |                     |     |      |                               |
| D  | Sides of columns            | SM                  | 27  |      |                               |
| E  | Sides and soffites of beams | SM                  | 45  |      |                               |
| <b><u>ELEMENT NO. 2</u></b>  |                             | <b>Carried to</b>   |     |      |                               |
| <b><u>R.C FRAME</u></b>  |                             | <b>Main summary</b> |     |      |                               |

| Item   | Description   | Unit                | QTY | Rate | Garbage Receptacles<br>Amount |
|--|---|---------------------|-----|------|-------------------------------|
| <b><u>PROPOSED GARBAGE RECEPTACLE</u></b>  |   |                     |     |      |                               |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |                     |     |      |                               |
| <b>ELEMENT No 3-WALLING</b>  |   |                     |     |      |                               |
| <b><u>WALLING</u></b>  |   |                     |     |      |                               |
| <b><u>External Walling</u></b>   |   |                     |     |      |                               |
| <i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength ;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i> |   |                     |     |      |                               |
| A  | 200mm thick walling Externally  | SM                  | 97  |      |                               |
| <b><u>Internal Walling</u></b>   |   |                     |     |      |                               |
| <i>Machine cut quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> average compressive strength ;bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</i> |   |                     |     |      |                               |
| B  | 200mm thick walling Internally  | SM                  | 70  |      |                               |
| C  | Approved hessian based damp proof course to 200mm thick walling in cement/sand mortar | LM                  | 75  |      |                               |
| <b><u>ELEMENT NO. 3</u></b>  |   | <b>Carried to</b>   |     |      |                               |
| <b><u>WALLING</u></b>  |   | <b>Main summary</b> |     |      |                               |





| Item   | Description   | Unit                | QTY | Rate | Garbage Receptacles<br>Amount |
|--|---|---------------------|-----|------|-------------------------------|
| <b><u>PROPOSED GARBAGE RECEPTACLE</u></b>  |   |                     |     |      |                               |
| <b>BILL NO.1-BUILDERS WORKS</b>  |   |                     |     |      |                               |
| <b>ELEMENT NO 6 - EXTERNAL FINISHES</b>  |   |                     |     |      |                               |
| <b>EXTERNAL WALL FINISHES</b>  |   |                     |     |      |                               |
| <b>External Render</b>   |   |                     |     |      |                               |
| <i>Cement and sand (1:3) render:wood floated: on concrete or blockwork:<br/>to</i>   |   |                     |     |      |                               |
| A  | 15mm thick to beams, Columns, Slab Moulds and walling externally  | SM                  | 23  |      |                               |
| B  | Extra over horizontal and vertical pointing in 10mm thick rod in cement and sand mix (1:3) mortar including one coat Bituminous paint | LM                  | 97  |      |                               |
| <b>External Painting</b>   |   |                     |     |      |                               |
| <i>Prepare and apply one coat Alkali Resistant primer followed by two coats of silicon exterior Emulsion paint in accordance with the manufacturers written instructions and to the satisfaction of the architect to</i> |   |                     |     |      |                               |
| C  | Concrete/masonry surfaces externally-Beam, Column and Slab Moulds   | SM                  | 23  |      |                               |
| <b><u>ELEMENT NO. 6</u></b>  |   | <b>Carried to</b>   |     |      |                               |
| <b>EXTERNAL FINISHES</b>   |   | <b>Main summary</b> |     |      |                               |

| Item  | Description  | Unit              | QTY | Rate | Garbage Receptacles Amount |
|---|--|-------------------|-----|------|----------------------------|
| <b><u>PROPOSED GARBAGE RECEPTACLE</u></b>   |  |                   |     |      |                            |
| <b>BILL NO.1-BUILDERS WORKS</b>   |  |                   |     |      |                            |
| <b>ELEMENT NO 7 - INTERNAL FINISHES</b>   |  |                   |     |      |                            |
| <b><u>Internal Wall Finishes</u></b>  |  |                   |     |      |                            |
| <u>Cement and sand (1:4) backings</u>   |  |                   |     |      |                            |
| A   | 32mm Thick coloured cement sand screed mix 1:3 finished to approval                | SM                | 98  |      |                            |
| <u>15mm (minimum) two coat cement, sand (1:3) plaster complete with wire gauze anti-crack mechanism at the intersection of masonry walling and concrete beams as described to:-</u> |  |                   |     |      |                            |
| B   | Concrete/masonry surfaces  | SM                | 237 |      |                            |
| <b><u>Floor Finishes</u></b>  |  |                   |     |      |                            |
| <u>Cement and sand (1:3) screeds, backings, beds etc</u>  |  |                   |     |      |                            |
| C   | 32mm Thick coloured cement sand screed mix 1:3 finished with red oxide to approval | SM                | 98  |      |                            |
| <b>ELEMENT NO. 7</b>  |  | <b>Carried to</b> |     |      |                            |
| <b>INTERNAL FINISHES Main summary</b>   |  |                   |     |      |                            |



| Item   | Description                      | Unit       | QTY | Rate | Garbage Receptacles<br>Amount |
|--|----------------------------------|------------|-----|------|-------------------------------|
| <b>BILL NO.1-BUILDERS WORKS<br/>MAIN SUMMARY</b>                         |                                  |            |     |      |                               |
| 1  | <b>Substructures</b>             |            |     |      |                               |
| 2  | <b>Reinforced Concrete Frame</b> |            |     |      |                               |
| 3  | <b>Walling</b>                   |            |     |      |                               |
| 4  | <b>Roof</b>                      |            |     |      |                               |
| 5  | <b>Doors</b>                     |            |     |      |                               |
| 6  | <b>External Finishes</b>         |            |     |      |                               |
| 7  | <b>Internal Finishes</b>         |            |     |      |                               |
|  |                                  |            |     |      |                               |
| <b><u>TOTAL FOR 1NO. GARBAGE RECEPTACLE</u></b>                          |                                  |            |     |      |                               |
|  |                                  |            |     |      |                               |
| <b>NO. OF BLOCKS</b>   |                                  |            |     |      |                               |
|  |                                  |            |     |      |                               |
| MULTIPLY BY <b>3.NO</b> OF RECEPTACLES                                   |                                  |            |     |      |                               |
|  |                                  | <b>X 3</b> |     |      | 3                             |
| <b><u>TOTAL FOR 1NO. GARBAGE RECEPTACLE CARRIED TO GRAND SUMMARY</u></b> |                                  |            |     |      |                               |

**BOUNDARY WALL**

| ITEM  | DESCRIPTION   | UNIT | QTY   | RATE | AMOUNT |
|---|---|------|-------|------|--------|
| <b><u>PROPOSED HOUSING UNITS FOR AFFORDABLE HOUSING</u></b>   |   |      |       |      |        |
| <b><u>PROGRAMME</u></b>   |   |      |       |      |        |
| <b>BILL NO.11-BUILDERS WORKS</b>  |   |      |       |      |        |
| <b><u>BOUNDARY WALL</u></b>   |   |      |       |      |        |
| <b>Excavation and Earthworks (All provisional)</b>  |   |      |       |      |        |
| A   | Clear site of all grass, hedges, shrubs, bushes including grubbing up of roots, cart away arising debris and burn them. | SM   | 800   |      |        |
| B   | Excavate oversite to remove black cotton soil, average depth 900mm and cart away arising debris                         | SM   | 800   |      |        |
| C   | Excavate for strip footing not exceeding 1.5m from stripped level   | CM   | 288   |      |        |
| D   | Excavate for column pits not exceeding 1.5m from stripped level   | CM   | 268   |      |        |
| E   | Return fill and ram best of the excavated material  | CM   | 112   |      |        |
|   | Back fill with imported approved material   | CM   | 640   |      |        |
| F   | Load,wheel and cart away surplus excavated material away from site  | CM   | 444   |      |        |
| <b>Disposal of water</b>  |   |      |       |      |        |
| G   | Allow for keeping all excavations free from water<br>Planking and strutting   | ITEM |       |      |        |
| H   | Allow for Planking and strutting to uphold sides of excavations   | ITEM |       |      |        |
| <b>In situ class 15 / 20 mm aggregates as described in:</b>   |   |      |       |      |        |
| J   | 50mm thick blinding under foundations and column bases  | SM   | 748   |      |        |
| <b>In situ concrete class 20 (20mm maximum aggregate size):vibrated and reinforced:</b>   |   |      |       |      |        |
| K   | Foundations in trenches and column bases  | CM   | 176   |      |        |
| L   | Stub columns and columns  | CM   | 64    |      |        |
| M   | Ditto beams   | CM   | 96    |      |        |
| <b>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strengthincluding bends, hooks, tying wire and distance blocks; to S.E's detail ( Provisional)</b> |   |      |       |      |        |
| N   | Assorted sizes  | KG   | 20160 |      |        |
| <b>Total carried to collection</b>  |   |      |       |      |        |

| ITEM  | DESCRIPTION  | UNIT | QTY  | RATE | AMOUNT |
|---|--|------|------|------|--------|
| <b><u>PROPOSED HOUSING UNITS FOR AFFORDABLE HOUSING PROGRAMME</u></b>   |  |      |      |      |        |
| <b>Modular steel frame with 5mm thick steel plates covering formwork and/or marine board formwork: to:</b>  |  |      |      |      |        |
| A   | Vertical sides of foundations  | SM   | 320  |      |        |
| B   | Ditto ; column bases   | SM   | 386  |      |        |
| C   | Ditto columns  | SM   | 925  |      |        |
| D   | Ditto beams  | SM   | 960  |      |        |
| <b>WALLING</b>  |  |      |      |      |        |
| E   | <b>Natural quarry stone walling with a minimum of 7.0 N/mm<sup>2</sup> bedded and jointed in cement and sand (1:4) mortar, reinforced with and including 25 x 3 mm thick hoop iron strips at every alternate course as described in;</b>   | SM   | 1320 |      |        |
| F   | 200mm thick Smooth chisel dressed natural stone walling in cement and sand (1:4) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course   | SM   | 1760 |      |        |
| <b>Concrete work sundries</b>   |  |      |      |      |        |
| G   | 225 mm wide damp proof course bedded and jointed in cement sand (1:3) mortar   | LM   | 800  |      |        |
| H   | 500 x 500 wide x 50mm thick concrete, coping, throated and weathered, bedding and jointing to colums with cement sand 1:4 mortar   | NO   | 268  |      |        |
| J   | Ditto 300 x 50mm concrete coping to walls  | LM   | 800  |      |        |
| <b>Finishes as described: -</b>   |  |      |      |      |        |
| K   | 12mm thick cement sand render (1:3) to the surfaces of the walling and columns internally and externally.  | SM   | 3520 |      |        |
| <b>GATES</b>  |  |      |      |      |        |
| <b>Mild steel sections as described</b>   |  |      |      |      |        |
| L   | 3000mm wide x 1800mm high double gate comprising of 50x50x3mm RHS framing and middle rail 50x25x3mm RHS Vertical infill members at 225mm centres;priming with red oxide primer; purpose made ironmongery; all necessary lugs and grouting as per details (all with roller at the ground) | No   | 1    |      |        |
| M   | Ditto pedestrian gate size 900x1800 ditto  | No   | 1    |      |        |
| <b><u>Prepare and apply aerosol spray painting in two finishing coats of first grade paint as per the manufacturer's printed instructions to: -</u></b> |  |      |      |      |        |
| N   | General surfaces of metal  | SM   | 14   |      |        |
| <b>Total carried to collection</b>  |  |      |      |      |        |
| <b>COLLECTION</b>   |  |      |      |      |        |
| <b>BOUNDARY WALL AND GATES</b>  |  |      |      |      |        |
| Total brought forward from page BW/1  |  |      |      |      |        |
| Total brought forward from page BW/2  |  |      |      |      |        |
| <b>TOTAL FOR BOUNDARY WALL CARRIED GRAND SUMMARY</b>  |  |      |      |      |        |

**CIVIL WORKS (ROADS)**

| ITEM                         | DESCRIPTION   | QTY       | UNIT | RATE | AMOUNT |
|------------------------------|---|-----------|------|------|--------|
|                              | <b><u>Preliminary and General Items</u></b>   |           |      |      |        |
| A                            | Allow Provisional sum of Kenya shillings (KSh 200,000/=) for materials testing as instructed by the Engineer. | Prov. Sum | 1    |      |        |
| B                            | Extra Over on Item 1.01 for Contractors overheads and profits   | %         | 10%  |      |        |
| <b>Carried to Collection</b> |   |           |      |      |        |

| ITEM | DESCRIPTION  | QTY | UNIT | RATE    | AMOUNT |
|------|--|-----|------|---------|--------|
|      | <b><u>Site Clearance and Topsoil Stripping</u></b>   |     |      |         |        |
| A    | Clear site including removal of trees (girth less than 300 mm), hedges, bushes and other vegetation and other deleterious materials, grub up roots and backfilling of holes left by removal of stumps and roots in accordance with the Specifications, as shown on the drawings and as instructed by Engineer. | m2  |      | 1530.00 |        |
| B    | Removal of top soil to a maximum depth of 200 mm including excavation, loading and disposal  | m3  |      | 1834.00 |        |
| C    | Cutting of trees of all girth above 300 mm including cutting of trunks, branches, uprooting and removal of all materials and stacking within the Right of Way and complete with filling of depressions/pits by earth including liaison with concerned authorities for obtaining permissions.                   |     |      |         |        |
|      | (i) Girth from 300 mm to 600 mm  | Nº  |      | 5.00    |        |
|      | (ii) Girth above 600 mm but up to 900 mm   | Nº  |      | 5.00    |        |
|      | (iii) Girth above 900 mm but up to 1800 mm   | Nº  |      | 5.00    |        |
| D    | Transpotation of the existing trees of girth above 600 mm girth as instructed by Engineer, including shifting of the tree and storing at locations as instructed by the Engineer.  | Nº  |      | 15.00   |        |
|      | <b>Carried to Collection</b>   |     |      |         |        |

| ITEM | DESCRIPTION   | QTY | UNIT    | RATE | AMOUNT |
|------|---|-----|---------|------|--------|
|      | <p><b><u>Earthworks</u></b></p> <p>No separate payments shall be made for the overhaul of the material and the cost of such haulage shall be included in the rates and or prices.</p> |     |         |      |        |
| A    | Cut to spoil in soft material   | m3  | 7416.00 |      |        |
| B    | As Item 5.01 but in hard material   | m3  | 2225.00 |      |        |
| C    | Provide, Spread and compact rockfill in swampy areas  | m3  | 7416.00 |      |        |
|      | <b>Carried to Collection</b>  |     |         |      |        |



| ITEM | DESCRIPTION   | QTY | UNIT | RATE   | AMOUNT |
|------|---|-----|------|--------|--------|
|      | <b><u>Culvert and Drainage Works</u></b>  |     |      |        |        |
|      | <b>No separate payment shall be made for the haulage of surplus or unsuitable excavated material and the cost of such haulage shall be included in the rates and/or prices</b>  |     |      |        |        |
| A    | Excavate in soft material for pipe culverts, subsoil drains, headwalls, wing walls, aprons, toe walls, drop inlets, mitre drains, catch water drains and median drains including support of trench sides, backfilling and compacting as specified or as instructed by the Engineer. | m3  |      | 752.00 |        |
| B    | As Item 8.01 but in hard material (any method)  | m3  |      | 376.00 |        |
| C    | Allow for hacking in existing concrete drain for junction connections   | m3  |      | 226.00 |        |
| D    | Allow for perforation and connecting to the existing drain including stoppage of inflowing water (hole approximately 600 wide x 800 high x 250 thick)   | no. |      | 10.00  |        |
| E    | Provide, lay and joint 450 mm Internal Diameter (I. D.) Reinforced Cement Concrete pipes. The rate to include excavation, backfilling and compaction to drain formation level   | m   |      | 10.00  |        |
| F    | Ditto item 8.06 above but 600mm I.D. Reinforced Cement Concrete pipes   | m   |      | 895.00 |        |
| G    | Ditto item 8.06 above but 900mm I.D. Reinforced Cement Concrete pipes   | m   |      | 10.00  |        |
| H    | Provide place and compact class 25/20 concrete to headwalls, wingwalls, aprons and toe walls to pipe culverts.  | m3  |      | 100.00 |        |
| J    | Provide place and compact 150mm class 15/20 concrete to beds and surround to 450mm diameter pipes   | m3  |      | 50.00  |        |
| K    | Ditto item 8.11 above but 600mm I.D. Reinforced Cement Concrete pipes   | m3  |      | 471.00 |        |
| L    | Ditto item 8.11 above but 900mm I.D. Reinforced Cement Concrete pipes   | m3  |      | 8.00   |        |
| M    | Provide and joint 450mm diameter precast concrete invert block drain (IBD) channels with two double side precast side slabs of 600x225x75mm as lining for side drain including bedding and backfilling with selected material as directed by the Engineer.                          | m   |      | 150.00 |        |
| N    | Provide and lay 450 Dia service ducts of length 10 m each as per the drawings and as instructed by the Engineer; Rate to include excavation, disposal of excavated material and concrete surround   | No. |      | 15.00  |        |
|      | <b>Carried to Collection</b>  |     |      |        |        |

| ITEM | DESCRIPTION   | QTY | UNIT    | RATE | AMOUNT |
|------|---|-----|---------|------|--------|
|      | <p><b><u>Natural Material for Sub-base and Base</u></b></p> <p>Measurements and payment by method 'A' as defined in the standard specifications. No separate payments shall be made for the overhaul of material and the cost of such haulage shall be included in the rates and or prices</p>              |     |         |      |        |
| A    | <p>Provide, place, water and compact Natural Gravel Material to 95% MDD (AASHTO T180) of sub base quality for base for the walkways of thickness 100mm and on the carriageway and parking to a consolidated thickness of not more than 300mm as shown in the drawings and as instructed by the Engineer</p> | m3  | 1854.00 |      |        |
| B    | <p>Prepare surface provide, place, handpack (200mm in one layer)and compact quarry chips (natural blue stone) to refusal densities on the carriageway and parking as directed by the Engineer.</p>  | m3  | 1236.00 |      |        |
|      | <b>Carried to Collection</b>  |     |         |      |        |

| ITEM | DESCRIPTION  | QTY | UNIT    | RATE | AMOUNT |
|------|--|-----|---------|------|--------|
|      | <b><u>Concrete Works</u></b>   |     |         |      |        |
| A    | Provide and fix on the carriageway and parking interlocking concrete paved unishaped blocks (monolithic single layer precast concrete blocks) of any   | m2  | 6180.00 |      |        |
| B    | Extra over item 17.01 for laying blocks at speed bumps   | m2  | 0.00    |      |        |
| C    | Ditto item 17.01 above but for 60mm heavy duty blocks at the walkway   | m2  | 50.00   |      |        |
| D    | Provide, lay in place and joint 600x600x50mm well cured paving slabs on 50mm well compacted sand/quarry dust bed to footpaths/islands, Cloth drying areas and around the blocks as stipulated in the special Specifications. | m2  | 360.00  |      |        |
|      | <b>Carried to Collection</b>   |     |         |      |        |

| ITEM | DESCRIPTION  | QTY | UNIT | RATE    | AMOUNT |
|------|--|-----|------|---------|--------|
|      | <b><u>Road Furniture</u></b>   |     |      |         |        |
|      | <b>Road Marking and Road Signs</b>   |     |      |         |        |
| A    | <b>Road Marking</b><br>Provide and lay hot applied thermoplastic road marking compound in approved colour and shade (ASTM 9) for road marking on bituminous surface on centerline, 100 mm, edge line 150 mm wide 3.0 mm thick, using fully automatic extrusion machine and using pre-melter for melting thermoplastic material including cleaning the surface of all dirt, dust, and other foreign matter, complete with demarcation at site/pre-marking, finishing and managing the traffic movements. Marking to be done as per the specifications, detailed drawings and as instructed by the Engineer. |     |      |         |        |
|      | (i) For lane marking (broken lines) with white paint, 100 mm wide  | m2  |      | 179.00  |        |
|      | (ii) For lane marking with yellow paint, 100mm wide  | m2  |      | 1236.00 |        |
|      | (iii) For raised kerb lines with black paint, 150 mm wide  | m2  |      | 895.00  |        |
|      | <b>Other Road Furniture</b>  |     |      |         |        |
| B    | <b>Provide, lay and Joint complete with hauncing as shown on the drawings and as instructed by the Engineer</b>  |     |      |         |        |
|      | (i) Raised Kerbs   | m   |      | 1790.00 |        |
|      | (ii) Flush Kerbs   | m   |      | 20.00   |        |
| C    | Provide, lay and Joint complete with hauncing as shown on the drawings and as instructed by the Engineer 100 x 125 mm channels for the walkways and shallow drains   | m   |      | 1854.00 |        |
|      | <b>Carried to Collection</b>   |     |      |         |        |

| ITEM | DESCRIPTION                                     | QTY | UNIT | RATE | AMOUNT |
|------|---|-----|------|------|--------|
| 1    | Preliminary and General Items                   |     |      |      |        |
| 2    | Site Clearance and Topsoil Stripping            |     |      |      |        |
| 3    | Earthworks                                      |     |      |      |        |
| 4    | Culverts and Drainage Works                     |     |      |      |        |
| 5    | Natural Material for Sub-base and Base          |     |      |      |        |
| 6    | Concrete Works                                  |     |      |      |        |
| 7    | Road Furniture                                  |     |      |      |        |
|      | <b>TOTAL ROADWORKS CARRIED TO GRAND SUMMARY</b> |     |      |      |        |

**SEWER RETICULATION WORKS**

| <b>BILL NO. 13 - PRELIMINARIES AND GENERAL ITEMS</b>       |   |             |                 |                    |                      |
|--|---|-------------|-----------------|--------------------|----------------------|
| <b>Item No</b>   | <b>Description</b>  | <b>Unit</b> | <b>Quantity</b> | <b>Rate (KSh.)</b> | <b>Amount (KSh.)</b> |
| <b>CLASS A - GENERAL ITEMS</b>                             |   |             |                 |                    |                      |
| <b>Contractual Requirements</b>                            |   |             |                 |                    |                      |
| A140.2   | Provide for preparation and submission to the employer<br>1No set of virograph and 2No sets of blue print copies (A1 SIZE) of as built drawings for all the sewer pipelines in the contract. Note that manhole positions in the layout should be actual ( geo-referenced to the national grid). | sum         | 1               |                    |                      |
| <b>Specified Requirements</b>                              |   |             |                 |                    |                      |
| <b>Testing of Materials and Works</b>                      |   |             |                 |                    |                      |
| A250   | Provide for concrete strength test. Rate to include for casting of the necessary number of cubes, curing,transport from site to testing institution and fees payable for the service.   | nr          | 30              |                    |                      |
| A250.1   | Provide for testing of the sewer pipes.Rate to include for transportation to the testing institutions and fees payable for this service.  | nr          | 15              |                    |                      |
| <b>Temporary Works</b>                                     |   |             |                 |                    |                      |
| A272   | Traffic regulation (including signages,warning tapes and warning signs); establishment, operation and removal.  | Item        | Sum             |                    |                      |
| <b>Bill No. 1.1- PAGE 1 TOTAL CARRIED TO GRAND SUMMARY</b> |   |             |                 |                    |                      |

| <b>BILL No. 1.2 MEASURED WORKS</b>                                    |  |             |            |             |                       |
|---|--|-------------|------------|-------------|-----------------------|
| <b>ITEM No.</b>   | <b>DESCRIPTION</b>   | <b>Unit</b> | <b>Qty</b> | <b>Rate</b> | <b>Amount (Kshs.)</b> |
|   | <p><b>The rates quoted by the Contractor shall be deemed to include provision by the Contractor to provide temporary vehicular access to all construction sites including negotiating with private land owners and paying the necessary charges as required.</b></p> <p><b>CLASS A - GENERAL ITEMS</b></p> <p><b>GENERAL CLEARANCE</b></p> |             |            |             |                       |
| A140.3  | Allow for setting out of the works   | m           | 910.00     |             |                       |
|   | <p><b>Testing of the works</b></p>   |             |            |             |                       |
| A260  | Carrying out test on sewer, a pipeline as specified or directed by the engineer, include provision of all equipment and materials  | m           | 910.00     |             |                       |
| A277  | Allow for keeping trenches and other excavation free of water which may have entered through ground seepage, rain or by other means as directed by the Engineer  | sum         | 1.00       |             |                       |
|   | <p><b>CLASS B - SITE INVESTIGATION</b></p>   |             |            |             |                       |
| B111  | Trial holes where ordered to prove location , construction size etc., of pipelines, services or existing structures, max depth n.e 1m ( provisional)   | nr          | 3.00       |             |                       |
| B112  | Trial holes where ordered to prove location , construction size etc., of pipelines, services or existing structures, max depth 1- 2m ( provisional)  | nr          | 3.00       |             |                       |
| B113  | Trial holes where ordered to prove location , construction size etc., of pipelines, services or existing structures, max depth 2-3m ( provisional)   | nr          | 3.00       |             |                       |
|   | <p><b>CLASS D - DEMOLITION AND SITE CLEARANCE</b></p> <p><b>The rate quoted is for site clearance and demolition along construction wayleave shall be deemed to include removal of the material and carting away to tips, identified by the Contractor in liaison with the Local Authority.</b></p>  |             |            |             |                       |
| D100  | General site clearance through undeveloped land over the wayleave, include for additional clearance required   | ha          | 0.27       |             |                       |
| D210  | Removal of trees girth 0.5- 1m ( Provisional)  | nr          | 3.00       |             |                       |
| D220  | Removal of trees girth 1-2m ( Provisional)   | nr          | 3.00       |             |                       |
| <b>Bill No. 1.2- PAGE 1 TOTAL CARRIED FORWARD TO COLLECTION SHEET</b> |  |             |            |             |                       |



| ITEM No.  | DESCRIPTION  | Unit | Qty    | Rate | Amount (Kshs.) |
|---|--|------|--------|------|----------------|
|   | <b>CLASS I - PIPEWORK - PIPES</b><br><b>Provide materials, lay, joint and test approved pipes and fittings. Rates to include for handling, laying, all jointing materials and fixing as directed by the engineer.</b><br><b>Supply of pipes</b>  |      |        |      |                |
| I230.1  | Nominal bore 150mm uPVC Class 34 Pipeline  | m    | 750.00 |      |                |
| I230.2  | Nominal bore 225mm uPVC Class 34 Pipeline  | m    | 10.00  |      |                |
| I230.3  | Nominal bore 300 mm DWC HDPE SN8 Pipe  | m    | 150.00 |      |                |
|   | <b>uPVC &amp; DWC HDPE SN8 PIPES WITH SPIGOT AND SOCKET</b><br><b>The rates entered against the items in this section shall include for stripping top soil, laying aside and subsequently replacing over refilled trench, excavation in trench in material other than rock, shuttering where necessary, refilling and compacting spreading surplus soil evenly over and alongside pipe trench, compacting, lay and joint pipes to correct line and level. Depths are stated from ground level to invert level.</b><br><b>Nominal bore 150 mm in trenches</b> |      |        |      |                |
| I233.1  | depth not exceeding 1.5 m.   | m    | 750.00 |      |                |
|   | <b>Nominal bore 225 mm in trenches</b>   |      |        |      |                |
| I232.1  | depth not exceeding 1.5 m.   | m    | 10.00  |      |                |
|   | <b>Nominal bore 300 mm in trenches</b>   |      |        |      |                |
| I232.1  | depth not exceeding 1.5 m.   | m    | 30.00  |      |                |
| I233.1  | ditto but depth; 1.5 - 2.0 m.  | m    | 75.00  |      |                |
| I234.1  | ditto but depth; 2.0 - 2.5 m.  | m    | 30.00  |      |                |
| I235.1  | ditto but depth; 2.5 - 3.0 m.  | m    | 15.00  |      |                |
| <b>Bill No. 1.2- PAGE 2 TOTAL CARRIED FORWARD TO COLLECTION SHEET</b> |  |      |        |      |                |

| ITEM No.  | DESCRIPTION   | Unit | Qty   | Rate | Amount (Kshs.) |
|---|---|------|-------|------|----------------|
|   | <b>CLASS K - PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES</b>   |      |       |      |                |
|   | <b>Excavation quantities are given net. The rate entered are to include for manhole concrete slabs and covers, step irons or ladder, excavation, shuttering where necessary, refilling and compacting around the finished manholes, and disposing of surplus spoil is to be evenly spread. Excavation in any material other than rock</b> |      |       |      |                |
|   | <b>Masonry manhole 1050 mm , reinforced concrete manhole slab and cover.</b>  |      |       |      |                |
| K151.1  | depth not exceeding 0.6 m.  | nr   | 74.00 |      |                |
| K151.2  | depth not exceeding 0.9 m.  | nr   | 32.00 |      |                |
|   | <b>MANHOLES</b>   |      |       |      |                |
|   | <b>Manhole size 1050 mm , reinforced concrete manhole slab and cover.</b>   |      |       |      |                |
| K151.1  | depth not exceeding 1.5 m.  | nr   | 5.00  |      |                |
| K152.1  | ditto but depth; 1.5 - 2.0 m.   | nr   | 2.00  |      |                |
| K153.1  | ditto but depth; 2.0 - 2.5 m.   | nr   | 2.00  |      |                |
|   | <b>MANHOLES</b>   |      |       |      |                |
|   | <b>Manhole size 1200 mm , reinforced concrete manhole slab and cover.</b>   |      |       |      |                |
| K153.1  | ditto but depth; 2.0 - 2.5 m.   | nr   | 1.00  |      |                |
| K154.1  | ditto but depth; 2.5 - 3.0 m.   | nr   | 1.00  |      |                |
| <b>Bill No. 1.2- PAGE 3 TOTAL CARRIED FORWARD TO COLLECTION SHEET</b> |   |      |       |      |                |

| ITEM No.    | DESCRIPTION   | Unit | Qty   | Rate | Amount (Kshs.) |
|-------------|---|------|-------|------|----------------|
|             | <b>CLASS L; SUPPORTS AND PROTECTION ANCILLIARIES TO LAYING AND EXCAVATION</b>   |      |       |      |                |
|             | <b>Extras to Excavation and backfilling Trenches. ( Note : blasting not allowed for any rock excavation)</b>  |      |       |      |                |
|             | <b><i>In pipe trenches 225mm bore</i></b>   |      |       |      |                |
| L111        | Excavation of rock  | m3   | 2.50  |      |                |
| L118        | Allow for excavation of soft material below final surface of pipe trench and back fill with approved hardcore, well compacted in ,layers of 200mm thickness , depth not exceeding 1.0m  | m3   | 1.00  |      |                |
|             | <b><i>In pipe trenches 300mm bore</i></b>   |      |       |      |                |
| L111        | Excavation of rock  | m3   | 75.00 |      |                |
| L118        | Allow for excavation of soft material below final surface of pipe trench and back fill with approved hardcore, well compacted in ,layers of 200mm thickness , depth not exceeding 1.0m  | m3   | 45.00 |      |                |
|             | <b><i>In Manholes and other chambers</i></b><br>( Note: Blasting not allowed for any rock excavation )  |      |       |      |                |
| L 121       | Excavation of rock  | m3   | 7     |      |                |
| L 128       | Allow for excavation of soft material below final surface of manhole and back fill with approved hardcore, well compacted in ,layers of 200mm thickness , depth not exceeding 1.0m  | m3   | 83    |      |                |
|             | <b>Reinstatement</b>  |      |       |      |                |
| <b>k732</b> | Microtunneling across 24m length road using DN 450 externally Epoxy coated and internally cement lined socket and spigot steel pipes. proads pipe nominal bore 375 mm. Rate to include application and acquison of road cutting permits from road authorities.Rate to include application and acquison of road cutting permits from road authorities. (Provisional sum) | sum  | 1.00  |      |                |

**Bill No. 1.2- PAGE 4 TOTAL CARRIED FORWARD TO COLLECTION SHEET**

| ITEM No.  | DESCRIPTION   | Unit | Qty    | Rate | Amount (Kshs.) |
|---|---|------|--------|------|----------------|
|   | <b>Bed, Haunches and Surrounds</b>  |      |        |      |                |
|   | <b>Mass concrete grade 15/20 in 150mm Thick Beds, Haunches and surrounds</b>            |      |        |      |                |
| L 444.1   | 225 mm nominal bore pipeline<br>Bed haunch and surround type D (0.2821 m <sup>3</sup> ) | m    | 10.00  |      |                |
| L 444.2   | 300 mm nominal bore pipeline<br>Bed haunch and surround type A (0.1471 m <sup>3</sup> ) | m    | 150.00 |      |                |
| L 444.3   | 300 mm nominal bore pipeline<br>Bed haunch and surround type D (0.3702 m <sup>3</sup> ) | m    | 10.00  |      |                |
| <b>Bill No. 1.2- PAGE 5 TOTAL CARRIED FORWARD TO COLLECTION SHEET</b> |   |      |        |      |                |

| <b>COLLECTION PAGE</b>                                     |                        |             |            |  |                       |
|--|------------------------|-------------|------------|--|-----------------------|
| <b>ITEM No.</b>  | <b>DESCRIPTION</b>     | <b>Unit</b> | <b>Qty</b> |  | <b>Amount (Kshs.)</b> |
|  | <b>COLLECTION PAGE</b> |             |            |  |                       |
| 1  | <b>From Page 2</b>     |             |            |  |                       |
| 2  | <b>From Page 3</b>     |             |            |  |                       |
| 3  | <b>From Page 4</b>     |             |            |  |                       |
| 3  | <b>From Page 5</b>     |             |            |  |                       |
| 4  | <b>From Page 6</b>     |             |            |  |                       |
|  | <b>Sub-Total (i)</b>   |             |            |  |                       |
| <b>Bill No. 1.2-TOTAL CARRIED FORWARD TO GRAND SUMMARY</b> |                        |             |            |  |                       |

| ITEM No.   | DESCRIPTION  | Unit | Qty  | Rate | Amount (Kshs.) |
|--|--|------|------|------|----------------|
| <b>BILL No. 1.3. WASTE WATER</b>                                   |  |      |      |      |                |
| A  | <p><b>TREATMENT/WASTE WATER DISPOSAL</b></p> <p>Provide a provisional sum for civil works associated with waste water treatment plant/waste water disposal to be executed as authorized by the Engineer and to be measured and valued by the Quantity Surveyor in accordance with the Contract</p> | sum  | 1.00 |      |                |
| <b>Bill No. 1.3- PAGE 3 TOTAL CARRIED FORWARD TO GRAND SUMMARY</b> |  |      |      |      |                |

| ITEM No.               | DESCRIPTION                         | Unit | Qty | Rate | Amount (Kshs.) |
|------------------------|-------------------------------------|------|-----|------|----------------|
| <b>Bill No.</b>        | <b>GRAND SUMMARY</b><br>Description |      |     |      | <b>Amount</b>  |
| <b>Bill No.</b><br>1.1 | Preliminaries and General Items     |      |     |      |                |
| <b>Bill No.</b><br>1.2 | Measured Works                      |      |     |      |                |
| <b>Bill No.</b><br>1.3 | Biodigester                         |      |     |      |                |
|                        | <b>GRAND TOTAL</b>                  |      |     |      |                |

**UNDERGROUND WATER TANK**



| ITEM NO | DESCRIPTION  | UNIT           | QTY   | RATE | AMOUNT |
|---------|--|----------------|-------|------|--------|
|         | <b>EXTERNAL WORKS</b>  |                |       |      |        |
|         | <b>BILL NO. 7</b>  |                |       |      |        |
|         | <b>UNDERGROUND WATER TANK</b>  |                |       |      |        |
|         | <b>SUBSTRUCTURE (ALL PROVISIONAL)</b>  |                |       |      |        |
|         | <u>Excavations</u>   |                |       |      |        |
| A       | Excavate over site to remove top soil average 200mm deep and cart away.  | m <sup>2</sup> | 608   |      |        |
| B       | Excavate for pits commencing at reduced excavation level and not exceeding 1.50m deep.   | m <sup>3</sup> | 912   |      |        |
| C       | Excavate for pits commencing at reduced excavation level and not exceeding 1.50-3m deep  | m <sup>3</sup> | 912   |      |        |
| D       | Excavate for pits commencing at reduced excavation level and not exceeding 3-4.5m deep   | m <sup>3</sup> | 699   |      |        |
| E       | Extra excavation for excavating in all types of rock and cart away.  | m <sup>3</sup> | 757   |      |        |
| F       | Remove surplus excavated material from site.   | m <sup>3</sup> | 2,523 |      |        |
|         | <u>Disposal</u>  |                |       |      |        |
| G       | Allow for keeping the whole of the excavation free from all spring and running water by pumping or any other such means as may be necessary            | Item           | 1     |      |        |
| H       | Allow for planking and strutting to sides of already excavated surfaces and new excavated surfaces to keep excavations free from all fallen materials. | Item           | 1     |      |        |
|         | <b>Fillings</b>  |                |       |      |        |
| J       | Approved 300mm wide granular filling layers not exceeding 150mm thick  | m <sup>2</sup> | 608   |      |        |
|         | <b><u>In situ concrete Class 15MPa: vibrated:</u></b>  |                |       |      |        |
| K       | Floor slab   | m <sup>2</sup> | 608   |      |        |
|         | Carried to Collection  |                |       |      |        |

| ITEM NO | DESCRIPTION   | UNIT           | QTY    | RATE | AMOUNT |
|---------|---|----------------|--------|------|--------|
|         | <b>REINFORCED CONCRETE FRAME</b>  |                |        |      |        |
|         | <u>In situ concrete class 30MPa: vibrated: reinforced</u>   |                |        |      |        |
| A       | Beams   | m <sup>2</sup> | 15     |      |        |
| B       | 250mm RC wall   | m <sup>2</sup> | 48     |      |        |
| C       | 300mm RC wall   | m <sup>2</sup> | 331    |      |        |
| D       | 300mm bottom slab   | m <sup>2</sup> | 608    |      |        |
| E       | 200mm top slab  | m <sup>2</sup> | 608    |      |        |
| F       | Extra over for boxing to form opening size 600 x 450mm through 200mm thick reinforced concrete slab; rebated edges  | No             | 4      |      |        |
| G       | Sump  | No             | 4      |      |        |
|         | <u>Ribbed reinforcement steel bars to KS 573:2014 : Grade 500 high tensile strength including bends, hooks, tying wire and distance blocks; to S.E's detail (Provisional)</u> |                |        |      |        |
| H       | Assorted reinforcement  | kg             | 56,800 |      |        |
|         | <u>Modular steel frame with steel plates covering formwork and/or marine board formwork: to</u>   |                |        |      |        |
| J       | Sides of beams  | m <sup>2</sup> | 98     |      |        |
| K       | RC wall   | m <sup>2</sup> | 758    |      |        |
| L       | Soffits of suspended slab   | m <sup>2</sup> | 608    |      |        |
| M       | Edge of floor slab 150 - 225mm high.  | m              | 108    |      |        |
| N       | Edge of floor slab 225 - 300mm high.  | m              | 108    |      |        |
|         | <u>Water Bar</u>  |                |        |      |        |
| P       | 250mm wide PVC water bar  | m              | 123    |      |        |
|         | Carried to Collection   |                |        |      |        |
|         | <i>Underground Water Tank</i>   |                |        |      |        |

| ITEM NO | DESCRIPTION  | UNIT           | QTY | RATE | AMOUNT |
|---------|--|----------------|-----|------|--------|
|         | <b>FINISHES</b>  |                |     |      |        |
|         | <b>WALL FINISHES</b>   |                |     |      |        |
|         | <i>15mm cement and sand rendering on concrete surfaces finished with a wood float to:-</i>   |                |     |      |        |
| A       | 12mm Two coat external lime plaster on walls finished smooth with a steel trowel   | m <sup>2</sup> | 758 |      |        |
|         | <b>Waterproofing</b>   |                |     |      |        |
|         | <i>25mm thick 2 coats lime waterproofed plaster in "penetron Plus" as described:</i>   |                |     |      |        |
| B       | 300mm thick floor slab   | m <sup>2</sup> | 608 |      |        |
| C       | Ditto to walls   | m <sup>2</sup> | 758 |      |        |
|         | <u>Plastic manhole</u>   |                |     |      |        |
| E       | Heavy duty plastic manhole cover and frame size 600x450mm wide with cover set in frame with grease   | No             | 4   |      |        |
| F       | Supply and fix approved 450mm, 10mm dia solid rungs wide stainless steel step ladder at 300mm centres fixed with SS bolts and nuts to structural details | No             | 4   |      |        |
|         | Carried to Collection  |                |     |      |        |
|         | <b>UNDERGROUND WATER TANK</b>  |                |     |      |        |
|         | <b>COLLECTION</b>  |                |     |      |        |
|         | Total brought forward from Page No. 1  |                |     |      |        |
|         | Total brought forward from Page No. 2  |                |     |      |        |
|         | Total brought forward from above   |                |     |      |        |
|         | <b>Carried Forward to Summary</b>  |                |     |      |        |
|         |  |                |     |      |        |
|         |  |                |     |      |        |

**ELECTRICAL WORKS**

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
|  | <b><u>BILL NO. 2</u></b>   |      |     |               |                 |
|  | <b><u>PROPOSED TYPICAL SOCIAL &amp; AFFORDABLE UNITS BLOCK TYPE A</u></b>  |      |     |               |                 |
|  | <b>(i) <u>GROUND FLOOR</u></b>   |      |     |               |                 |
|  | <b>A. <u>2 BEDROOM AHP UNITS</u></b>   |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK<br>AND COMMISSION THE FOLLOWING:-   |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup><br>single core PVC insulated copper cables drawn<br>in 20mm diameter heavy gauge PVC conduits<br>including all accessories for one way switching,<br>but excluding the switch and luminaire. | No.  | 6   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way<br>switching   | No.  | 4   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree,<br>MK Logic, Clipsal E- Series or approved<br>equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 3   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 5   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 2   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable,<br>lamp holder and 11W led lamp as crabtree or<br>approved equivalent <b>Type 'CR'</b>  | No.  | 6   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass<br>and 16W compact fluorescent lamp as Astra,<br>Micromark, Thorn or approved equivalent.<br><b>"Type BF"</b>   | No.  | 2   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 1.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 7   |               |                 |
| 1.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or approved equivalent.  | No.  | 7   |               |                 |
| 1.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 1.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 1.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories, but excluding the 45A Cooker connection unit         | No.  | 1   |               |                 |
| 1.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10 | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to the Next Pg.</b>  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
| <b>TELEPHONE, DATA AND TV POINTS POINTS</b>  |   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the Data socket outlet.   | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the DTV socket outlet.  | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable   | No.  | 2   |               |                 |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | LM   | 45  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM  | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|   | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 1.17  | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |               |                 |
| 1.18  | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|   | i)10 A SP MCB  | No.  | 1   |               |                 |
|   | ii)32 A SP MCB   | No.  | 2   |               |                 |
|   | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|   | iv) Blanking plates  | No.  | 2   |               |                 |
| 1.19  | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard below the staircase. | LM   | 45  |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Pg.</b> |  |      |     |               |                 |



| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| <b>B.</b>                                    | <b><u>3 BEDROOM AHP UNIT</u></b>   |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 4   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 6   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 4   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 8   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 1   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 7   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 3   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|  | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 8   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 8   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 2   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories, but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
| <b>TELEPHONE, DATA AND TV POINTS POINTS</b>  |   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the telephone socket outlet.  | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the DTV socket outlet.  | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | LM   | 45  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM  | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|   | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 1.17  | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator ,but excluding the MCBs, and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |               |                 |
| 1.18  | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|   | i)10 A SP MCB  | No.  | 1   |               |                 |
|   | ii)32 A SP MCB   | No.  | 3   |               |                 |
|   | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|   | iv) Blanking plates  | No.  | 1   |               |                 |
| 1.19  | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 45  |               |                 |
| <b>Total Carried Forward to the Ground Floor Collection Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| C.   | <b><u>STUDIO SOCIAL UNITS</u></b>  |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 1   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 2   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 1   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 2   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 1   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 2   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| <b>POWER AND SOCKET OUTLET POINTS</b>        |   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 4   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 4   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|---|------|-----|------------|--------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |            |              |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |            |              |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |            |              |
| <b>TELEPHONE, DATA AND TV POINTS POINTS</b>  |   |      |     |            |              |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the telephone socket outlet.  | No.  | 1   |            |              |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |            |              |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |            |              |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | LM   | 30  |            |              |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |            |              |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 1.17   | 6 ways 100A SPN Consumer Unit `A' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |               |                 |
| 1.18   | <b>MCBs for item above as Schneider Electric Acti 9 or approved equivalent</b>   |      |     |               |                 |
|  | i)10 A SP MCB  | No.  | 1   |               |                 |
|  | ii)32 A SP MCB   | No.  | 3   |               |                 |
|  | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|  | iv) Blanking plates  | No.  | 1   |               |                 |
| 1.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard below the staircase. | LM   | 30  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |



| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| D.   | <b><u>2 ROOM/1 ROOM UNITS</u></b>  |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 2   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 3   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A two gang one way switch   | No.  | 1   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 3   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 1   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 4   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| <b>POWER AND SOCKET OUTLET POINTS</b>        |   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 6   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 6   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | LM   | 20  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM  | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|   | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>   |      |     |               |                 |
| 1.17  | 6 ways 100A SPN Consumer Unit `A' complete with 100A SPN integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.  | No.  | 1   |               |                 |
| 1.18  | <b>MCBs for item above as Schneider Electric Acti 9 or approved equivalent</b>  |      |     |               |                 |
|   | i)10 A SP MCB   | No.  | 1   |               |                 |
|   | ii)32 A SP MCB  | No.  | 3   |               |                 |
|   | iii) 45 A SP MCB  | No.  | 1   |               |                 |
|   | iv) Blanking plates   | No.  | 1   |               |                 |
| 1.19  | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LVswitchboard below the staircase. | LM   | 20  |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| E.   | <b><u>3 ROOM SOCIAL UNIT</u></b>   |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 2   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 5   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 1   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 4   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 3   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 6   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass   | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| <b>POWER AND SOCKET OUTLET POINTS</b>        |   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 7   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 7   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories, but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the telephone socket outlet.  | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the DTV socket outlet.  | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 20  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 1.17   | 6 ways 100A SPN Consumer Unit `A' complete with 100A SPN integral isolator ,but excluding the MCBs, and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |               |                 |
| 1.18   | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|  | i)10 A SP MCB  | No.  | 1   |               |                 |
|  | ii)32 A SP MCB   | No.  | 3   |               |                 |
|  | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|  | iv) Blanking plates  | No.  | 1   |               |                 |
| 1.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 20  |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Page</b> |  |      |     |               |                 |



| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| F.   | <b><u>CORRIDOR/ LIFTS LOBBY AREA</u></b>   |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for two way switching, but excluding the switch and luminaire. | No.  | 31  |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-<br>i) 10A one gang two way switch<br>ii) 10A two gang two way switch   | No.  | 4   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Circular shaped surface mounted led luminaire   | No.  | 12  |               |                 |
|  | b) Emergency Maintained Circular shaped surface  | No.  | 3   |               |                 |
|  | c) 8W bulkhead luminaire ,polycarbonate base, and clear diffuser and installed inside the lift shaft As Thorn EWB/ETB bulkhead. "Type G"   | No.  | 2   |               |                 |
|  | d) Bulkhead fitting with moulded glass diffuser  | No.  | 14  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.04   | CCTV points in designaed locations for survailance, comprising of 25mm diameter HG PVC conduits complete with draw wire and the blanking plate. Allow for draw boxes where all the conduits from each security point converge.  | No.  | 6   |               |                 |
| 1.05   | 300x 300x 100mm deep 16 G galvanized adaptable box.   | No.  | 2   |               |                 |
|  | <b>LIGHTING CONTROL</b>   |      |     |               |                 |
| 1.06   | Presence sensor complete with assocaited wiring (light and motion sensor) as Osram Duo with the following characteristics:<br>Operation voltage 220 - 240V 50Hz, detection area-12m dia minimum, settable light value, switch-off delay (if no motion detected), installation height - 5m minimum | No.  | 3   |               |                 |
| 1.07   | 24A, 240V, 2P DB/CU mounted silent operation contactor for Switching External lights complete with all accessories and as CRABTREE CIK24 or an approved equivalent  | No.  | 2   |               |                 |
| 1.08   | Photocell control unit and wired to energize the contactors complete with a D.P override switch as THORN QPK or approved equivalent   | No.  | 2   |               |                 |
| 1.09   | Water booster power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 38mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 40A TPN isolator   | No.  | 1   |               |                 |
| 1.10   | 40A TPN isolator as MK or approved equivalent   | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.11   | Lifts isolators power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 63A TPN isolator | No.  | 2   |               |                 |
| 1.12   | 63A TPN isolator as MK or approved equivalent   | No.  | 2   |               |                 |
| 1.13   | 8 ways 100A TPN distribution boards 'T' complete with 100A TPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.  | No.  | 1   |               |                 |
| 1.14   | 4 ways 100A SPN Consumer Unit `C' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent for common services.  | No.  | 5   |               |                 |
| 1.15   | <b>MCBs for item above as Schneider Electric Acti 9</b>   |      |     |               |                 |
|  | i)10 A SP MCB   | No.  | 6   |               |                 |
|  | ii) 32 A SP MCB   | No.  | 4   |               |                 |
|  | iii) 40 A SP MCB  | No.  | 5   |               |                 |
|  | iv) 32 A TP MCB   | No.  | 3   |               |                 |
|  | v) Blanking plates  | No.  | 8   |               |                 |
| 1.16   | Sub-mains circuits for DB 'T' above comprising of 4 core 25mm <sup>2</sup> PVC/SWA/PVC cable drawn in cable tray/ 50mm diameter heavy gauge conduits and running from the Lv switchboard  | LM   | 10  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM  | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>                          |   |      |     |               |                 |
| 1.17  | Sub-mains circuits for CU 'C ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from common distribution board. | LM   | 30  |               |                 |
| 1.18  | 200mm x 50mm galvanised metallic cable tray (Telecom, DTV, Internet Cables) gauge 14 (riser duct) c/w all mounting accessories bends, rawl bolts, threaded bolts, brackets,                     | LM.  | 60  |               |                 |
| 1.19  | 200mm x 50mm galvanised metallic cable tray (Power Cables) gauge 14 (riser duct) c/w all mounting accessories bends, rawl bolts, threaded bolts, brackets,                                      | LM.  | 40  |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Pg.</b> |   |      |     |               |                 |

| ITEM  | DESCRIPTION                             | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|-----|---------------|-----------------|
| <b>GROUND FLOOR SUMMARY PAGE</b>                            |   |     |               |                 |
| 1   | Total Amount for 2 Bedroom AHP Unit     | 4   |               |                 |
| 2   | Total Amount for 3 Bedroom AHP Unit     | 1   |               |                 |
| 3   | Total Amount for Studio/1 Room AHP Unit | 4   |               |                 |
| 4   | Total Amount for 2 Room Social Unit     | 2   |               |                 |
| 5   | Total Amount for 3 Room Social Unit     | 1   |               |                 |
| 6   | Total Amount for Common Area            | 1   |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Pg.</b> |   |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| (ii)   | <b><u>TYPICAL 1ST - 9TH FLOOR</u></b>  |      |     |               |                 |
| A.   | <b><u>2 BEDROOM AHP UNITS</u></b>  |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 6   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 4   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 3   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 5   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 2   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 6   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 2   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| <b>POWER AND SOCKET OUTLET POINTS</b>        |   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 7   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or approved equivalent.  | No.  | 7   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories, but excluding the 45A Cooker connection unit         | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the Data socket outlet.   | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the DTV socket outlet.  | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | LM   | 45  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |



| ITEM   | DESCRIPTION  | UNIT                     | QTY              | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|--------------------------|------------------|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>                           |  |                          |                  |               |                 |
| <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>            |  |                          |                  |               |                 |
| 1.17   | 6 ways 100A SPN Consumer Unit `A' complete with 100A SPN integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.   | No.                      | 1                |               |                 |
| 1.18   | <b>MCBs for item above as Schneider Electric Acti 9</b><br>i)10 A SP MCB<br>ii)32 A SP MCB<br>iii) 45 A SP MCB<br>iv) Blanking plates  | No.<br>No.<br>No.<br>No. | 1<br>2<br>1<br>2 |               |                 |
| 1.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard below the staircase. | LM                       | 65               |               |                 |
| <b>Total Carried Forward to Typical Floor Collection Pg.</b> |  |                          |                  |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| <b>B.</b>                                    | <b><u>3 BEDROOM AHP UNIT</u></b>   |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 4   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 6   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 4   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 8   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 1   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 7   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 3   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| <b>POWER AND SOCKET OUTLET POINTS</b>        |   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 8   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 8   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 2   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories, but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the telephone socket outlet.  | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the DTV socket outlet.  | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 1.16   | 25 mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts  | LM   | 45  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>                           |  |      |     |               |                 |
| <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>            |  |      |     |               |                 |
| 1.17   | 6 ways 100A SPN Consumer Unit `A' complete with 100A SPN integral isolator ,but excluding the MCBs, and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |               |                 |
| 1.18   | <b>MCBs for item above as Schneider Electric Acti 9</b><br>i)10 A SP MCB<br>ii)32 A SP MCB<br>iii) 45 A SP MCB<br>iv) Blanking plates  | No.  | 1   |               |                 |
| 1.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 65  |               |                 |
| <b>Total Carried Forward to Typical Floor Collection Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| C.   | <b><u>STUDIO/1 ROOM UNITS</u></b>  |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 1   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 2   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 1   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 2   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 1   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 2   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| <b>POWER AND SOCKET OUTLET POINTS</b>        |   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 4   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 4   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the telephone socket outlet.  | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | LM   | 30  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |



| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 1.17   | 6 ways 100A SPN Consumer Unit `A' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |               |                 |
| 1.18   | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|  | i)10 A SP MCB  | No.  | 1   |               |                 |
|  | ii)32 A SP MCB   | No.  | 3   |               |                 |
|  | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|  | iv) Blanking plates  | No.  | 1   |               |                 |
| 1.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard below the staircase. | LM   | 50  |               |                 |
| <b>Total Carried Forward to Typical Floor Collection Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| D.   | <b><u>2 ROOM SOCIAL UNITS</u></b>  |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 2   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 3   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A two gang one way switch   | No.  | 1   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 3   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 1   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 4   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|  | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 6   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 6   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
| <b>TELEPHONE, DATA AND TV POINTS POINTS</b>  |   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | LM   | 20  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>   |      |     |               |                 |
| 1.17   | 6 ways 100A SPN Consumer Unit `A' complete with 100A SPN integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.  | No.  | 1   |               |                 |
| 1.18   | <b>MCBs for item above as Schneider Electric Acti 9</b>   |      |     |               |                 |
|  | i)10 A SP MCB   | No.  | 1   |               |                 |
|  | ii)32 A SP MCB  | No.  | 3   |               |                 |
|  | iii) 45 A SP MCB  | No.  | 1   |               |                 |
|  | iv) Blanking plates   | No.  | 1   |               |                 |
| 1.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LVswitchboard below the staircase. | LM   | 30  |               |                 |
| <b>Total Carried Forward to Typical Floor Collection Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| E.   | <b><u>3 ROOM SOCIAL UNIT</u></b>   |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 2   |               |                 |
|  | ii) Ditto as in item No. 1.01 but for two way switching  | No.  | 5   |               |                 |
| 1.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 1   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 4   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 3   |               |                 |
| 1.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 6   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>           |   |      |     |               |                 |
| <b>POWER AND SOCKET OUTLET POINTS</b>        |   |      |     |               |                 |
| 1.04   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 7   |               |                 |
| 1.05   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 7   |               |                 |
| 1.06   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 1.07   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 1.08   | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories, but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 1.09   | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 1.10   | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 1.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 1.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the telephone socket outlet.  | No.  | 1   |               |                 |
| 1.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the DTV socket outlet.  | No.  | 1   |               |                 |
| 1.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 1.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 20  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |



| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 1.17   | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator ,but excluding the MCBs, and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |               |                 |
| 1.18   | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|  | i)10 A SP MCB  | No.  | 1   |               |                 |
|  | ii)32 A SP MCB   | No.  | 3   |               |                 |
|  | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|  | iv) Blanking plates  | No.  | 1   |               |                 |
| 1.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 45  |               |                 |
| <b>Total Carried Forward to Typical Floor Collection Pg.</b> |  |      |     |               |                 |

| ITEM                                     | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| F.                                       | <b><u>CORRIDOR/ LIFTS LOBBY AREA</u></b>   |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 1.01                                     | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for two way switching, but excluding the switch and luminaire. | No.  | 20  |               |                 |
| 1.02                                     | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang two way switch   | No.  | 5   |               |                 |
|  | ii) 10A two gang two way switch  | No.  | 5   |               |                 |
| 1.03                                     | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Circular shaped surface mounted led luminaire   | No.  | 12  |               |                 |
|  | b) Emergency Maintained Circular shaped surface  | No.  | 3   |               |                 |
|  | c) 8W bulkhead luminaire ,polycarbonate base, and clear diffuser and installed inside the lift shaft As Thorn EWB/ETB bulkhead. "Type G"   | No.  | 2   |               |                 |
| <b>Total Carried Forward to Next Pg.</b> |  |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.04 | CCTV points in designaed locations for survailance, comprising of 25mm diameter HG PVC conduits complete with draw wire and the blanking plate. Allow for draw boxes where all the conduits from each security point converge.  | No.  | 6   |               |                 |
| 1.05 | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
|      | <b>LIGHTING CONTROL</b>   |      |     |               |                 |
| 1.06 | Presence sensor complete with assocaited wiring (light and motion sensor) as Osram Duo with the following characteristics:<br><br>Operation voltage 220 - 240V 50Hz, detection area-12m dia minimum, settable light value, switch-off delay (if no motion detected), installation height - 5m minimum | No.  | 3   |               |                 |
|      | <b>Total Carried Forward to Next Pg.</b>  |      |     |               |                 |

| ITEM   | DESCRIPTION                         | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|-------------------------------------|-----|---------------|-----------------|
|  | <b>TYPICAL FLOOR SUMMARY</b>        |     |               |                 |
| 1  | Total Amount for 2 Bedroom AHP Unit | 36  |               |                 |
| 2  | Total Amount for 3 Bedroom AHP Unit | 9   |               |                 |
| 3  | Total Amount for Studio AHP Unit    | 18  |               |                 |
| 4  | Total Amount for 1 Room Social Unit | 9   |               |                 |
| 5  | Total Amount for 2 Room Social Unit | 9   |               |                 |
| 6  | Total Amount for 3 Room Social Unit | 9   |               |                 |
| 7  | Total Amount for Common Area        | 9   |               |                 |
| <b>Total for 9No. Typical Floor Carried Forward to Main Summary Page</b> |                                     |     |               |                 |

| ITEM                                     | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| (iii)                                    | <b><u>EARTHING AND LIGHTNING PROTECTION</u></b>  |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>Air Termination</b>   |      |     |               |                 |
| 1.01                                     | 2000mm x15mmØ multiple point pure copper AirRods/ Termination with spikes as Furse Part No. RA240 or approved equivalent | No.  | 3   |               |                 |
| 1.02                                     | Copper Air Rod Base as Furse Part No. SD105-H or approved equivalent   | No.  | 3   |               |                 |
| 1.03                                     | Copper Junction Clamps for copper tape as Furse Part No. CN105-H or approved equivalent                                  | No.  | 3   |               |                 |
| 1.04                                     | 25mm x 3mm Tinned Copper Tape as Furse TC230 or approved equivalent  | Lm.  | 130 |               |                 |
|  | <b>Down Conductor</b>  |      |     |               |                 |
| 1.05                                     | 25mm x 3mm Tinned Copper Tape as Furse TC230 or approved equivalent  | Lm.  | 200 |               |                 |
| 1.06                                     | Screwdown copper test clamp as Furse CT305 or approved equivalent  | No.  | 3   |               |                 |
| 1.07                                     | 38mm Ø HG PVC conduits for drawing the down conductor above.   | Lm.  | 10  |               |                 |
| <b>Total Carried Forward to Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>               |   |      |     |               |                 |
| <b>Earth Termination</b>                         |   |      |     |               |                 |
| 1.08   | 15mm Ø, 1500mm long solid copper earth rod c/w driving stud, coupling, and spike as Furse RC011 or approved equivalent  | No   | 3   |               |                 |
| 1.09   | Earth rod to tape clamp type A as Furse CR108 or approved equivalent  | No.  | 3   |               |                 |
| 1.10   | Concrete inspection earth pit Cat. No. PT 005 with 5 hole earth bar as Furse Cat. No. PT 006.   | No.  | 2   |               |                 |
| 1.11   | 600mm x 600mm copper earth mat made from 25mm x 3mm copper tape at 300mm spacing, buried to permanent moisture level and complete with all clamps and 6m long 25mm x 3mm copper tape clamped to the down conductor, soil conditioning agents (marconite or bentonite) as necessary to achieve earthing resistance value below 10-Ohms | Lot  | 1   |               |                 |
| 1.12   | Allow for earthing tests for the above and submission of the report to the engineer to BS7671 & BS62305 standards   | No.  | 1   |               |                 |
| 1.13   | <b>Bonding</b><br>Bonding and clamping to all metal work including water pipes, gas pipes, hand-rails, smatv system, window frames, cladding, metal roof etc. and the main earth for the building.  | Item | 1   |               |                 |
| <b>Total Carried Forward to Main Summary Pg.</b> |   |      |     |               |                 |

| ITEM                                     | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| (iv)                                     | <b><u>LV SWITCHBOARD</u></b>   |      |     |               |                 |
|  | TAKE DELIVERY, STORE, INSTALL AND COMMISSION THE FOLLOWING:-   |      |     |               |                 |
| 1.01                                     | Install purpose made Free-standing, fully wired front access metal clad main switchboard cubicle suitable for floor / wall mounting and manufactured in 14SWG galvanised mild steel sheet, to be finished in cream (or appropriate colour) powder coating. Wiring as shown on the schematic (the other details as per Particular Specification), complete with the following:- | No.  | 1   |               |                 |
| (i)                                      | 630Amps TP/N copper busbars - KPLC supply (Sealable)   |      |     |               |                 |
| (ii)                                     | 630Amps MCCB as mains incomer adjustable   |      |     |               |                 |
| (iii)                                    | Space for 1No. 3-phase KPLC Common Services meter (kW, kWh, kVA, V, I etc), 63A TP MCB   |      |     |               |                 |
| (iv)                                     | 180 No. 63A DP MCBs for the sub-main cables  |      |     |               |                 |
| (v)                                      | 1No. 100A DP MCBs for the sub-main cables  |      |     |               |                 |
| (vi)                                     | Space for KPLC cut-outs including studs for mounting KPLC seals  |      |     |               |                 |
| (vii)                                    | Sealable studs for all cover plate screws and all necessary accessories  |      |     |               |                 |
| (viii)                                   | 6mm perspex viewing window for each section  |      |     |               |                 |
| (ix)                                     | Heavy duty rubber lining for all the perspex viewing windows   |      |     |               |                 |
| (x)                                      | 4 No. Spare ways   |      |     |               |                 |
| <b>Total Carried Forward to Next Pg.</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| 1.02   | <p><b>Total B/F from Previous Pg.</b></p> <p>Earthing for the switch-board under this section comprising 25x3mm copper tape lead, 1800mm long x 15mm diameter copper earth electrode as Furse or approved equivalent complete with driving stud and tape to rod clamp, 300mm x 300mm x 300mm deep concrete inspection earth pit with removable waterproof cover, 600mm x 600mm copper earth mat, soil conditioning agents (marconite and bentonite etc) necessary to achieve earthing value below 5-Ohms and all other necessary accessories</p> | No.  | 1   |               |                 |
| <b>Total Carried Forward to Main Summary Pg.</b> |  |      |     |               |                 |



| ITEM   | DESCRIPTION   |  |
|--|---|--|
| <b>BLOCK TYPE A SUMMARY PAGE</b>   |   |  |
| 1  | Total Amount for Ground Floor B/F Page D-25                             |  |
| 2  | Total Amount for Typical 1st - 9th Floor B/F Page D-48                  |  |
| 3  | Total Amount for Lightning Protection B/F Page D-50                     |  |
| 4  | Total Amount for LV Switchboard Installation and Earthing B/F Page D-53 |  |
| <b>TOTAL AMOUNT FOR BILL No. 1: TYPICAL 1NO. BLOCK TYPE A CARRIED FORWARD TO PRICE COLLECTION PAGE</b> |   |  |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b><u>BILL NO. 3</u></b>  |      |     |               |                 |
|  | <b><u>PROPOSED TYPICAL AFFORDABLE &amp; MARKET UNITS BLOCK TYPE B</u></b>   |      |     |               |                 |
|  | <b>(i) <u>GROUND FLOOR</u></b>  |      |     |               |                 |
|  | <b>A. <u>2 BEDROOM AHP UNITS</u></b>  |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-   |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>  |      |     |               |                 |
| 2.01   | i) Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 3   |               |                 |
|  | ii) Ditto as in item No. 2.01 but for two way switching   | No.  | 6   |               |                 |
| 2.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-   |      |     |               |                 |
|  | i) 10A one gang one way switch  | No.  | 3   |               |                 |
|  | ii) 10A one gang two way switch   | No.  | 6   |               |                 |
|  | iii) 10A two gang two way switch  | No.  | 2   |               |                 |
| 2.03   | <b>LIGHTING FITTINGS</b>  |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>   | No.  | 6   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>   | No.  | 2   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 2.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 8   |               |                 |
| 2.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or approved equivalent.  | No.  | 8   |               |                 |
| 2.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 2.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 2.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories, but excluding the 45A Cooker connection unit         | No.  | 1   |               |                 |
| 2.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 2.10 | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to the Next Pg.</b>  |      |     |               |                 |

| ITEM                                     | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.11                                     | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 2.12                                     | 240V/12V Ding dong domestic door bell as Oxford or approved equivalent  | No.  | 1   |               |                 |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 2.13                                     | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the Data socket outlet.   | No.  | 1   |               |                 |
| 2.14                                     | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the DTV socket outlet.  | No.  | 1   |               |                 |
| 2.15                                     | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 2.16                                     | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 20  |               |                 |
| <b>Total Carried Forward to Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|--|------|-----|------------|--------------|
|  | <b>Total B/F from Previous Pg.</b>   |      |     |            |              |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |            |              |
| 2.17   | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |            |              |
| 2.18   | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |            |              |
|  | i)10 A SP MCB  | No.  | 1   |            |              |
|  | ii)32 A SP MCB   | No.  | 2   |            |              |
|  | iii) 45 A SP MCB   | No.  | 1   |            |              |
|  | iv) Blanking plates  | No.  | 2   |            |              |
| 2.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard below the staircase. | LM   | 20  |            |              |
| <b>Total Carried Forward to Ground Floor Collection Page</b> |  |      |     |            |              |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|---|------|-----|------------|--------------|
| <b>B.</b>                                    | <b><u>3 BEDROOM AHP UNITS</u></b>   |      |     |            |              |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-   |      |     |            |              |
|  | <b>LIGHTING POINTS</b>  |      |     |            |              |
| 2.01   | i) Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 4   |            |              |
|  | ii) Ditto as in item No. 2.01 but for two way switching   | No.  | 8   |            |              |
| 2.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-   |      |     |            |              |
|  | i) 10A one gang one way switch  | No.  | 5   |            |              |
|  | ii) 10A one gang two way switch   | No.  | 8   |            |              |
|  | iii) 10A two gang two way switch  | No.  | 2   |            |              |
| 2.03   | <b>LIGHTING FITTINGS</b>  |      |     |            |              |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>   | No.  | 9   |            |              |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>   | No.  | 2   |            |              |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |            |              |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 2.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 11  |               |                 |
| 2.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 11  |               |                 |
| 2.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 2   |               |                 |
| 2.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |               |                 |
| 2.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories, but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 2.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 2.10 | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to the Next Pg.</b>  |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.11 | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 2.12 | 240V/12V Ding dong domestic door bell as Oxfrud or approved equivalent  | No.  | 1   |               |                 |
|      | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 2.13 | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the telephone socket outlet.  | No.  | 1   |               |                 |
| 2.14 | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking cover but excluding the DTV socket outlet.  | No.  | 1   |               |                 |
| 2.15 | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 2.16 | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 20  |               |                 |
|      | <b>Total Carried Forward to the Next Pg.</b>  |      |     |               |                 |



| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 2.17   | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator ,but excluding the MCBs, and as Schneider Electric Acti 9 or approved equivalent.                                     | No.  | 1   |               |                 |
| 2.18   | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|  | i)10 A SP MCB  | No.  | 1   |               |                 |
|  | ii)32 A SP MCB   | No.  | 3   |               |                 |
|  | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|  | iv) Blanking plates  | No.  | 1   |               |                 |
| 2.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm2 single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 45  |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Page</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| C.   | <b><u>2 BEDROOM MARKET UNITS</u></b>  |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-   |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>  |      |     |               |                 |
| 2.01   | i) Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 5   |               |                 |
|  | ii) Ditto as in item No. 2.01 but for two way switching   | No.  | 5   |               |                 |
| 2.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-   |      |     |               |                 |
|  | i) 10A one gang one way switch  | No.  | 4   |               |                 |
|  | ii) 10A two gang one way switch   | No.  | 1   |               |                 |
|  | iii) 10A one gang two way switch  | No.  | 6   |               |                 |
|  | iv) 10A two gang two way switch   | No.  | 2   |               |                 |
| 2.03   | <b>LIGHTING FITTINGS</b>  |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>   | No.  | 7   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>   | No.  | 2   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 2.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 9   |               |                 |
| 2.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 9   |               |                 |
| 2.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 40A DP connection unit | No.  | 2   |               |                 |
| 2.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |               |                 |
| 2.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 2.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused Socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 2.10 | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to the Next Pg.</b>  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.11   | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 2.12   | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 2.13   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the telephone socket outlet.  | No.  | 1   |               |                 |
| 2.14   | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 2.15   | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 2.16   | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 40  |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 2.17   | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.                                     | No.  | 1   |               |                 |
| 2.18   | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|  | i)10 A SP MCB  | No.  | 1   |               |                 |
|  | ii)32 A SP MCB   | No.  | 3   |               |                 |
|  | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|  | iv) Blanking plates  | No.  | 1   |               |                 |
| 2.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm2 single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard below the staircase. | LM   | 40  |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Page</b> |  |      |     |               |                 |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|------|-----|---------------|-----------------|
| D.   | <b><u>3 BEDROOM MARKET UNITS</u></b>   |      |     |               |                 |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|  | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 2.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 5   |               |                 |
|  | ii) Ditto as in item No. 2.01 but for two way switching  | No.  | 7   |               |                 |
| 2.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|  | i) 10A one gang one way switch   | No.  | 5   |               |                 |
|  | ii) 10A one gang two way switch  | No.  | 6   |               |                 |
|  | iii) 10A two gang two way switch   | No.  | 4   |               |                 |
| 2.03   | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 8   |               |                 |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 3   |               |                 |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 2.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 12  |               |                 |
| 2.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 12  |               |                 |
| 2.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 2   |               |                 |
| 2.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |               |                 |
| 2.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 2.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 2.10 | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to the Next Pg.</b>  |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.11 | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 2.12 | 240V/12V Ding dong domestic door bell as Oxford or approved equivalent  | No.  | 1   |               |                 |
|      | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 2.13 | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.  | 1   |               |                 |
| 2.14 | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 2.15 | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 2.16 | 32mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 40  |               |                 |
|      | <b>Total Carried Forward to the Next Pg.</b>  |      |     |               |                 |



| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|  | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>   |      |     |               |                 |
| 2.17   | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.                                    | No.  | 1   |               |                 |
| 2.18   | <b>MCBs for item above as Schneider Electric Acti 9</b>   |      |     |               |                 |
|  | i)10 A SP MCB   | No.  | 1   |               |                 |
|  | ii)32 A SP MCB  | No.  | 3   |               |                 |
|  | iii) 45 A SP MCB  | No.  | 1   |               |                 |
|  | iv) Blanking plates   | No.  | 1   |               |                 |
| 2.19   | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm2 single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LVswitchboard below the staircase. | LM   | 40  |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Page</b> |   |      |     |               |                 |

| ITEM                                     | DESCRIPTION  | UNIT       | QTY    | RATE (KSH) | AMOUNT (KSH) |
|--|--|------------|--------|------------|--------------|
| E.                                       | <b><u>CORRIDOR/ LIFTS LOBBY AREA</u></b>   |            |        |            |              |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |            |        |            |              |
|  | <b>LIGHTING POINTS</b>   |            |        |            |              |
| 2.01                                     | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for two way switching, but excluding the switch and luminaire. | No.        | 32     |            |              |
| 2.02                                     | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-<br>i) 10A one gang two way switch<br>ii) 10A two gang two way switch   | No.<br>No. | 4<br>4 |            |              |
| 2.03                                     | <b>LIGHTING FITTINGS</b>   |            |        |            |              |
|  | a) Circular shaped surface mounted led luminaire as Phillips Coreline Cat No. WL131V LED12S/840 PSED EL3 WH "Type N"   | No.        | 15     |            |              |
|  | b) Emergency Maintained Circular shaped surface mounted led luminaire as Phillips Coreline Cat No. WL131V LED12S/840 PSED EL3 WH "Type Ne"   | No.        | 3      |            |              |
|  | c) 8W bulkhead luminaire ,polycarbonate base, and clear diffuser and installed inside the lift shaft As Thorn EWB/ETB bulkhead. "Type G"   | No.        | 2      |            |              |
|  | d) Bulkhead fitting with moulded glass diffuser & Die Cast Aluminium base c/w 16W PL Lamp as Massive Sunderland Cat. No. 71410/01/31 for security lights. "Type B"   | No.        | 14     |            |              |
| <b>Total Carried Forward to Next Pg.</b> |  |            |        |            |              |

| ITEM | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|--|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
| 2.04 | CCTV points in designated locations for surveillance, comprising of 25mm diameter HG PVC conduits complete with draw wire and the blanking plate. Allow for draw boxes where all the conduits from each security point converge.   | No.  | 6   |               |                 |
| 2.05 | 300x 300x 100mm deep 16 G galvanized adaptable box.  | No.  | 2   |               |                 |
|      | <b>LIGHTING CONTROL</b>  |      |     |               |                 |
| 2.06 | Presence sensor complete with associated wiring (light and motion sensor) as Osram Duo with the following characteristics:<br>Operation voltage 220 - 240V 50Hz, detection area- 12m dia minimum, settable light value, switch-off delay (if no motion detected), installation height - 5m minimum | No.  | 3   |               |                 |
| 2.07 | 24A, 240V, 2P DB/CU mounted silent operation contactor for Switching External lights complete with all accessories and as CRABTREE CIK24 or an approved equivalent   | No.  | 2   |               |                 |
| 2.08 | Photocell control unit and wired to energize the contactors complete with a D.P override switch as THORN QPK or approved equivalent  | No.  | 2   |               |                 |
| 2.09 | Water booster power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 38mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 40A TPN isolator  | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to Next Pg.</b>   |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.10 | 40A TPN isolator as MK or approved equivalent   | No.  | 1   |               |                 |
| 2.11 | Lifts isolators power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 63A TPN isolator | No.  | 2   |               |                 |
| 2.12 | 63A TPN isolator as MK or approved equivalent   | No.  | 2   |               |                 |
| 2.13 | 8 ways 100A TPN distribution boards 'T' complete with 100A TPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.  | No.  | 1   |               |                 |
| 2.14 | 4 ways 100A SPN Consumer Unit 'C' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent for common services.  | No.  | 5   |               |                 |
| 2.15 | <b>MCBs for item above as Schneider Electric Acti 9</b>   |      |     |               |                 |
|      | i) 10 A SP MCB  | No.  | 6   |               |                 |
|      | ii) 32 A SP MCB   | No.  | 4   |               |                 |
|      | iii) 40 A SP MCB  | No.  | 5   |               |                 |
|      | iv) 32 A TP MCB   | No.  | 3   |               |                 |
|      | v) Blanking plates  | No.  | 8   |               |                 |
| 2.16 | Sub-mains circuits for DB 'T' above comprising of 4 core 25mm <sup>2</sup> PVC/SWA/PVC cable drawn in cable tray/ 50mm diameter heavy gauge conduits and running from the Lv switchboard  | LM   | 30  |               |                 |
|      | <b>Total Carried Forward to Next Pg.</b>  |      |     |               |                 |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.17   | Sub-mains circuits for CU 'C ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from common distribution board. | LM   | 60  |               |                 |
| 2.18   | 200mm x 50mm galvanised metallic cable tray (Telecom, DTV, Internet Cables) gauge 14 (riser duct) c/w all mounting accessories bends, rawl bolts, threaded bolts, brackets,                     | LM.  | 40  |               |                 |
| 2.19   | 300mm x 50mm galvanised metallic cable tray (Power Cables) gauge 14 (riser duct) c/w all mounting accessories bends, rawl bolts, threaded bolts, brackets,                                      | LM.  | 40  |               |                 |
| <b>Total Carried Forward to Ground Floor Collection Page</b> |   |      |     |               |                 |

| ITEM   | DESCRIPTION                            | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|--|-----|---------------|-----------------|
| <b>GROUND FLOOR SUMMARY</b>                      |  |     |               |                 |
| 1  | Total Amount for 2 Bedroom AHP Unit    | 1   |               |                 |
| 2  | Total Amount for 3 Bedroom AHP Unit    | 1   |               |                 |
| 3  | Total Amount for 2 Bedroom Market Unit | 3   |               |                 |
| 4  | Total Amount for 3 Bedroom Market Unit | 3   |               |                 |
| 5  | Total Amount for Ground Floor Lobby    | 1   |               |                 |
| <b>Total Carried Forwad to Main Summary Page</b> |  |     |               |                 |

| ITEM NO.                                 | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|--|---|------|-----|------|--------|
|  | <b><u>BILL NO. 2</u></b>  |      |     |      |        |
| (ii)                                     | <b><u>TYPICAL 1ST - 9TH FLOOR</u></b>   |      |     |      |        |
| A.                                       | <b><u>2 BEDROOM AHP UNITS</u></b>   |      |     |      |        |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-   |      |     |      |        |
|  | <b>LIGHTING POINTS</b>  |      |     |      |        |
| 2.01                                     | i) Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 3   |      |        |
|  | ii) Ditto as in item No. 2.01 but for two way switching   | No.  | 6   |      |        |
| 2.02                                     | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-   |      |     |      |        |
|  | i) 10A one gang one way switch  | No.  | 3   |      |        |
|  | ii) 10A one gang two way switch   | No.  | 6   |      |        |
|  | iii) 10A two gang two way switch  | No.  | 2   |      |        |
| 2.03                                     | <b>LIGHTING FITTINGS</b>  |      |     |      |        |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>   | No.  | 6   |      |        |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact lamp as Astra, Micromark, Thornor equal & approved equivalent. "Type BF"   | No.  | 2   |      |        |
| <b>Total Carried Forward to Next Pg.</b> |   |      |     |      |        |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 2.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 8   |               |                 |
| 2.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 8   |               |                 |
| 2.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 40A DP connection unit | No.  | 1   |               |                 |
| 2.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |               |                 |
| 2.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 2.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 2.10 | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to Next Pg.</b>  |      |     |               |                 |



| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.11 | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 2.12 | 240V/12V Ding dong domestic door bell   | No.  | 1   |               |                 |
|      | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 2.13 | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.  | 1   |               |                 |
| 2.14 | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 2.15 | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 2.16 | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 20  |               |                 |
|      | <b>Total Carried Forward to Next Pg.</b>  |      |     |               |                 |

| ITEM  | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|   | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 2.17  | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.   | No.  | 1   |               |                 |
| 2.18  | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|   | i)10 A SP MCB  | No.  | 1   |               |                 |
|   | ii)32 A SP MCB   | No.  | 2   |               |                 |
|   | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|   | iv) Blanking plates  | No.  | 2   |               |                 |
| 2.19  | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 40  |               |                 |
| <b>Total Carried Forward to First Floor Collection Page</b> |  |      |     |               |                 |

| ITEM                                     | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|--|------|-----|------------|--------------|
| <b>B.</b>                                | <b><u>3 BEDROOM AHP UNITS</u></b>  |      |     |            |              |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |            |              |
|  | <b>LIGHTING POINTS</b>   |      |     |            |              |
| 2.01                                     | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 4   |            |              |
|  | ii) Ditto as in item No. 2.01 but for two way switching  | No.  | 8   |            |              |
| 2.02                                     | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |            |              |
|  | i) 10A one gang one way switch   | No.  | 5   |            |              |
|  | ii) 10A one gang two way switch  | No.  | 8   |            |              |
|  | iii) 10A two gang two way switch   | No.  | 2   |            |              |
| 2.03                                     | <b>LIGHTING FITTINGS</b>   |      |     |            |              |
|  | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 9   |            |              |
|  | b) Spherical screwneck luminaire with opal glass and 16W compact fluorescent lamp as Astra, Micromark, Thornor equal & approved equivalent. "Type BF"  | No.  | 2   |            |              |
| <b>Total Carried Forward to Next Pg.</b> |  |      |     |            |              |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 2.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 11  |               |                 |
| 2.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 11  |               |                 |
| 2.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 40A DP connection unit | No.  | 2   |               |                 |
| 2.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |               |                 |
| 2.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 2.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 2.10 | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to Next Pg.</b>  |      |     |               |                 |

| ITEM  | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
| <b>Total B/F from Previous Pg.</b>          |   |      |     |               |                 |
| 2.11  | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 2.12  | 240V/12V Ding dong domestic door bell as Oxford or approved equivalent  | No.  | 1   |               |                 |
| <b>TELEPHONE, DATA AND TV POINTS POINTS</b> |   |      |     |               |                 |
| 2.13  | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.  | 1   |               |                 |
| 2.14  | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 2.15  | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 2.16  | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 20  |               |                 |
| <b>Total Carried Forward to Next Pg.</b>    |   |      |     |               |                 |

| ITEM  | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|   | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 2.17  | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.                                     | No.  | 1   |               |                 |
| 2.18  | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |               |                 |
|   | i)10 A SP MCB  | No.  | 1   |               |                 |
|   | ii)32 A SP MCB   | No.  | 3   |               |                 |
|   | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|   | iv) Blanking plates  | No.  | 1   |               |                 |
| 2.19  | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm2 single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 65  |               |                 |
| <b>Total Carried Forward to First Floor Collection Page</b> |  |      |     |               |                 |

| ITEM                                      | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
| C.  | <b><u>2 BEDROOM MARKET UNITS</u></b>   |      |     |               |                 |
|   | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|   | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 2.01                                      | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 5   |               |                 |
|   | ii) Ditto as in item No. 2.01 but for two way switching  | No.  | 5   |               |                 |
| 2.02                                      | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|   | i) 10A one gang one way switch   | No.  | 4   |               |                 |
|   | ii) 10A two gang one way switch  | No.  | 1   |               |                 |
|   | iii) 10A one gang two way switch   | No.  | 6   |               |                 |
|   | iv) 10A two gang two way switch  | No.  | 2   |               |                 |
| 2.03                                      | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|   | a) Ceiling rose complete with 3 core flex cable, lamp holder and 11W led lamp as crabtree or approved equivalent <b>Type 'CR'</b>  | No.  | 7   |               |                 |
|   | b) Spherical screwneck luminaire with opal glass and 16W compact lamp as Astra, Micromark, Thornor equal & approved equivalent. "Type BF"  | No.  | 2   |               |                 |
| <b>Total Carried Forward to Next Page</b> |  |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 2.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 9   |               |                 |
| 2.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 9   |               |                 |
| 2.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 40A DP connection unit | No.  | 2   |               |                 |
| 2.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |               |                 |
| 2.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 2.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 2.10 | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to Next Page</b>   |      |     |               |                 |



| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.11                                      | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 2.12                                      | 240V/12V Ding dong domestic door bell as Oxford or approved equivalent  | No.  | 1   |               |                 |
|   | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 2.13                                      | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.  | 1   |               |                 |
| 2.14                                      | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 2.15                                      | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 2.16                                      | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 40  |               |                 |
| <b>Total Carried Forward to Next Page</b> |   |      |     |               |                 |

| ITEM  | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|   | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 2.17  | 6 ways 100A SPN Consumer Unit `A' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.                                     | No.  | 1   |               |                 |
| 2.18  | <b>MCBs for item above as Schneider Electric Acti 9 or approved equivalent</b>   |      |     |               |                 |
|   | i)10 A SP MCB  | No.  | 1   |               |                 |
|   | ii)32 A SP MCB   | No.  | 3   |               |                 |
|   | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|   | iv) Blanking plates  | No.  | 1   |               |                 |
| 2.19  | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm2 single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 60  |               |                 |
| <b>Total Carried Forward to First Floor Collection Page</b> |  |      |     |               |                 |

| ITEM                                      | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
| D.  | <b><u>3 BEDROOM MARKET UNITS</u></b>   |      |     |               |                 |
|   | SUPPLY, DELIVER , INSTALL ,SET TO WORK<br>AND COMMISSION THE FOLLOWING:-   |      |     |               |                 |
|   | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 2.01                                      | Lighting point completely wired in 3 x 1.5mm <sup>2</sup><br>single core PVC insulated copper cables drawn in<br>20mm diameter heavy gauge PVC conduits<br>including all accessories for one way switching,<br>but excluding the switch and luminaire. | No.  | 5   |               |                 |
|   | ii) Ditto as in item No. 2.01 but for two way<br>switching   | No.  | 7   |               |                 |
| 2.02                                      | 10A white moulded switch plate as Crabtree, MK<br>Logic, Clipsal E- Series or approved equivalent as<br>follows:-  |      |     |               |                 |
|   | i) 10A one gang one way switch   | No.  | 5   |               |                 |
|   | ii) 10A one gang two way switch  | No.  | 6   |               |                 |
|   | iii) 10A two gang two way switch   | No.  | 4   |               |                 |
| 2.03                                      | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|   | a) Ceiling rose complete with 3 core flex cable,<br>lamp holder and 11W led lamp as crabtree or<br>approved equivalent <b>Type 'CR'</b>  | No.  | 8   |               |                 |
|   | b) Spherical screwneck luminaire with opal glass<br>and 16W compact fluorescent lamp as Astra,<br>Micromark, Thornor equal & approved<br>equivalent. "Type BF"   | No.  | 3   |               |                 |
| <b>Total Carried Forward to Next Page</b> |  |      |     |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|------|---|------|-----|---------------|-----------------|
|      | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|      | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |               |                 |
| 2.04 | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 12  |               |                 |
| 2.05 | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 12  |               |                 |
| 2.06 | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 40A DP connection unit | No.  | 2   |               |                 |
| 2.07 | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |               |                 |
| 2.08 | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit             | No.  | 1   |               |                 |
| 2.09 | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |               |                 |
| 2.10 | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |               |                 |
|      | <b>Total Carried Forward to Next Page</b>   |      |     |               |                 |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 2.11                                      | Domestic door bell point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories but excluding the bell. | No.  | 1   |               |                 |
| 2.12                                      | 240V/12V Ding dong domestic door bell as Oxford or approved equivalent  | No.  | 1   |               |                 |
|   | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |     |               |                 |
| 2.13                                      | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.  | 1   |               |                 |
| 2.14                                      | DTV Socket point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories but excluding the DTV socket outlet.   | No.  | 1   |               |                 |
| 2.15                                      | 300x 300x 100mm deep 16G galvanized adaptable box.  | No.  | 2   |               |                 |
| 2.16                                      | 25mm diameter PVC HG conduit for ICT services and linking the Draw Boxes to the ICT ducts   | Lm.  | 40  |               |                 |
| <b>Total Carried Forward to Next Page</b> |   |      |     |               |                 |

| ITEM  | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
|   | <b>POWER RETICULATION AND DISTRIBUTION BOARDS</b>  |      |     |               |                 |
| 2.17  | 6 ways 100A SPN Consumer Unit 'A' complete with 100A SPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.                                     | No.  | 1   |               |                 |
| 2.18  | <b>MCBs for item above as Schneider Electric Acti 9 or approved equivalent</b>   |      |     |               |                 |
|   | i)10 A SP MCB  | No.  | 1   |               |                 |
|   | ii)32 A SP MCB   | No.  | 3   |               |                 |
|   | iii) 45 A SP MCB   | No.  | 1   |               |                 |
|   | iv) Blanking plates  | No.  | 1   |               |                 |
| 2.19  | Sub-mains circuits for CU 'A ' above comprising of 3 x 10mm2 single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the Lv switchboard below the staircase. | LM   | 60  |               |                 |
| <b>Total Carried Forward to First Floor Collection Page</b> |  |      |     |               |                 |

| ITEM                                      | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
| E.  | <b><u>CORRIDOR/ LIFTS LOBBY AREA</u></b>   |      |     |               |                 |
|   | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|   | <b>LIGHTING POINTS</b>   |      |     |               |                 |
| 2.01                                      | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for two way switching, but excluding the switch and luminaire. | No.  | 20  |               |                 |
| 2.02                                      | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |               |                 |
|   | i) 10A one gang two way switch   | No.  | 5   |               |                 |
|   | ii) 10A two gang two way switch  | No.  | 5   |               |                 |
| 2.03                                      | <b>LIGHTING FITTINGS</b>   |      |     |               |                 |
|   | a) Circular shaped surface mounted led luminaire as Phillips Coreline Cat No. WL131V LED12S/840 PSED EL3 WH "Type N"   | No.  | 18  |               |                 |
|   | b) Emergency Maintained Circular shaped surface mounted led luminaire as Phillips Coreline Cat No. WL131V LED12S/840 PSED EL3 WH "Type Ne"   | No.  | 3   |               |                 |
| <b>Total Carried Forward to Next Page</b> |  |      |     |               |                 |

| ITEM  | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |               |                 |
| 2.04  | CCTV points in designaed locations for surveillance, comprising of 25mm diameter HG PVC conduits complete with draw wire and the blanking plate. Allow for draw boxes where all the conduits from each security point converge.  | No.  | 6   |               |                 |
| 2.05  | 300x 300x 100mm deep 16G galvanized adaptable box.   | No.  | 2   |               |                 |
|   | <b>LIGHTING CONTROL</b>  |      |     |               |                 |
| 2.06  | Presence sensor complete with assocaited wiring (light and motion sensor) as Osram Duo with the following characteristics:<br>Operation voltage 220 - 240V 50Hz, detection area- 12m dia minimum, settable light value, switch-off delay (if no motion detected), installation height - 5m minimum | No.  | 3   |               |                 |
| <b>Total Carried Forward to First Floor Collection Page</b> |  |      |     |               |                 |



| ITEM  | DESCRIPTION                            | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|-----|---------------|-----------------|
| <b>TYPICAL FLOOR SUMMARY</b>  |  |     |               |                 |
| 1   | Total Amount for 2 Bedroom AHP Unit    | 9   |               |                 |
| 2   | Total Amount for 3 Bedroom AHP Unit    | 9   |               |                 |
| 3   | Total Amount for 2 Bedroom Market Unit | 27  |               |                 |
| 4   | Total Amount for 3 Bedroom Market Unit | 27  |               |                 |
| 5   | Total Amount for Lift Lobby Summary    | 9   |               |                 |
| <b>Total for 9No. Typical Floors Carried Forward to Main Summary Page</b> |  |     |               |                 |

| ITEM                                      | DESCRIPTION  | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|--|------|-----|---------------|-----------------|
| (iii)                                     | <b><u>EARTHING AND LIGHTNING PROTECTION</u></b>  |      |     |               |                 |
|   | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |               |                 |
|   | <b>Air Termination</b>   |      |     |               |                 |
| 2.01                                      | 2000mm x15mmØ multiple point pure copper AirRods/ Termination with spikes as Furse Part No. RA240 or approved equivalent | No.  | 3   |               |                 |
| 2.02                                      | Copper Air Rod Base as Furse Part No. SD105-H or approved equivalent   | No.  | 3   |               |                 |
| 2.03                                      | Copper Junction Clamps for copper tape as Furse Part No. CN105-H or approved equivalent                                  | No.  | 3   |               |                 |
| 2.04                                      | 25mm x 3mm Tinned Copper Tape as Furse TC230 or approved equivalent  | Lm.  | 130 |               |                 |
|   | <b>Down Conductor</b>  |      |     |               |                 |
| 2.05                                      | 25mm x 3mm Tinned Copper Tape as Furse TC230 or approved equivalent  | Lm.  | 200 |               |                 |
| 2.06                                      | Screwdown copper test clamp as Furse CT305 or approved equivalent  | No.  | 3   |               |                 |
| 2.07                                      | 38mm Ø HG PVC conduits for drawing the down conductor above.   | Lm.  | 10  |               |                 |
| <b>Total Carried Forward to Next Page</b> |  |      |     |               |                 |

| ITEM  | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
|   | <b>Earth Termination</b>  |      |     |               |                 |
| 2.08  | 15mm Ø, 1500mm long solid copper earth rod c/w driving stud, coupling, and spike as Furse RC011 or approved equivalent  | No   | 3   |               |                 |
| 2.09  | Earth rod to tape clamp type A as Furse CR108 or approved equivalent  | No.  | 3   |               |                 |
| 2.10  | Concrete inspection earth pit Cat. No. PT 005 with 5 hole earth bar as Furse Cat. No. PT 006.   | No.  | 2   |               |                 |
| 2.11  | 600mm x 600mm copper earth mat made from 25mm x 3mm copper tape at 300mm spacing, buried to permanent moisture level and complete with all clamps and 6m long 25mm x 3mm copper tape clamped to the down conductor, soil conditioning agents (marconite or bentonite) as necessary to achieve earthing resistance value below 10-Ohms | Lot  | 1   |               |                 |
| 2.12  | Allow for earthing tests for the above and submission of the report to the engineer to BS7671 & BS62305 standards   | No.  | 1   |               |                 |
|   | <b>Bonding</b>  |      |     |               |                 |
| 2.13  | Bonding and clamping to all metal work including water pipes, gas pipes, hand-rails, smatv system, window frames, cladding, metal roof etc. and the main earth for the building.  | Item | 1   |               |                 |
| <b>Total Carried Forward to Main Summary Page</b> |   |      |     |               |                 |

| ITEM                                     | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|--|------|-----|------------|--------------|
| (iv)                                     | <b><u>LV SWITCHBOARD</u></b>   |      |     |            |              |
|  | TAKE DELIVERY, STORE, INSTALL AND COMMISSION THE FOLLOWING:-   |      |     |            |              |
| 1.01                                     | Install purpose made Free-standing, fully wired front access metal clad main switchboard cubicle suitable for floor / wall mounting and manufactured in 14SWG galvanised mild steel sheet, to be finished in cream (or appropriate colour) powder coating. Wiring as shown on the schematic (the other details as per Particular Specification), complete with the following:- | No.  | 1   |            |              |
| (i)                                      | 630Amps TP/N copper busbars - KPLC supply (Sealable)   |      |     |            |              |
| (ii)                                     | 630Amps MCCB as mains incomer adjustable   |      |     |            |              |
| (iii)                                    | Space for 1No. 3-phase KPLC Common Services meter (kW, kWh, kVA, V, I etc), 63A TP MCB   |      |     |            |              |
| (iv)                                     | 180 No. 63A DP MCBs for the sub-main cables  |      |     |            |              |
| (v)                                      | 1No. 100A DP MCBs for the sub-main cables  |      |     |            |              |
| (vi)                                     | Space for KPLC cut-outs including studs for mounting KPLC seals  |      |     |            |              |
| (vii)                                    | Sealable studs for all cover plate screws and all necessary accessories  |      |     |            |              |
| (viii)                                   | 6mm perspex viewing window for each section  |      |     |            |              |
| (ix)                                     | Heavy duty rubber lining for all the perspex viewing windows   |      |     |            |              |
| (x)                                      | 4 No. Spare ways   |      |     |            |              |
| <b>Total Carried Forward to Next Pg.</b> |  |      |     |            |              |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|--|------|-----|------------|--------------|
| 1.02   | <p><b>Total B/F from Previous Pg.</b></p> <p>Earthing for the switch-board under this section comprising 25x3mm copper tape lead, 1800mm long x 15mm diameter copper earth electrode as Furse or approved equivalent complete with driving stud and tape to rod clamp, 300mm x 300mm x 300mm deep concrete inspection earth pit with removable waterproof cover, 600mm x 600mm copper earth mat, soil conditioning agents (marconite and bentonite etc) necessary to achieve earthing value below 5-Ohms and all other necessary accessories</p> | No.  | 1   |            |              |
| <b>Total Carried Forward to Main Summary Pg.</b> |  |      |     |            |              |

| ITEM   | DESCRIPTION   | AMOUNT |
|--|---|--------|
| <b>BLOCK TYPE B SUMMARY PAGE</b>   |   |        |
| 1  | Total Amount for Ground Floor B/F Page D-21                             |        |
| 2  | Total Amount for Typical 1st - 9th Floor B/F Page D-40                  |        |
| 3  | Total Amount for Lightning Protection B/F Page D-42                     |        |
| 4  | Total Amount for LV Switchboard Installation and Earthing B/F Page D-45 |        |
| <b>TOTAL AMOUNT FOR BILL No. 2: TYPICAL 1NO. BLOCK TYPE B CARRIED FORWARD TO PRICE COLLECTION PAGE</b> |   |        |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|---|------|-----|------------|--------------|
|   | <b>BILL NO. 3</b>   |      |     |            |              |
| i)  | <b><u>EXTENAL SERVICES</u></b>  |      |     |            |              |
|   | Supply, Install, test and Commission the following;   |      |     |            |              |
|   | <b>STREET LIGHTING</b>  |      |     |            |              |
| A   | Cylindrical-conical pole 8 meters with single arm and tube, in hot-dipped galvanized steel painted with anchor bolts complete with photovoltaic solar panel minimum 305Wp LED light 1x2B - 80W nominal - 24V - 4000K - >190lm/W<br>NiMH battery 24V 4P, on top of pole, | No   | 96  |            |              |
| B   | Type ML- 20m Highmast c/w 200 W flood light complete with with inbuilt charge controller ,automatic light sensor and a solar panel complete with all necessary wiring,fixing bracket and all other neccessary accessories   | No.  | 12  |            |              |
| C   | Type WL- IP65 External bulkhead fitting   | No.  | 200 |            |              |
| ii)                                       | <b>POWER HOUSE ELECTRICS</b>  |      |     |            |              |
| D   | All lighting points wired in 1.5mm <sup>2</sup> PVC cu cables in 20mm diameterHG PVC conduit embedded in wall fabrics, roof structure and floor slabs complete with switches as shown on the contract drawings  | No   | 20  |            |              |
|   | <b>POWER</b>  |      |     |            |              |
| E   | 4way 63A SPN CU as SCHNEIDER or Equivalent and Approved complete with MCBs or equal and approved.   | No   | 1   |            |              |
| F   | All socket outlet points wired in 2.5mm <sup>2</sup> PVC cable in conduit embedded in floor slabs and in metal trunking complete with 13A twin socket outlet as shown on the drawing  | No   | 4   |            |              |
| <b>Total Carried Forward to Next Page</b> |   |      |     |            |              |

| ITEM                                      | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|--|------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |            |              |
| A   | Provisions for points including laying of conduits and provision of outlet boxes for the following:  |      |     |            |              |
|   | i) Surveillance Cameras  | No   | 80  |            |              |
|   | <b>DATA</b>  |      |     |            |              |
| B   | 600 x 600 x 600 concrete manhole complete with Manhole covers.   | No   | 30  |            |              |
| C   | 100mm diameter HG PVC ducts for Data, laid at a depth of 600mm.  | Lm.  | 600 |            |              |
| D   | Trenching to a depth of 700mm, and backfilling after laying of ducts itemised above.   | Lm.  | 600 |            |              |
| iii)                                      | <b>PUMP ROOM ELECTRICS</b>   |      |     |            |              |
| E   | All lighting points wired in 1.5mm <sup>2</sup> PVC cu cables in 20mm diameterHG PVC conduit embedded in wall fabrics, roof structure and floor slabs complete with switches as shown on the contract drawings   | No   | 6   |            |              |
|   | <b>POWER</b>   |      |     |            |              |
| F   | Supply, install and connect 6 way TP/N distribution board for power supply in riser duct complete with 250 Amp integral isolator and MCBs as specified.  | No   | 1   |            |              |
| G   | All socket outlet points wired in 2.5mm <sup>2</sup> PVC cable in conduit embedded in floor slabs and in metal trunking complete with 13A twin socket outlet as shown on the drawing                             | No   | 4   |            |              |
| H   | 400A TPN isolator as KATCO or approved equivalent  | No   | 10  |            |              |
| I   | Submains circuit from the External Common Loads LV Board to Pump Room DB in electrical ducts comprising of 95mm <sup>2</sup> XLPE/PVC/SWA 4c + 35mm <sup>2</sup> sc ECC Copper cables laid in PVC Duct and Trays | Lm.  | 50  |            |              |
| <b>Total Carried Forward to Next Page</b> |  |      |     |            |              |



| ITEM  | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|---|------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |            |              |
|   | <b><u>EXTERNAL LOADS SWITCHBOARD</u></b>  |      |     |            |              |
|   | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-   |      |     |            |              |
| N   | Supply and install purpose made Free-standing, fully wired front access metal clad main switchboard cubicle suitable for floor / wall mounting and manufactured in 14SWG galvanised mild steel sheet, to be finished in cream (or appropriate colour) powder coating. Wiring as shown on the schematic (the other details as per Particular Specification), complete with the following:- | No.  | 1   |            |              |
| (i)   | 320Amps TP/N copper busbars - KPLC supply (Sealable)  |      |     |            |              |
| (ii)  | 320Amps MCCB as mains incomer adjustable  |      |     |            |              |
| (iii)   | Space for 1No. 3-phase KPLC Common Services meter (kW, kWh, kVA, V, I etc),   |      |     |            |              |
|   | <b>Outgoers:</b>  |      |     |            |              |
| (iv)  | 1No. 250A TP MCCBs for the Pump Room DB   |      |     |            |              |
| (v)   | 5No. 63A TP MCCBs for the External Loads Feeder Pillars   |      |     |            |              |
| (vi)  | Sealable studs for all cover plate screws and all necessary accessories   |      |     |            |              |
| (vii)   | 6mm perspex viewing window for each section   |      |     |            |              |
| (viii)  | Heavy duty rubber lining for all the perspex viewing windows  |      |     |            |              |
| (ix)  | 4 No. Spare ways  |      |     |            |              |
| O   | Feeder Pillars, 125A 6-WAY TPN Feeder Pillar with 125A TPN incomer and 10x20A SP MCBs outgoers and 3No. spareways for External power distribution to to Engineer's approval   | No.  | 5   |            |              |
| P   | Submains circuit from the External Common Loads LV Board to Feeder Pillars in electrical ducts comprising of 16mm <sup>2</sup> XLPE/PVC/SWA 4c + 6mm <sup>2</sup> sc ECC Copper cables laid in PVC Duct and Trays   | Lm.  | 200 |            |              |
| <b>Total Carried Forward to Main Summary Page</b> |   |      |     |            |              |

| ITEM | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|------|--|------|-----|------------|--------------|
|      | <b>BILL NO. 4</b>  |      |     |            |              |
| i)   | <b><u>INCOMING POWER</u></b>   |      |     |            |              |
|      | <b><u>KPLC RELATED WORKS</u></b>   |      |     |            |              |
| A    | 150mm diameter Heavy gauge duct for incoming underground H.V. cables with 1:3:6 concrete surround                    | M    | 950 |            |              |
| B    | 900 x 900 x 900 concrete manhole complete with Manhole covers and Hatari( Danger) Sign indelibly engraved at the top | No   | 50  |            |              |
| C    | Hatari( Danger) sign concrete slabs  | No   | 50  |            |              |
| D    | Attendance on Kenya Power and Lighting Co. Ltd.  | Sum  | 1   |            |              |
| E    | Complete Earthing system to KPLC requirements  | Sum  | 1   |            |              |
| F    | Any other item to complete the installation in this section.   | Sum  | 1   |            |              |
|      |  |      |     |            |              |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|--|------|-----|------------|--------------|
|  | <b><u>BILL NO. 7</u></b>   |      |     |            |              |
|  | <b><u>CLUB HOUSE</u></b>   |      |     |            |              |
|  | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |            |              |
|  | <b>LIGHTING POINTS</b>   |      |     |            |              |
| 4.01   | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 34  |            |              |
|  | ii) Ditto as in item No. 4.01 but for two way switching  | No.  | 24  |            |              |
| 4.02   | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |            |              |
|  | i) 10A one gang one way switch   | No.  | 14  |            |              |
|  | ii) 10A one gang two way switch  | No.  | 4   |            |              |
|  | iii) 10A two gang two way switch   | No.  | 4   |            |              |
| 4.03   | <b>LIGHTING FITTINGS</b>   |      |     |            |              |
|  | a) Circular shaped surface mounted led luminaire as Phillips Coreline Cat No. WL131V LED12S/840 PSED EL3 WH "Type N"   | No.  | 24  |            |              |
|  | b) Bulkhead fitting with moulded glass diffuser & Die Cast Aluminium base c/w 16W PL Lamp as Massive Sunderland Cat. No. 71410/01/31 for security lights. "Type B"   | No.  | 10  |            |              |
| <b>Total Carried Forward to the Next Pg.</b> |  |      |     |            |              |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|---|------|-----|------------|--------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |            |              |
|  | c) 600mm x 600mm, 33 watts LED panel light fitting as Phillips CoreLine Cat. No. RC132V LED36S/840 PSU W 60L60 OC complete with Phillips LED internal driver  | No.  | 3   |            |              |
|  | d) 1 x 36W, 1200mm Surface mounted mirror strip HPF water proof 1P65 fluorescent fitting with diffuser as Thorn or equal and approved equivalent type "4M"  | No.  | 4   |            |              |
|  | e) Large decorative highbay pendant with metal die cast aluminium housing on single steel wire suspension for 70w lamps complete with prismatic polycarbonate, lamps & aluminium reflector as Thorn Glacier II or equal and approved equivalent type "B". | No.  | 12  |            |              |
|  | f) 36W Suspended/Wall mounted LED linear luminaire complete with LEDs mounted on steel plate, base made of plastic polycarbonate, Diffuser "Type 4C"  | No.  | 3   |            |              |
| 4.04   | CCTV points in designaed locations for survailance, comprising of 25mm diameter HG PVC conduits complete with draw wire and the blanking plate. Allow for draw boxes where all the conduits from each security point converge.                            | No.  | 4   |            |              |
| 4.05   | 300x 300x 100mm deep 16 G galvanized adaptable box.   | No.  | 2   |            |              |
| 4.06   | 24A, 240V, 2P DB/CU mounted silent operation contactor for Switching External lights complete with all accessories and as CRABTREE CIK24 or an approved equivalent  | No.  | 1   |            |              |
| 4.07   | Photocell control unit and wired to energize the contactors complete with a D.P override switch as THORN QPK or approved equivalent   | No.  | 1   |            |              |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |            |              |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|---|------|-----|------------|--------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |            |              |
|  | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |     |            |              |
| 4.08   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.             | No.  | 8   |            |              |
| 4.09   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 8   |            |              |
| 4.10   | Instant shower water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit | No.  | 2   |            |              |
| 4.11   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |            |              |
| 4.12   | Under sink water heater power points completely wired in 3 x 4mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 40A DP connection unit     | No.  | 1   |            |              |
| 4.13   | 40A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |            |              |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |            |              |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|---|------|-----|------------|--------------|
|  | <b>Total B/F from Previous Pg.</b>  |      |     |            |              |
| 4.14   | Hand drier power points completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 20A DP connection unit    | No.  | 2   |            |              |
| 4.15   | 20A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 2   |            |              |
| 4.16   | Kitchen hood power points completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories, but excluding the 20A DP connection unit  | No.  | 1   |            |              |
| 4.17   | 20A DP switched connection unit with neon indicator as MK or approved equivalent  | No.  | 1   |            |              |
| 4.18   | Deep fat fryer power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 63A TPN isolator    | No.  | 2   |            |              |
| 4.19   | Electric 4 burner power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 63A TPN isolator | No.  | 2   |            |              |
| 4.20   | 63A TPN isolator as MK or approved equivalent   | No.  | 4   |            |              |
| <b>Total Carried Forward to the Next Pg.</b> |   |      |     |            |              |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|--|------|-----|------------|--------------|
|  | <b>Total B/F from Previous Pg.</b>   |      |     |            |              |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>  |      |     |            |              |
| 4.21   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.    | No.  | 2   |            |              |
| 4.22   | 6 ways 100A TPN distribution boards 'T' complete with 100A TPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent. | No.  | 1   |            |              |
| 4.23   | <b>MCBs for item above as Schneider Electric Acti 9</b>  |      |     |            |              |
|  | i)10 A SP MCB  | No.  | 3   |            |              |
|  | ii)32 A SP MCB   | No.  | 2   |            |              |
|  | iii)32 A TP MCB  | No.  | 4   |            |              |
|  | iv) Blanking plates  | No.  | 4   |            |              |
| 4.24   | Sub-mains circuits for DB 'T' above comprising of 4 core 16mm <sup>2</sup> PVC/SWA/PVC cable drawn in 32mm diameter heavy gauge conduits for club house            | LM   | 90  |            |              |
| <b>TOTAL AMOUNT FOR BILL No. 7: CLUB HOUSE CARRIED FORWARD TO GRAND SUMMARY PAGE</b> |  |      |     |            |              |

| ITEM                                      | DESCRIPTION  | UNIT | QTY   | RATE (KSH) | AMOUNT (KSH) |
|---|--|------|-------|------------|--------------|
|   | <b><u>BILL NO. 8</u></b>   |      |       |            |              |
|   | <b><u>GATE HOUSE &amp; GARBAGE RECEPTACLE</u></b>  |      |       |            |              |
| <b>A.</b>                                 | <b><u>GUARD HOUSE</u></b>  |      |       |            |              |
|   | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |       |            |              |
|   | <b>LIGHTING POINTS</b>   |      |       |            |              |
| 7.01                                      | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 8.00  |            |              |
|   | ii) Ditto as in item No. 5.01 but for two way switching  | No.  | 8.00  |            |              |
| 7.02                                      | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |       |            |              |
|   | i) 10A one gang one way switch   | No.  | 6.00  |            |              |
|   | ii) 10A one gang two way switch  | No.  | 4.00  |            |              |
| 7.03                                      | <b>LIGHTING FITTINGS</b>   |      |       |            |              |
|   | a) Circular shaped surface mounted led luminaire as Phillips Coreline Cat No. WL131V LED12S/840 PSED EL3 WH "Type N"   | No.  | 12.00 |            |              |
|   | b) Bulkhead fitting with moulded glass diffuser & Die Cast Aluminium base c/w 16W PL Lamp as Massive Sunderland Cat. No. 71410/01/31 for security lights. "Type B"   | No.  | 4.00  |            |              |
| 7.04                                      | CCTV points in designaed locations for surveillance, comprising of 25mm diameter HG PVC conduits complete with draw wire and the blanking plate. Allow for draw boxes where all the conduits from each security point converge.            | No.  | 6.00  |            |              |
| <b>Total Carried Forward to Next Page</b> |  |      |       |            |              |



| ITEM                                      | DESCRIPTION   | UNIT | QTY  | RATE (KSH) | AMOUNT (KSH) |
|---|---|------|------|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |      |            |              |
| 7.05                                      | 300x 300x 100mm deep 16 G galvanized adaptable box.   | No.  | 1.00 |            |              |
| 7.06                                      | 24A, 240V, 2P DB/CU mounted silent operation contactor for Switching External lights complete with all accessories and as CRABTREE CIK24 or an approved equivalent  | No.  | 1.00 |            |              |
| 7.07                                      | Photocell control unit and wired to energize the contactors complete with a D.P override switch as THORN QPK or approved equivalent   | No.  | 1.00 |            |              |
|   | <b>POWER AND SOCKET OUTLET POINTS</b>   |      |      |            |              |
| 7.08                                      | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet. | No.  | 1.00 |            |              |
| 7.09                                      | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 1.00 |            |              |
|   | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |      |      |            |              |
| 7.10                                      | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.  | 1.00 |            |              |
| 7.11                                      | 6 ways 100A SPN Consumer Unit 'G' complete with 100A SPN integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.  | No.  | 1.00 |            |              |
| <b>Total Carried Forward to Next Page</b> |   |      |      |            |              |

| ITEM  | DESCRIPTION  | UNIT                             | QTY                                 | RATE (KSH) | AMOUNT (KSH) |
|---|--|----------------------------------|-------------------------------------|------------|--------------|
| 7.12  | <p><b>Total B/F from Previous Pg.</b></p> <p><b>MCBs for item above as Schneider Electric Acti 9 or approved equivalent</b></p> <p>i)10 A SP MCB</p> <p>ii)32 A SP MCB</p> <p>iii) Blanking plates</p> | <p>No.</p> <p>No.</p> <p>No.</p> | <p>1.00</p> <p>1.00</p> <p>4.00</p> |            |              |
| 7.13  | <p>Sub-mains circuits for CU 'G' above comprising of 2 core 6mm<sup>2</sup> PVC/SWA/PVC cable drawn in 32mm diameter heavy gauge conduits for gate house</p>   | LM                               | 35.00                               |            |              |
| <p><b>TOTAL AMOUNT FOR BILL No. 7 GATE HOUSE &amp; GARBAGE RECEPTACLE CARRIED FORWARD TO GRAND SUMMARY PAGE</b></p> |  |                                  |                                     |            |              |

| ITEM                                      | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|--|------|-----|------------|--------------|
|   | <b><u>BILL NO. 9 : SHOPS</u></b>   |      |     |            |              |
|   | <b>(i) <u>GROUND FLOOR</u></b>   |      |     |            |              |
|   | <b>A. <u>TYPICAL SHOPS (32 No.)</u></b>  |      |     |            |              |
|   | SUPPLY, DELIVER , INSTALL ,SET TO WORK AND COMMISSION THE FOLLOWING:-  |      |     |            |              |
|   | <b>LIGHTING POINTS</b>   |      |     |            |              |
| 8.01                                      | Lighting point completely wired in 3 x 1.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 20mm diameter heavy gauge PVC conduits including all accessories for one way switching, but excluding the switch and luminaire. | No.  | 1   |            |              |
| 8.02                                      | 10A white moulded switch plate as Crabtree, MK Logic, Clipsal E- Series or approved equivalent as follows:-  |      |     |            |              |
|   | i) 10A one gang one way switch   | No.  | 1   |            |              |
| 8.03                                      | <b>LIGHTING FITTINGS</b>   |      |     |            |              |
|   | a) 1 x 36W, LED Batten, 4ft, 3200lms, 23.5W, 4000K as Thorn Poppack or approved equivalent <b>Type '4C'</b>  | No.  | 1   |            |              |
| <b>Total Carried Forward to Next Page</b> |  |      |     |            |              |

| ITEM   | DESCRIPTION   | UNIT              | QTY         | RATE (KSH) | AMOUNT (KSH) |
|--|---|-------------------|-------------|------------|--------------|
|  | <b>Total B/F from Previous Pg.</b>  |                   |             |            |              |
|  | <b>POWER AND SOCKET OUTLET POINTS</b>   |                   |             |            |              |
| 8.08   | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet. | No.               | 2           |            |              |
| 8.09   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.               | 0           |            |              |
|  | <b>TELEPHONE, DATA AND TV POINTS POINTS</b>   |                   |             |            |              |
| 8.10   | Data point comprising of draw wire in 25mm diameter Heavy Gauge PVC conduits including all accessories and blanking plate but excluding the data socket outlet.   | No.               | 1           |            |              |
| 8.11   | 4 ways 100A SPN Consumer Unit 'S' complete with 100A SPN integral isolator, but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.  | No.               | 1           |            |              |
| 8.12   | <b>MCBs for item above as Schneider Electric Acti 9 or approved equivalent</b><br>i)10 A SP MCB<br>ii)32 A SP MCB<br>iii) Blanking plates   | No.<br>No.<br>No. | 1<br>1<br>2 |            |              |
| 3.13   | Sub-mains circuits for CU 'A ' above comprising of 3 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm heavy gauge conduits and running from the LV switchboard below the staircase.                       | LM                | 40          |            |              |
| <b>TOTAL AMOUNT FOR BILL No. 8 SHOPS CARRIED FORWARD TO GRAND SUMMARY PAGE</b> |   |                   |             |            |              |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
|   | <b>BILL NO. 10</b>  |      |     |               |                 |
| 1.00                                      | <b><u>ECD</u></b>   |      |     |               |                 |
|   | <b><u>LIGHTING POINTS, FITTINGS &amp; ACCESSORIES</u></b>   |      |     |               |                 |
|   | <b><u>Supply, Install, Connect, Test and Set to work the following:-</u></b>  |      |     |               |                 |
| 1.01                                      | Lighting points wired in 3x1.5mm <sup>2</sup> PVC insulated single core (SC) copper cables drawn in 20mm diameter HG PVC conduit concealed in walls and or floor slabs with all accessories but excluding switch and fitting for one way switching. | No.  | 112 |               |                 |
| 1.02                                      | Ditto but for two way switching.  | No.  | 8   |               |                 |
| 1.03                                      | Ditto but for Emergency Switching.  | No.  | 12  |               |                 |
|   | <b><u>Supply, Install, Connect, Test and Set to work the following as marked on drawings and described in the schedule of Fittings:-</u></b>  |      |     |               |                 |
|   | <b><i>10A white moulded wide rocker switch plates:-</i></b>   |      |     |               |                 |
| 1.04                                      | 10A 1 gang 1 way switch   | No.  | 12  |               |                 |
| 1.05                                      | 10A 2 gang 2 way switch   | No.  | 4   |               |                 |
| <b>Total Carried Forward to Next Page</b> |   |      |     |               |                 |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|---|------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |            |              |
|   | <i>Light fittings, complete with lamps of specified wattage and appropriate colour rendering:-</i>  |      |     |            |              |
| 1.06                                      | Type P 1200 X 300MM 220/240V x 30 watt Warm White, 6500K Ceiling Mount. (Two LED Tubes)   | No.  | 36  |            |              |
| 1.07                                      | Type D - Round Light with LED lamp  | No.  | 50  |            |              |
| 1.08                                      | Spherical screwneck luminaire with opal glass and 16W compact lamp as Astra, Micromark, Thorn or approved equivalent. <b>"Type BF"</b>  | No.  | 20  |            |              |
| 1.09                                      | Type Exit   | No.  | 6   |            |              |
| 1.10                                      | d) Bulkhead fitting with moulded glass diffuser & Die Cast Aluminium base c/w 16W PL Lamp as Massive Sunderland Cat. No. 71410/01/31 for security lights. <b>"Type S"</b>   | No.  | 20  |            |              |
| 1.11                                      | Presence sensor complete with associated wiring (light and motion sensor) as Osram Duo with the following characteristics:<br>Operation voltage 220 - 240V 50Hz, detection area-12m dia minimum, settable light value, switch-off delay (if no motion detected), installation height - 5m minimum | No.  | 4   |            |              |
| 1.12                                      | 24A, 240V, 2P DB/CU mounted silent operation contactor for Switching External lights complete with all accessories and as CRABTREE CIK24 or an approved equivalent  | No.  | 2   |            |              |
| 1.13                                      | Photocell control unit and wired to energize the contactors complete with a D.P override switch as THORN QPK or approved equivalent   | No.  | 2   |            |              |
| <b>Total Carried Forward to Next Page</b> |   |      |     |            |              |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|---|------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |            |              |
|   | <b><u>POWER POINTS &amp; ACCESSORIES</u></b><br><b>Supply, Install, connect and set to work the following:-</b>   |      |     |            |              |
| 1.14                                      | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet. | No.  | 40  |            |              |
|   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 40  |            |              |
| 1.15                                      | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit | No.  | 1   |            |              |
| 1.16                                      | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 1   |            |              |
| 1.17                                      | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 1   |            |              |
| 1.18                                      | 300x 300x 100mm deep 16 G galvanized adaptable box.   | No.  | 4   |            |              |
| <b>Total Carried Forward to Next Page</b> |   |      |     |            |              |

| ITEM                                      | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|--|------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |            |              |
| 1.19                                      | Water booster power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 38mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 40A TPN isolator                                    | No.  | 1   |            |              |
| 1.20                                      | 40A TPN isolator as MK or approved equivalent  | No.  | 1   |            |              |
|   | <b><u>ELV CABLE WAYS</u></b>   |      |     |            |              |
|   | <b>ICT Points</b>  |      |     |            |              |
| 1.21                                      | Supply, install and connect data outlet point consisting of average 20 meters of 25 mm diameter concealed heavy gauge PVC conduit inclusive of conduit, couplers, draw boxes, switch boxes, draw wire and other necessary accessories but excluding face plates. | No.  | 20  |            |              |
|   | <b>CCTV Points</b>   |      |     |            |              |
| 1.22                                      | Supply, install and connect CCTV outlet point consisting of average 20 meters of 25 mm diameter concealed heavy gauge PVC conduit inclusive of conduit, couplers, draw boxes, switch boxes, draw wire and other necessary accessories.                           | No.  | 12  |            |              |
|   | <b>Fire Alarm Points</b>   |      |     |            |              |
| 1.23                                      | Outlets for fire Alarm points drawn in 25mm diameter heavy gauge PVC conduits concealed in wall and floor slabs including all conduit accessories and draw wire but excluding cabling and detectors  | No.  | 16  |            |              |
| <b>Total Carried Forward to Next Page</b> |  |      |     |            |              |



| ITEM  | DESCRIPTION  | UNIT  | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|--|-------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>   |       |     |            |              |
|   | <b><u>POWER DISTRIBUTION</u></b><br><b>Supply, Install, connect and set to work the following:-</b>  |       |     |            |              |
| 1.24  | 8 ways 100A TPN distribution boards 'T' complete with 100A TPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.                       | No.   | 2   |            |              |
|   | i)10 A SP MCB  | No.   | 8   |            |              |
|   | ii) 32 A SP MCB  | No.   | 8   |            |              |
|   | iii) 40 A SP MCB   | No.   | 1   |            |              |
|   | iv) 32 A TP MCB  | No.   | 2   |            |              |
|   | v) Blanking plates   | No.   | 8   |            |              |
|   | vi)Earthing of the Distribution Board above  | Item. | 2   |            |              |
| 1.25  | Sub-mains circuits for DB 'T' above comprising of 4 core 25mm <sup>2</sup> PVC/SWA/PVC cable drawn in cable tray/ 50mm diameter heavy gauge conduits and running from the Lv switchboard | LM    | 100 |            |              |
| <b>TOTAL AMOUNT FOR BILL No. 10 ECD CARRIED FORWARD TO GRAND SUMMARY PAGE</b> |  |       |     |            |              |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
|   | <b>BILL NO. 11</b>  |      |     |               |                 |
| 1.00                                      | <b><u>COMMUNITY CENTRE</u></b>  |      |     |               |                 |
|   | <b><u>LIGHTING POINTS, FITTINGS &amp; ACCESSORIES</u></b>   |      |     |               |                 |
|   | <b><u>Supply, Install, Connect, Test and Set to work the following:-</u></b>  |      |     |               |                 |
| 1.01                                      | Lighting points wired in 3x1.5mm <sup>2</sup> PVC insulated single core (SC) copper cables drawn in 20mm diameter HG PVC conduit concealed in walls and or floor slabs with all accessories but excluding switch and fitting for one way switching. | No.  | 124 |               |                 |
| 1.02                                      | Ditto but for two way switching.  | No.  | 8   |               |                 |
| 1.03                                      | Ditto but for Emergency Switching.  | No.  | 12  |               |                 |
|   | <b><u>Supply, Install, Connect, Test and Set to work the following as marked on drawings and described in the schedule of Fittings:-</u></b>  |      |     |               |                 |
|   | <b><i>10A white moulded wide rocker switch plates:-</i></b>   |      |     |               |                 |
| 1.04                                      | 10A 1 gang 1 way switch   | No.  | 12  |               |                 |
| 1.05                                      | 10A 2 gang 2 way switch   | No.  | 4   |               |                 |
|   | <b><i>Light fittings, complete with lamps of specified wattage and appropriate colour rendering:-</i></b>   |      |     |               |                 |
| 1.06                                      | Type P 1200 X 300MM 220/240V x 30 watt Warm White, 6500K Ceiling Mount. (Two LED Tubes)   | No.  | 64  |               |                 |
| 1.07                                      | Type D - Round Light with LED lamp  | No.  | 60  |               |                 |
| <b>Total Carried Forward to Next Page</b> |   |      |     |               |                 |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|---|------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |            |              |
| 1.08                                      | Spherical screwneck luminaire with opal glass and 16W compact lamp as Astra, Micromark, Thorn or approved equivalent. "Type BF"   | No.  | 20  |            |              |
| 1.09                                      | Type Exit   | No.  | 20  |            |              |
| 1.10                                      | d) Bulkhead fitting with moulded glass diffuser & Die Cast Aluminium base c/w 16W PL Lamp as Massive Sunderland Cat. No. 71410/01/31 for security lights. "Type S"  | No.  | 20  |            |              |
| 1.11                                      | Presence sensor complete with associated wiring (light and motion sensor) as Osram Duo with the following characteristics:<br>Operation voltage 220 - 240V 50Hz, detection area-12m dia minimum, settable light value, switch-off delay (if no motion detected), installation height - 5m minimum | No.  | 6   |            |              |
| 1.12                                      | 24A, 240V, 2P DB/CU mounted silent operation contactor for Switching External lights complete with all accessories and as CRABTREE CIK24 or an approved equivalent  | No.  | 2   |            |              |
| 1.13                                      | Photocell control unit and wired to energize the contactors complete with a D.P override switch as THORN QPK or approved equivalent   | No.  | 2   |            |              |
|   | <b><u>POWER POINTS &amp; ACCESSORIES</u></b>  |      |     |            |              |
|   | <b>Supply, Install, connect and set to work the following:-</b>   |      |     |            |              |
| 1.14                                      | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet.   | No.  | 60  |            |              |
|   | Socket Outlet plates  |      |     |            |              |
|   | i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 60  |            |              |
| <b>Total Carried Forward to Next Page</b> |   |      |     |            |              |

| ITEM                                      | DESCRIPTION  | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|--|------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>   |      |     |            |              |
| 1.15                                      | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit                                | No.  | 1   |            |              |
| 1.16                                      | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.   | No.  | 1   |            |              |
| 1.17                                      | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:  | No.  | 1   |            |              |
| 1.18                                      | 300x 300x 100mm deep 16 G galvanized adaptable box.  | No.  | 4   |            |              |
| 1.19                                      | Water booster power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 38mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 40A TPN isolator                                    | No.  | 1   |            |              |
| 1.20                                      | 40A TPN isolator as MK or approved equivalent  | No.  | 1   |            |              |
|   | <b><u>ELV CABLE WAYS</u></b>   |      |     |            |              |
|   | <b>ICT Points</b>  |      |     |            |              |
| 1.21                                      | Supply, install and connect data outlet point consisting of average 20 meters of 25 mm diameter concealed heavy gauge PVC conduit inclusive of conduit, couplers, draw boxes, switch boxes, draw wire and other necessary accessories but excluding face plates. | No.  | 20  |            |              |
|   | <b>CCTV Points</b>   |      |     |            |              |
| 1.22                                      | Supply, install and connect CCTV outlet point consisting of average 20 meters of 25 mm diameter concealed heavy gauge PVC conduit inclusive of conduit, couplers, draw boxes, switch boxes, draw wire and other necessary accessories.                           | No.  | 10  |            |              |
| <b>Total Carried Forward to Next Page</b> |  |      |     |            |              |

| ITEM   | DESCRIPTION   | UNIT  | QTY | RATE (KSH) | AMOUNT (KSH) |
|--|---|-------|-----|------------|--------------|
|  | <b>Total B/F from Previous Pg.</b>  |       |     |            |              |
|  | <b>Fire Alarm Points</b>  |       |     |            |              |
| 1.23   | Outlets for fire Alarm points drawn in 25mm diameter heavy gauge PVC conduits concealed in wall and floor slabs including all conduit accessories and draw wire but excluding cabling and detectors | No.   | 10  |            |              |
|  | <b><u>POWER DISTRIBUTION</u></b>  |       |     |            |              |
|  | <b>Supply, Install, connect and set to work the following:-</b>   |       |     |            |              |
| 1.24   | 8 ways 100A TPN distribution boards 'T' complete with 100A TPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.                                  | No.   | 1   |            |              |
|  | i)10 A SP MCB   | No.   | 10  |            |              |
|  | ii) 32 A SP MCB   | No.   | 10  |            |              |
|  | iii) 40 A SP MCB  | No.   | 1   |            |              |
|  | iv) 32 A TP MCB   | No.   | 1   |            |              |
|  | v) Blanking plates  | No.   | 4   |            |              |
|  | vi)Earthing of the Distribution Board above   | Item. | 4   |            |              |
| 1.25   | Sub-mains circuits for DB 'T' above comprising of 4 core 25mm <sup>2</sup> PVC/SWA/PVC cable drawn in cable tray/ 50mm diameter heavy gauge conduits and running from the Lv switchboard            | LM    | 150 |            |              |
|  | 200mm x 50mm galvanised metallic cable tray (Telecom, DTV, Internet Cables) gauge 14 c/w all mounting accessories bends, rawl bolts, threaded bolts, brackets,                                      | LM.   | 200 |            |              |
|  | 200mm x 50mm galvanised metallic cable tray (Power Cables) gauge 14 c/w all mounting accessories bends, rawl bolts, threaded bolts, brackets,   | LM.   | 200 |            |              |
| <b>TOTAL AMOUNT FOR BILL No. 11 COMMUNITY CENTRE CARRIED FORWARD TO GRAND SUMMARY PAGE</b> |   |       |     |            |              |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
|   | <b>BILL NO. 12</b>  |      |     |               |                 |
| 1.00                                      | <b><u>SCHOOL</u></b>  |      |     |               |                 |
|   | <b><u>LIGHTING POINTS, FITTINGS &amp; ACCESSORIES</u></b>   |      |     |               |                 |
|   | <b><u>Supply, Install, Connect, Test and Set to work the following:-</u></b>  |      |     |               |                 |
| 1.01                                      | Lighting points wired in 3x1.5mm <sup>2</sup> PVC insulated single core (SC) copper cables drawn in 20mm diameter HG PVC conduit concealed in walls and or floor slabs with all accessories but excluding switch and fitting for one way switching. | No.  | 220 |               |                 |
| 1.02                                      | Ditto but for two way switching.  | No.  | 8   |               |                 |
| 1.03                                      | Ditto but for Emergency Switching.  | No.  | 12  |               |                 |
|   | <b><u>Supply, Install, Connect, Test and Set to work the following as marked on drawings and described in the schedule of Fittings:-</u></b>  |      |     |               |                 |
|   | <b><i>10A white moulded wide rocker switch plates:-</i></b>   |      |     |               |                 |
| 1.04                                      | 10A 1 gang 1 way switch   | No.  | 12  |               |                 |
| 1.05                                      | 10A 2 gang 2 way switch   | No.  | 4   |               |                 |
|   | <b><i>Light fittings, complete with lamps of specified wattage and appropriate colour rendering:-</i></b>   |      |     |               |                 |
| 1.06                                      | Type P 1200 X 300MM 220/240V x 30 watt Warm White, 6500K Ceiling Mount. (Two LED Tubes)   | No.  | 120 |               |                 |
| <b>Total Carried Forward to Next Page</b> |   |      |     |               |                 |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|---|---|------|-----|---------------|-----------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |               |                 |
| 1.07                                      | Type D - Round Light with LED lamp  | No.  | 100 |               |                 |
| 1.08                                      | Spherical screwneck luminaire with opal glass and 16W compact lamp as Astra, Micromark, Thorn or approved equivalent. "Type BF"   | No.  | 40  |               |                 |
| 1.07                                      | Type Exit   | No.  | 30  |               |                 |
| 1.09                                      | d) Bulkhead fitting with moulded glass diffuser & Die Cast Aluminium base c/w 16W PL Lamp as Massive Sunderland Cat. No. 71410/01/31 for security lights. "Type S"  | No.  | 30  |               |                 |
| 1.10                                      | Presence sensor complete with associated wiring (light and motion sensor) as Osram Duo with the following characteristics:<br>Operation voltage 220 - 240V 50Hz, detection area-12m dia minimum, settable light value, switch-off delay (if no motion detected), installation height - 5m minimum | No.  | 8   |               |                 |
| 1.11                                      | 24A, 240V, 2P DB/CU mounted silent operation contactor for Switching External lights complete with all accessories and as CRABTREE CIK24 or an approved equivalent  | No.  | 2   |               |                 |
| 1.12                                      | Photocell control unit and wired to energize the contactors complete with a D.P override switch as THORN QPK or approved equivalent   | No.  | 2   |               |                 |
| <b>Total Carried Forward to Next Page</b> |   |      |     |               |                 |

| ITEM                                      | DESCRIPTION   | UNIT | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|---|------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>  |      |     |            |              |
|   | <b><u>POWER POINTS &amp; ACCESSORIES</u></b><br><b>Supply, Install, connect and set to work the following:-</b>   |      |     |            |              |
| 1.13                                      | 13A SP socket point completely wired in 3 x 2.5mm <sup>2</sup> single core PVC insulated copper cables drawn in 25mm diameter heavy gauge PVC conduits including all accessories but excluding the 13A SP switched socket outlet. | No.  | 100 |            |              |
|   | Socket Outlet plates<br>i) 13A SP twin switched socket outlet as MK 2536 or equal & approved equivalent.  | No.  | 100 |            |              |
| 1.14                                      | Cooker outlet power points completely wired in 3 x 6.0mm <sup>2</sup> single core PVC insulated copper cables drawn in 32mm diameter heavy gauge PVC conduits including all accessories ,but excluding the 45A DP connection unit | No.  | 4   |            |              |
| 1.15                                      | 45A Moulded plate Cooker Control Unit complete with 13A fused socket outlet as MK/Crabtree or approved equivalent.  | No.  | 4   |            |              |
| 1.16                                      | 45A moulded plate cooker connection unit as MK/Crabtree or approved equivalent:   | No.  | 4   |            |              |
| 1.17                                      | 300x 300x 100mm deep 16 G galvanized adaptable box.   | No.  | 8   |            |              |
| 1.18                                      | Water booster power points completely wired in 5 x 6mm <sup>2</sup> single core PVC insulated copper cables drawn in 38mm diameter heavy gauge PVC conduits including all accessories ,but excluding the the 40A TPN isolator     | No.  | 2   |            |              |
| 1.19                                      | 40A TPN isolator as MK or approved equivalent   | No.  | 2   |            |              |
| <b>Total Carried Forward to Next Page</b> |   |      |     |            |              |



| ITEM                                      | DESCRIPTION  | UNIT  | QTY | RATE (KSH) | AMOUNT (KSH) |
|---|--|-------|-----|------------|--------------|
|   | <b>Total B/F from Previous Pg.</b>   |       |     |            |              |
|   | <b><u>ELV CABLE WAYS</u></b>   |       |     |            |              |
|   | <b>ICT Points</b>  |       |     |            |              |
| 1.20                                      | Supply, install and connect data outlet point consisting of average 20 meters of 25 mm diameter concealed heavy gauge PVC conduit inclusive of conduit, couplers, draw boxes, switch boxes, draw wire and other necessary accessories but excluding face plates. | No.   | 60  |            |              |
|   | <b>CCTV Points</b>   |       |     |            |              |
| 1.21                                      | Supply, install and connect CCTV outlet point consisting of average 20 meters of 25 mm diameter concealed heavy gauge PVC conduit inclusive of conduit, couplers, draw boxes, switch boxes, draw wire and other necessary accessories.                           | No.   | 20  |            |              |
|   | <b>Fire Alarm Points</b>   |       |     |            |              |
| 1.22                                      | Outlets for fire Alarm points drawn in 25mm diameter heavy gauge PVC conduits concealed in wall and floor slabs including all conduit accessories and draw wire but excluding cabling and detectors  | No.   | 50  |            |              |
|   | <b><u>POWER DISTRIBUTION</u></b>   |       |     |            |              |
|   | <b>Supply, Install, connect and set to work the following:-</b>  |       |     |            |              |
| 1.23                                      | 8 ways 100A TPN distribution boards 'T' complete with 100A TPN integral isolator ,but excluding the MCBs ,and as Schneider Electric Acti 9 or approved equivalent.   | No.   | 4   |            |              |
|   | i)10 A SP MCB  | No.   | 16  |            |              |
|   | ii) 32 A SP MCB  | No.   | 16  |            |              |
|   | iii) 40 A SP MCB   | No.   | 4   |            |              |
|   | iv) 32 A TP MCB  | No.   | 4   |            |              |
|   | v) Blanking plates   | No.   | 8   |            |              |
|   | vi)Earthing of the Distribution Board above  | Item. | 4   |            |              |
| <b>Total Carried Forward to Next Page</b> |  |       |     |            |              |

| ITEM   | DESCRIPTION   | UNIT | QTY | RATE<br>(KSH) | AMOUNT<br>(KSH) |
|--|---|------|-----|---------------|-----------------|
| 1.24   | <p><b>Total B/F from Previous Pg.</b></p> <p>Sub-mains circuits for DB 'T' above comprising of 4 core 25mm<sup>2</sup> PVC/SWA/PVC cable drawn in cable tray/ 50mm diameter heavy gauge conduits and running from the Lv switchboard</p> <p>200mm x 50mm galvanised metallic cable tray (Telecom, DTV, Internet Cables) gauge 14 c/w all mounting accessories bends, rawl bolts, threaded bolts, brackets,</p> <p>200mm x 50mm galvanised metallic cable tray (Power Cables) gauge 14 c/w all mounting accessories bends, rawl bolts, threaded bolts, brackets,</p> | LM   | 200 |               |                 |
|  |   | LM.  | 400 |               |                 |
|  |   | LM.  | 400 |               |                 |
| <b>TOTAL AMOUNT FOR BILL No. 12 COMMUNITY CENTRE CARRIED FORWARD TO GRAND SUMMARY PAGE</b> |   |      |     |               |                 |

PROPOSED NGONG AFFORDABLE HOUSING PROJECT

ELECTRICAL INSTALLATIONS BILL OF QUANTITIES

GRAND SUMMARY PAGE

| ITEM   | DESCRIPTION   | Unit | Qty | RATE (KSHS) | AMOUNT (KSHS) |
|--|---|------|-----|-------------|---------------|
| 1  | SUMMARY FOR INCOMING POWER & KPLC RELATED COSTS                     | Lot  | 1   |             |               |
| 2  | SUMMARY FOR ELECTRICAL SERVICES FOR AFFORDABLE HOUSING BLOCK TYPE A | No   | 10  |             |               |
| 3  | SUMMARY FOR ELECTRICAL SERVICES FOR AFFORDABLE HOUSING BLOCK TYPE B | No   | 10  |             |               |
| 4  | SUMMARY FOR EXTERNAL ELECTRICS                                      | No   | 1   |             |               |
| 5  | SUMMARY FOR ELECTRICAL SERVICES FOR CLUB HOUSE                      | Lot  | 1   |             |               |
| 6  | SUMMARY FOR ELECTRICAL SERVICES FOR GATE HOUSE                      | Lot  | 3   |             |               |
| 7  | SUMMARY FOR ELECTRICAL SERVICES FOR SHOPS                           | Lot  | 32  |             |               |
| 8  | SUMMARY FOR ELECTRICAL SERVICES FOR ECD                             | Lot  | 1   |             |               |
| 9  | SUMMARY FOR ELECTRICAL SERVICES FOR COMMUNITY CENTRE                | Lot  | 1   |             |               |
| 10   | SUMMARY FOR ELECTRICAL SERVICES FOR SCHOOL                          | Lot  | 1   |             |               |
| <b>TOTALS FOR ELECTRICAL INSTALLATION SERVICES FOR PROPOSED NGONG AFFORDABLE HOUSING PROJECT</b> |   |      |     |             |               |

Amount in Words: Kenya Shillings.....

.....

.....

Official Stamp & Address:.....

.....

.....

Tenderer's Signature:.....Date:.....

Witness' Name:.....Witness' Signature:.....

Address:.....

Date:.....

**MECHANICAL WORKS**

| ITEM                              | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|--|------|------|---------------|-----------------|
| 1.0                               | <p><b>Internal Plumbing Installations</b></p> <p>Supply, deliver install, Test and Commission:</p> <p><b>PP-R (Polypropylene Random Co-polymer)</b> pipes PN 20 and fittings and fusion joints to (KS ISO 15874 Part 1, 2, 3 &amp; 5) of approved manufacturer. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints etc. as required in the running lengths of pipework. The pipes shall run in floors and wall chase. The pipes will be pressure tested before the plastering of wall commences and as per the</p> |      |      |               |                 |
| (i)                               | <u>3 BR AHP</u>  |      |      |               |                 |
|                                   | <b>Pipe Works</b>  |      |      |               |                 |
| A                                 | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B                                 | Ditto 25mm Ø   | 20   | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C                                 | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D                                 | Ditto 25mm Ø   | 14   | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E                                 | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F                                 | 25 x 25 x 25mm   | 7    | No.  |               |                 |
|                                   | <b>Reducers</b>  |      |      |               |                 |
| G                                 | 32 x 25mm reducer  | 1    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J                                 | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K                                 | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L                                 | 25 x 15mm male threaded bend   | 14   | LM   |               |                 |
| <b>Total Carried to Next Page</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 7    | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 25mm diameter water check meter  | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|  | <b>TOTAL FOR 1 No. 3BR AHP (Per Floor)</b>   | 1    |      | x 1           |                 |
| <b>Total Cost of Plumbing Installation for 3BR AHP per Floor</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
| (ii)  | <u>3 Room Social</u>   |      |      |               |                 |
|   | <b>Pipe Works</b>  |      |      |               |                 |
| A   | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B   | Ditto 25mm Ø   | 15   | LM   |               |                 |
|   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C   | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D   | Ditto 25mm Ø   | 8    | No.  |               |                 |
|   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E   | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F   | 25 x 25 x 25mm   | 4    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| G   | 32 x 25mm reducer  | 1    | No.  |               |                 |
|   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J   | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K   | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L   | 25 x 15mm male threaded bend   | 8    | LM   |               |                 |
|   | <b>Isolating valves</b>  |      |      |               |                 |
| M   | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|   | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N   | Brass plated 1/2" angle valve  | 4    | No.  |               |                 |
|   | <b>Check Meter</b>   |      |      |               |                 |
| O   | 25mm diameter water check meter  | 1    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P   | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|   | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|   | <b>TOTAL FOR 1 No. 3Room Social (Per Floor)</b>  | 1    |      | x 1           |                 |
| <b>Total Cost of Plumbing Installation for 3Room Social per Floor</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
| (iii)  | <b>2 BR AHP</b>  |      |      |               |                 |
|  | <b>Pipe Works</b>  |      |      |               |                 |
| A  | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B  | Ditto 25mm Ø   | 15   | LM   |               |                 |
|  | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|  | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C  | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D  | Ditto 25mm Ø   | 8    | No.  |               |                 |
|  | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E  | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F  | 25 x 25 x 25mm   | 4    | No.  |               |                 |
|  | <b>Reducers</b>  |      |      |               |                 |
| G  | 32 x 25mm reducer  | 1    | No.  |               |                 |
|  | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J  | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K  | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L  | 25 x 15mm male threaded bend   | 8    | LM   |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 4    | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 25mm diameter water check meter  | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|  | <b>TOTAL FOR 4 No. 2BR AHP (Per Floor)</b>   | 4    |      | x 4           |                 |
| <b>Total Cost of Plumbing Installation for 2BR AHP per Floor</b> |  |      |      |               |                 |



| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
| (iv)  | <u>2 Room Social</u>   |      |      |               |                 |
|   | <b>Pipe Works</b>  |      |      |               |                 |
| A   | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B   | Ditto 25mm Ø   | 15   | LM   |               |                 |
|   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C   | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D   | Ditto 25mm Ø   | 8    | No.  |               |                 |
|   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E   | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F   | 25 x 25 x 25mm   | 4    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| G   | 32 x 25mm reducer  | 1    | No.  |               |                 |
|   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J   | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K   | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L   | 25 x 15mm male threaded bend   | 8    | LM   |               |                 |
|   | <b>Isolating valves</b>  |      |      |               |                 |
| M   | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|   | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N   | Brass plated 1/2" angle valve  | 4    | No.  |               |                 |
|   | <b>Check Meter</b>   |      |      |               |                 |
| O   | 25mm diameter water check meter  | 1    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P   | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|   | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|   | <b>TOTAL FOR 2 No. 2 Room Social (Per Floor)</b>   | 2    |      | x 2           |                 |
| <b>Total Cost of Plumbing Installation for 2Room Social per Floor</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
| (v)   | <u>1 Room Social</u>   |      |      |               |                 |
|   | <b>Pipe Works</b>  |      |      |               |                 |
| A   | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B   | Ditto 25mm Ø   | 15   | LM   |               |                 |
|   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C   | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D   | Ditto 25mm Ø   | 8    | No.  |               |                 |
|   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E   | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F   | 25 x 25 x 25mm   | 4    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| G   | 32 x 25mm reducer  | 1    | No.  |               |                 |
|   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J   | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K   | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L   | 25 x 15mm male threaded bend   | 8    | LM   |               |                 |
|   | <b>Isolating valves</b>  |      |      |               |                 |
| M   | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|   | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N   | Brass plated 1/2" angle valve  | 4    | No.  |               |                 |
|   | <b>Check Meter</b>   |      |      |               |                 |
| O   | 25mm diameter water check meter  | 1    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P   | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|   | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|   | <b>TOTAL FOR 1 No. 1Room Social (Per Floor)</b>  | 1    |      | x 1           |                 |
| <b>Total Cost of Plumbing Installation for 1Room Social per Floor</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
| (vi)  | <b>Studio Apartment</b>  |      |      |               |                 |
|   | <b>Pipe Works</b>  |      |      |               |                 |
| A   | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B   | Ditto 25mm Ø   | 15   | LM   |               |                 |
|   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C   | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D   | Ditto 25mm Ø   | 8    | No.  |               |                 |
|   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E   | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F   | 25 x 25 x 25mm   | 4    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| G   | 32 x 25mm reducer  | 1    | No.  |               |                 |
|   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J   | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K   | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L   | 25 x 15mm male threaded bend   | 8    | LM   |               |                 |
|   | <b>Isolating valves</b>  |      |      |               |                 |
| M   | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|   | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N   | Brass plated 1/2" angle valve  | 4    | No.  |               |                 |
|   | <b>Check Meter</b>   |      |      |               |                 |
| O   | 25mm diameter water check meter  | 1    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P   | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|   | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|   | <b>TOTAL FOR 2 No. Studios (Per Floor)</b>   | 2    |      | x 2           |                 |
| <b>Total Cost of Plumbing Installation for 2Room Social per Floor</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
| (vii)   | <u>1 No. Extra Apartment on Ground Floor</u>   |      |      |               |                 |
|   | <b>Pipe Works</b>  |      |      |               |                 |
| A   | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B   | Ditto 25mm Ø   | 15   | LM   |               |                 |
|   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C   | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D   | Ditto 25mm Ø   | 8    | No.  |               |                 |
|   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E   | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F   | 25 x 25 x 25mm   | 4    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| G   | 32 x 25mm reducer  | 1    | No.  |               |                 |
|   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J   | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K   | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L   | 25 x 15mm male threaded bend   | 8    | LM   |               |                 |
|   | <b>Isolating valves</b>  |      |      |               |                 |
| M   | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|   | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N   | Brass plated 1/2" angle valve  | 4    | No.  |               |                 |
|   | <b>Check Meter</b>   |      |      |               |                 |
| O   | 25mm diameter water check meter  | 1    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P   | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|   | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|   | <b>TOTAL FOR 1 No. Studio (Extra)</b>  | 1    |      | x1            |                 |
| <b>Total Cost of Plumbing Installation for the Extra Studio</b> |  |      |      |               |                 |

| ITEM | DESCRIPTION   | AMOUNT<br>(KES) |
|------|---|-----------------|
|      | <b><u>Typical Floor Collection Page</u></b>                       |                 |
| 1    | Total Cost For Plumbing Installation for 3BR AHP                  |                 |
| 2    | Total Cost For Plumbing Installation for 3Room Social             |                 |
| 3    | Total Cost For Plumbing Installation for 2BR AHP                  |                 |
| 4    | Total Cost For Plumbing Installation for 2Room Social             |                 |
| 5    | Total Cost For Plumbing Installation for 1Room Social             |                 |
| 6    | Total Cost For Plumbing Installation for Studio Apartment         |                 |
| 7    | Total Plumbing Cost Per Floor                                     |                 |
| 8    | <b>Total Plumbing Cost for G + 9 Levels ( Item 7 x 10 Floors)</b> |                 |
| 9    | <b>Add Total Cost of Extra Studio Apartment on Ground Gloor</b>   |                 |
|      | <b>Total Cost (Item 8 +7) of Plumbing Carried to Summary Page</b> |                 |

| ITEM                                  | DESCRIPTION                               | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---------------------------------------|---|------|------|---------------|-----------------|
| <b>2</b>                              | <b>Risers and Roof Levels</b>             |      |      |               |                 |
|                                       | <b>Pipe Works</b>                         |      |      |               |                 |
| A                                     | 75mm Ø PPR pipe                           | 50   | LM   |               |                 |
| B                                     | Ditto 63mm Ø                              | 50   | LM   |               |                 |
| B                                     | Ditto 50mm Ø                              | 50   | LM   |               |                 |
| C                                     | Ditto 40mm Ø                              | 40   | LM   |               |                 |
|                                       | <b>Extra Over Pipe Work</b>               |      |      |               |                 |
|                                       | <b>Elbows/ Bends</b>                      |      |      |               |                 |
| D                                     | 75mm Ø Elbows/ Bends                      | 12   | No.  |               |                 |
| E                                     | Ditto 63mm Ø                              | 25   | No.  |               |                 |
| F                                     | Ditto 50mm Ø                              | 8    | No.  |               |                 |
| G                                     | Ditto 40mm Ø                              | 16   | No.  |               |                 |
| H                                     | Ditto 32mm Ø                              | 16   | No.  |               |                 |
| I                                     | Ditto 25mm Ø                              | 8    | No.  |               |                 |
|                                       | <b>Equal/Unequal Tees</b>                 |      |      |               |                 |
| J                                     | 63 x 63 x 63mm                            | 10   | No.  |               |                 |
| K                                     | 40 x 40 x 40mm                            | 8    | No.  |               |                 |
| L                                     | 40 x 40 x 32mm                            | 16   | No.  |               |                 |
| M                                     | 32 x 32 x 32mm                            | 4    | No.  |               |                 |
| N                                     | 32 x 32 x 25mm                            | 4    | No.  |               |                 |
| O                                     | 25 x 25 x 25mm                            | 12   | No.  |               |                 |
|                                       | <b>Reducers</b>                           |      |      |               |                 |
| P                                     | 63 x 50mm reducer                         | 6    | No.  |               |                 |
| Q                                     | 50 x 40mm reducer                         | 6    | No.  |               |                 |
| R                                     | 40 x 32mm reducer                         | 6    | No.  |               |                 |
| S                                     | 40 x 32mm reducer                         | 6    | No.  |               |                 |
| T                                     | 32 x 25mm reducer                         | 8    | No.  |               |                 |
|                                       | <b>Male/Female brass threaded adaptor</b> |      |      |               |                 |
| U                                     | 40 x 32mm male/female threaded adaptor    | 5    | No.  |               |                 |
| V                                     | 32 x 25mm male/female threaded adaptor    | 7    | No.  |               |                 |
| <b>Total Carried to the Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| W  | 65mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
| X  | 40mm Ø Ditto   | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| Y  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <i>Sub Total for 1 Riser</i>   |      |      |               |                 |
|  | <b>TOTAL FOR 4 No. Risers</b>  | 4    |      | x 4           |                 |
| <b>Total Cost of Riser &amp; Roof Level Plumbing</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|---|------|------|---------------|-----------------|
| 3  | <b>SANITARY FITTINGS AND ACCESSORIES<br/>INSTALL ONLY</b>   |      |      |               |                 |
| A  | <b>Water Closet (WC) Pan</b><br>Close Coupled dual flush Floor Standing Close<br>Coupled WC Bowl complete with seat cover<br>and cistern, WC connector relevant fittings &<br>accessories                           | 121  | No.  |               |                 |
| B  | <b>Wash Basin</b><br>WHB basin Full pedestal Wash Basin<br>450x485x230m White Complte with bottle traps,<br>flexible connection hoses and other accessories<br>with cws only tap                                    | 121  | No.  |               |                 |
| C  | <b>Shower Fittings</b><br>Shower fitting c/w 15mm diameter chrome<br>plated stop cork, Instant shower fitting and 1/2"<br>Cobra 211- 15 Star Pillar tap as Pegler or equal<br>and equivalent                        | 121  | No.  |               |                 |
| D  | <b>Bathroom Accessories</b><br>Medium Washroom bathroom set Consisitng of<br>Toilet roll holder, soap dish holder, brush<br>holder and Coat Hooke   | 121  | Set  |               |                 |
| E  | <b>kitchen sink</b><br>Stainless steel kitchen sink single drain, single<br>bowl complete overflow and 40mm diameter<br>plastic tubular p-trap PVC Bottle Trap and<br>waste 1.5in x 40, Long Neck Wall type Bib Tap | 111  | No.  |               |                 |
| <b>Total Cost of Sanitary Fittings &amp; Accessories</b> |   |      |      |               |                 |



| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b>FIRE PROTECTION</b>   |      |      |               |                 |
|   | <b>Hose Reel and Associated Pipework</b>   |      |      |               |                 |
| A   | Supply and Install automatic 30 meters long, 25mm diameter hosereel and nozzle installed to KS 2003:2006   | 5    | No.  |               |                 |
|   | <b>Associated Pipework</b>   |      |      |               |                 |
|   | GI Class 'B' tubing to KS06-259 with screwed and socketed joints to KS ISO 7-1:1994 including all range piping, fittings, hanagers, supports, brackets, and supports               |      |      |               |                 |
| B   | 50mm diameter  | 65   | LM   |               |                 |
| C   | 25mm ditto   | 13   | LM   |               |                 |
|   | <b>Extra Over Piping For Fittings:-</b>  |      |      |               |                 |
|   | <b>Elbows/Various Bends</b>  |      |      |               |                 |
| D   | 50mm bend/elbow  | 7    | No.  |               |                 |
| E   | 25mm ditto   | 20   | No.  |               |                 |
|   | <b>Equal/Unequal tees</b>  |      |      |               |                 |
| F   | 50 x 50 x 50mm tee   | 10   | No.  |               |                 |
| G   | 50 x 50 x 25mm ditto   | 19   | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| H   | 50 x 25mm reducer  | 10   | No.  |               |                 |
|   | <b>Unions</b>  |      |      |               |                 |
| I   | 50mm diameter union  | 2    | No.  |               |                 |
| J   | 25mm ditto   | 20   | No.  |               |                 |
|   | <b>Valves</b>  |      |      |               |                 |
| K   | 25mm diameter quarter Turn hose reel isolation valve to be as PEGLER or approved equivalent.   | 20   | No.  |               |                 |
|   | <b>Painting</b>  |      |      |               |                 |
| L   | Allow for Wire brushing , cleaning and painting of the complete fire fighting pipework installation with one coat of red oxide primer, undercoat, and gloss coat to specifications | 1    | Item |               |                 |
| <b>Total Cost Carried For hose reel and associated pipework Installations</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b><u>Portable Fire Protection Equipment + Hose</u></b>  |      |      |               |                 |
|   | <b>Reel Pump</b>   |      |      |               |                 |
|   | <b>Supply, deliver, install, test and commission</b><br>portable fire protection equipment with initial<br>fill complete with all the necessary mounting<br>accessories. |      |      |               |                 |
| A   | 9 litres, carbon dioxide gas extinguisher  | 10   | No.  |               |                 |
| B   | 4.5kg ABC dry powder extinguisher  | 10   | No.  |               |                 |
| C   | Supply and fix signs indicating the words "FIRE<br>POINT" in 80mm high letters   | 10   | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| D   | Allow for testing and commissioning of the fire<br>pump installation to the satisfaction of the<br>Engineer.   | 1    | Item |               |                 |
| <b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b> |  |      |      |               |                 |

| ITEM | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|------|---|------|-----|------|--------|
|      | <b><u>DRY RISER</u></b><br>Supply , deliver and install Galvernised Iron (GI) Pipe KS 06-259 Class B, Groove fittings including fixing and jointing. Tenderers must allow in their pipework prices for Galvanised Support Brackets, Clamping screw, Threaded Rod, Bolts & all the couplings, connectors, joints etc. required in the running length of pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed, brackets and pipe sleeves through structural |      |     |      |        |
| 1    | 100mm diameter Black Pipe   | LM   | 48  |      |        |
|      | <b><u>Extra over Black Pipe tubing for the following:</u></b>   |      |     |      |        |
|      | <b><u>Bends</u></b>   |      |     |      |        |
| 2    | 100mm diameter bend   | No.  | 8   |      |        |
|      | <b><u>Tees</u></b>  |      |     |      |        |
| 3    | 100mm ditto   | No.  | 10  |      |        |
|      | <b><u>Reducing Bushes</u></b>   |      |     |      |        |
| 4    | 100x65mm Black Pipe reducing bush   | No.  | 11  |      |        |
|      | <b><u>Couplers</u></b>  |      |     |      |        |
| 5    | 100mm diameter Black Pipe union   | No.  | 9   |      |        |
|      | <b><u>Flanges</u></b>   |      |     |      |        |
| 6    | 65mm dia Black Pipe flanges(pair, including bolt  | No.  | 11  |      |        |
|      | <b><u>Landing Valve</u></b>   |      |     |      |        |
| 7    | 65mm diameter landing valve as Merry - Weather "Equery" constant pressure outlet with flanged inlet and 1No. 65mm dia female instantaneous outlet with blank cap and chain.   | No.  | 11  |      |        |
|      | <b><u>Fire Hose</u></b>   |      |     |      |        |
| 8    | 65mm dia x30m long canvas hose as specified   | No.  | 1   |      |        |
| 9    | Hose cradle for above canvas hose   | No.  | 1   |      |        |
| 10   | 65mm dia branch pipe complete with nozzle/sp  | No.  | 1   |      |        |
|      | <b><u>Gate Valves</u></b>   |      |     |      |        |
| 11   | 100mm dia approved high pressure screw-down full way non-rising stem solid wedge disc gate valve to BS 5154 PN 16 for Series B Rating with wheel head and joints to steel tubing. As "Crane Model 156 " or equal and approved   | No.  | 1   |      |        |
| 12   | 100mm 2-way horizontal mounted pumping in breeching inlet to BS 5041 Part 3 and horizontal inlet box with door fitted with Georgian wired glass panel to BS5041 Part 5. Inclusive of Breeching inlet cabinet as specified complete with access break glass and painted  | Item | 1   |      |        |
|      | <b>TOTAL TO NEXT PAGE</b>   |      |     |      |        |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|--|--|------|-----|------|--------|
|  | <i>Balance brought forward</i>   |      |     |      |        |
| 14   | 25mm dia Air Relief Valve as specified   | No.  | 1   |      |        |
| 15   | Wire brush , clean, and paint complete installation with one coat of red oxide primer, undercoat, and gloss coat to Architects colour including banding and colour coding to British Standards       | Sum  | 1   |      |        |
| 16   | <b><u>Pressure testing and Painting</u></b><br>Allow for pressure testing of the entire Dry riser installation and obtain relevant test certificates endorsed by the Engineer or his representative. | Sum  | 1   |      |        |
|  | Sub Total For 1No. Block   |      |     |      |        |
| <b>TOTAL COST FOR DRY RISER TO MAIN SUMMARY PAGE</b> |  |      |     |      |        |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage (Ground Floor)</u></b>   |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b>Piping</b>  |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 60   | LM   |               |                 |
| B    | 40mm ditto   | 60   | LM   |               |                 |
| C    | 50mm ditto   | 120  | LM   |               |                 |
| D    | 75mm ditto   | 80   | LM   |               |                 |
| E    | 100mm ditto  | 80   | LM   |               |                 |
| F    | 100mm diameter heavy duty golden brown pipe  | 155  | LM   |               |                 |
| G    | 150mm diameter heavy duty golden brown pipe  | 300  | LM   |               |                 |
|      | <b>Extra over uPVC Pipeworks</b>   |      |      |               |                 |
| H    | 32mm sweep bend  | 15   | No.  |               |                 |
| I    | 40mm sweep bend  | 60   | No.  |               |                 |
| J    | 50mm sweep bend  | 15   | No.  |               |                 |
| K    | 75mm sweep bend  | 8    | No.  |               |                 |
| L    | 100mm sweep bend   | 22   | No.  |               |                 |
| M    | 150mm sweep bend   | 16   | No.  |               |                 |
| N    | 40mm 450 bend  | 22   | No.  |               |                 |
| O    | 50mm 450 bend  | 15   | No.  |               |                 |
| P    | 40mm sweep tee   | 25   | No.  |               |                 |
| Q    | 40 x 32mm reducer  | 15   | No.  |               |                 |
| R    | 75 x 40mm ditto  | 15   | No.  |               |                 |
| S    | 150 x 40mm ditto   | 8    | No.  |               |                 |
| T    | 40mm access plug   | 22   | No.  |               |                 |
| U    | 150MM vent cowl  | 15   | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b>Total From Previous Page</b>  |      |      |               |                 |
| V   | 100 x 50mm floor trap set complete with plastic grating  | 17   | No.  |               |                 |
| AA  | <b>Gulley Trap</b><br>Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy duty iron cover.   | 25   | No.  |               |                 |
| BB  | <b>Manholes</b><br>Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal. | 32   | No.  |               |                 |
| CC  | <b>Excavations</b><br>Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.  | 120  | LM   |               |                 |
| DD  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings.   | 1    | Item |               |                 |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |  |      |      |               |                 |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage (1St Floor to 10th Floor)</u></b>  |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b>Piping</b>  |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 20   | LM   |               |                 |
| B    | 40mm ditto   | 70   | LM   |               |                 |
| C    | 50mm ditto   | 40   | LM   |               |                 |
| D    | 100mm ditto  | 40   | LM   |               |                 |
| E    | 150mm ditto  | 120  | LM   |               |                 |
|      | <b>Extra over uPVC Pipings</b>   |      |      |               |                 |
| F    | 32mm sweep bend  | 15   | No.  |               |                 |
| G    | 40mm sweep bend  | 82   | No.  |               |                 |
| H    | 50mm sweep bend  | 15   | No.  |               |                 |
| I    | 40mm 450sweep bend   | 25   | No.  |               |                 |
| J    | 50mm 450sweep bend   | 15   | No.  |               |                 |
| K    | 50mm y-connector   | 8    | No.  |               |                 |
| L    | 50mm sweep tee   | 4    | No.  |               |                 |
| M    | 40mm sweep tee   | 32   | No.  |               |                 |
| N    | 40 x 32mm reducer  | 14   | No.  |               |                 |
| O    | 150 x 40mm reducer   | 8    | No.  |               |                 |
| P    | 150 x 50mm reducer   | 8    | No.  |               |                 |
| Q    | 150 x 100mm reducer  | 22   | No.  |               |                 |
| R    | 40mm access plug   | 25   | No.  |               |                 |
| S    | 100mm access plug  | 15   | No.  |               |                 |
| T    | 100mm single branch  | 2    | No.  |               |                 |
| U    | 150mm single branch  | 17   | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total From Previous Page</b>  |      |      |               |                 |
| X  | 100 x 50mm floor trap set complete with polycarbonate flush grating  | 17   | No.  |               |                 |
| Y  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings. | 1    | Item |               |                 |
|  | <i>Sub Total for 1 Floor</i>   |      |      |               |                 |
|  | <b>TOTAL FOR 9 Floors</b>  | 9    |      | x 9           |                 |
| <b>Total Cost For 1st to 10th floor Foul Drainage Installation</b> |  |      |      |               |                 |



| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Rain Water Drainage</b>   |      |      |               |                 |
|  | Supply, deliver and install UPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) rainwater pipework. Allow for all flanges, couplings, nipples, connector joints, fixing clips holder bats etc as required in running length of pipework but not measured. |      |      |               |                 |
| <b>A</b>   | <b>Piping</b><br>100mm ditto   | 400  | LM   |               |                 |
|  | Extra over piping for fittings:-   |      |      |               |                 |
| <b>B</b>   | 100mm ditto  | 16   | No.  |               |                 |
| <b>C</b>   | 100mm sweep bend   | 2    | No.  |               |                 |
| <b>D</b>   | 100mm single branch  | 13   | No.  |               |                 |
| <b>E</b>   | 100mm double branch  | 7    | No.  |               |                 |
| <b>F</b>   | 100mm flat roof rain water outlets   | 10   | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| <b>G</b>   | Allow for testing and commissioning of the rain water drainage installation to the satisfaction of the engineer.   | 1    | Item |               |                 |
| <b>Total Cost For Rain Water Drainage Installation</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | AMOUNT<br>(KES) |
|--|--|-----------------|
| <u>SUMMARY PAGE</u>  |  |                 |
| 1.0  | Total Cost for Internal Plumbing   |                 |
| 2.0  | Total Cost for Roof + Riser  |                 |
| 3.0  | Total Cost for Sanitary Fittings Install Only                            |                 |
| 4.0  | Total Cost Carried For hose reel and associated pipework Installations   |                 |
| 5.0  | Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation |                 |
| 6.0  | Total Cost For Dry Riser Installation                                    |                 |
| 7.0  | Total Cost For Ground Floor Foul Drainage Installation                   |                 |
| 8.0  | Total Cost For 1st to 10th floor Foul Drainage Installation              |                 |
| 9.0  | Total Cost For Rain Water Drainage Installation                          |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |  |                 |

| ITEM                              | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|---|------|------|---------------|-----------------|
| 1.0                               | <b>Internal Plumbing Installations</b><br><br>Supply, deliver install, Test and Commission:<br><br><b>PP-R (Polypropylene Random Co-polymer)</b> pipes PN 20 and fittings and fusion joints to (KS ISO 15874 Part 1, 2, 3 & 5) of approved manufacturer. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints etc. as required in the running lengths of pipework. The pipes shall run in floors and wall chase. The pipes will be pressure tested before the plastering of wall commences and as per the |      |      |               |                 |
| (i)                               | <b>3 BR AHP</b>   |      |      |               |                 |
|                                   | <b>Pipe Works</b>   |      |      |               |                 |
| A                                 | 32mm Ø PPR Pipe   | 2    | LM   |               |                 |
| B                                 | Ditto 25mm Ø  | 20   | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>   |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>  |      |      |               |                 |
| C                                 | 32mm Ø Elbows/ Bends  | 2    | No.  |               |                 |
| D                                 | Ditto 25mm Ø  | 14   | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>   |      |      |               |                 |
| E                                 | 32 x 32 x 32mm  | 1    | No.  |               |                 |
| F                                 | 25 x 25 x 25mm  | 7    | No.  |               |                 |
|                                   | <b>Reducers</b>   |      |      |               |                 |
| G                                 | 32 x 25mm reducer   | 1    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>   |      |      |               |                 |
| J                                 | 25 x 20mm male/female threaded adaptor  | 2    | No.  |               |                 |
| K                                 | 25 x 15mm ditto   | 4    | LM   |               |                 |
| L                                 | 25 x 15mm male threaded bend  | 14   | LM   |               |                 |
| <b>Total Carried to Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 7    | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 25mm diameter water check meter  | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|  | <b>TOTAL FOR 1 No. 3BR AHP (Per Floor)</b>   | 1    |      | x 1           |                 |
| <b>Total Cost of Plumbing Installation for 3BR AHP per Floor</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
| (ii)  | <b>3 BR Market</b>   |      |      |               |                 |
|   | <b>Pipe Works</b>  |      |      |               |                 |
| A   | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B   | Ditto 25mm Ø   | 20   | LM   |               |                 |
|   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C   | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D   | Ditto 25mm Ø   | 14   | No.  |               |                 |
|   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E   | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F   | 25 x 25 x 25mm   | 7    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| G   | 32 x 25mm reducer  | 1    | No.  |               |                 |
|   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J   | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K   | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L   | 25 x 15mm male threaded bend   | 14   | LM   |               |                 |
|   | <b>Isolating valves</b>  |      |      |               |                 |
| M   | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|   | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N   | Brass plated 1/2" angle valve  | 7    | No.  |               |                 |
|   | <b>Check Meter</b>   |      |      |               |                 |
| O   | 25mm diameter water check meter  | 1    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P   | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|   | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|   | <b>TOTAL FOR 3 No. 3BR Market (Per Floor)</b>  | 3    |      | x 3           |                 |
| <b>Total Cost of Plumbing Installation for 3BR Market per Floor</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
| (iii)  | <b>2 BR AHP</b>  |      |      |               |                 |
|  | <b>Pipe Works</b>  |      |      |               |                 |
| A  | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B  | Ditto 25mm Ø   | 15   | LM   |               |                 |
|  | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|  | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C  | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D  | Ditto 25mm Ø   | 8    | No.  |               |                 |
|  | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E  | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F  | 25 x 25 x 25mm   | 4    | No.  |               |                 |
|  | <b>Reducers</b>  |      |      |               |                 |
| G  | 32 x 25mm reducer  | 1    | No.  |               |                 |
|  | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J  | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K  | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L  | 25 x 15mm male threaded bend   | 8    | LM   |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 4    | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 25mm diameter water check meter  | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|  | <b>TOTAL FOR 1 No. 2BR AHP (Per Floor)</b>   | 1    |      | x 1           |                 |
| <b>Total Cost of Plumbing Installation for 2BR AHP per Floor</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
| (iv)  | <b>2 BR Market</b>   |      |      |               |                 |
|   | <b>Pipe Works</b>  |      |      |               |                 |
| A   | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B   | Ditto 25mm Ø   | 20   | LM   |               |                 |
|   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C   | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D   | Ditto 25mm Ø   | 14   | No.  |               |                 |
|   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E   | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F   | 25 x 25 x 25mm   | 7    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| G   | 32 x 25mm reducer  | 1    | No.  |               |                 |
|   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J   | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K   | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L   | 25 x 15mm male threaded bend   | 14   | LM   |               |                 |
|   | <b>Isolating valves</b>  |      |      |               |                 |
| M   | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|   | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N   | Brass plated 1/2" angle valve  | 7    | No.  |               |                 |
|   | <b>Check Meter</b>   |      |      |               |                 |
| O   | 25mm diameter water check meter  | 1    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P   | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|   | <i>Sub Total for 1 Units</i>   |      |      |               |                 |
|   | <b>TOTAL FOR 3 No. 3BR Market (Per Floor)</b>  | 3    |      | x 3           |                 |
| <b>Total Cost of Plumbing Installation for 3BR Market per Floor</b> |  |      |      |               |                 |

| ITEM | DESCRIPTION  | AMOUNT<br>(KES) |
|------|--|-----------------|
|      | <b><u>Typical Floor Collection Page</u></b>                            |                 |
| 1    | Total Cost For Plumbing Installation for 3BR AHP                       |                 |
| 2    | Total Cost For Plumbing Installation for 3Room Social                  |                 |
| 3    | Total Cost For Plumbing Installation for 2BR AHP                       |                 |
| 4    | Total Cost For Plumbing Installation for 2Room Social                  |                 |
|      | Total Plumbing Cost Per Floor  |                 |
|      | <b>Total Plumbing Cost for G + 9 Levels (x 10 Floors)</b>              |                 |
|      | <b>Total for All Floor Carried forward to Plumbing Collection Page</b> |                 |



| ITEM                                  | DESCRIPTION                               | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---------------------------------------|---|------|------|---------------|-----------------|
| <b>2</b>                              | <b>Risers and Roof Levels</b>             |      |      |               |                 |
|                                       | <b>Pipe Works</b>                         |      |      |               |                 |
| A                                     | 75mm Ø PPR pipe                           | 50   | LM   |               |                 |
| B                                     | Ditto 63mm Ø                              | 50   | LM   |               |                 |
| B                                     | Ditto 50mm Ø                              | 50   | LM   |               |                 |
| C                                     | Ditto 40mm Ø                              | 40   | LM   |               |                 |
|                                       | <b>Extra Over Pipe Work</b>               |      |      |               |                 |
|                                       | <b>Elbows/ Bends</b>                      |      |      |               |                 |
| D                                     | 75mm Ø Elbows/ Bends                      | 12   | No.  |               |                 |
| E                                     | Ditto 63mm Ø                              | 25   | No.  |               |                 |
| F                                     | Ditto 50mm Ø                              | 8    | No.  |               |                 |
| G                                     | Ditto 40mm Ø                              | 16   | No.  |               |                 |
| H                                     | Ditto 32mm Ø                              | 16   | No.  |               |                 |
| I                                     | Ditto 25mm Ø                              | 8    | No.  |               |                 |
|                                       | <b>Equal/Unequal Tees</b>                 |      |      |               |                 |
| J                                     | 63 x 63 x 63mm                            | 10   | No.  |               |                 |
| K                                     | 40 x 40 x 40mm                            | 8    | No.  |               |                 |
| L                                     | 40 x 40 x 32mm                            | 16   | No.  |               |                 |
| M                                     | 32 x 32 x 32mm                            | 4    | No.  |               |                 |
| N                                     | 32 x 32 x 25mm                            | 4    | No.  |               |                 |
| O                                     | 25 x 25 x 25mm                            | 12   | No.  |               |                 |
|                                       | <b>Reducers</b>                           |      |      |               |                 |
| P                                     | 63 x 50mm reducer                         | 6    | No.  |               |                 |
| Q                                     | 50 x 40mm reducer                         | 6    | No.  |               |                 |
| R                                     | 40 x 32mm reducer                         | 6    | No.  |               |                 |
| S                                     | 40 x 32mm reducer                         | 6    | No.  |               |                 |
| T                                     | 32 x 25mm reducer                         | 8    | No.  |               |                 |
|                                       | <b>Male/Female brass threaded adaptor</b> |      |      |               |                 |
| U                                     | 40 x 32mm male/female threaded adaptor    | 5    | No.  |               |                 |
| V                                     | 32 x 25mm male/female threaded adaptor    | 7    | No.  |               |                 |
| <b>Total Carried to the Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| W  | 65mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
| X  | 40mm Ø Ditto   | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| Y  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <i>Sub Total for 1 Riser</i>   |      |      |               |                 |
|  | <b>TOTAL FOR 4 No. Risers</b>  | 4    |      | x 4           |                 |
| <b>Total Cost of Riser &amp; Roof Level Plumbing</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|---|------|------|---------------|-----------------|
| 3  | <b>SANITARY FITTINGS AND ACCESSORIES<br/>INSTALL ONLY</b>   |      |      |               |                 |
| A  | <b>Water Closet (WC) Pan</b><br>Close Coupled dual flush Floor Standing Close<br>Coupled WC Bowl complete with seat cover<br>and cistern, WC connector relevant fittings &<br>accessories                           | 15   | No.  |               |                 |
| B  | <b>Wash Basin</b><br>WHB basin Full pedestal Wash Basin<br>450x485x230m White Complte with bottle traps,<br>flexible connection hoses and other accessories<br>with cws only tap                                    | 15   | No.  |               |                 |
| C  | <b>Shower Fittings</b><br>Shower fitting c/w 15mm diameter chrome<br>plated stop cork, Instant shower fitting and 1/2"<br>Cobra 211- 15 Star Pillar tap as Pegler or equal<br>and equivalent                        | 15   | No.  |               |                 |
| E  | <b>Bathroom Accessories</b><br>Medium Washroom bathroom set Consisitng of<br>Toilet roll holder, soap dish holder, brush<br>holder and Coat Hooke   | 15   | Set  |               |                 |
| F  | <b>kitchen sink</b><br>Stainless steel kitchen sink single drain, single<br>bowl complete overflow and 40mm diameter<br>plastic tubular p-trap PVC Bottle Trap and<br>waste 1.5in x 40, Long Neck Wall type Bib Tap | 8    | No.  |               |                 |
|  | <i>Sub Total for 1 Floor</i>  |      |      |               |                 |
|  | <b>TOTAL FOR 10 Floors</b>  | 10   |      | x 10          |                 |
| <b>Total Cost of Sanitary Fittings &amp; Accessories</b> |   |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b>FIRE PROTECTION</b>   |      |      |               |                 |
|   | <b>Hose Reel and Associated Pipework</b>   |      |      |               |                 |
| A   | Supply and Install automatic 30 meters long, 25mm diameter hose reel and nozzle installed to KS 2003:2006  | 5    | No.  |               |                 |
|   | <b>Associated Pipework</b>   |      |      |               |                 |
|   | GI Class 'B' tubing to KS06-259 with screwed and socketed joints to KS ISO 7-1:1994 including all range piping, fittings, hangers, supports, brackets, and supports                |      |      |               |                 |
| B   | 50mm diameter  | 65   | LM   |               |                 |
| C   | 25mm ditto   | 13   | LM   |               |                 |
|   | <b>Extra Over Piping For Fittings:-</b>  |      |      |               |                 |
|   | <b>Elbows/Various Bends</b>  |      |      |               |                 |
| D   | 50mm bend/elbow  | 7    | No.  |               |                 |
| E   | 25mm ditto   | 20   | No.  |               |                 |
|   | <b>Equal/Unequal tees</b>  |      |      |               |                 |
| F   | 50 x 50 x 50mm tee   | 10   | No.  |               |                 |
| G   | 50 x 50 x 25mm ditto   | 19   | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| H   | 50 x 25mm reducer  | 10   | No.  |               |                 |
|   | <b>Unions</b>  |      |      |               |                 |
| I   | 50mm diameter union  | 2    | No.  |               |                 |
| J   | 25mm ditto   | 20   | No.  |               |                 |
|   | <b>Valves</b>  |      |      |               |                 |
| K   | 25mm diameter quarter Turn hose reel isolation valve to be as PEGLER or approved equivalent.   | 20   | No.  |               |                 |
|   | <b>Painting</b>  |      |      |               |                 |
| L   | Allow for Wire brushing , cleaning and painting of the complete fire fighting pipework installation with one coat of red oxide primer, undercoat, and gloss coat to specifications | 1    | Item |               |                 |
| <b>Total Cost Carried For hose reel and associated pipework Installations</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|--|--|------|------|------------|--------------|
|  | <p><b><u>Portable Fire Protection Equipment + Hose</u></b></p>   |      |      |            |              |
|  | <p><b>Reel Pump</b></p>  |      |      |            |              |
|  | <p><b>Supply, deliver, install, test and commission</b> portable fire protection equipment with initial fill complete with all the necessary mounting accessories.</p> |      |      |            |              |
| A  | 9 litres, carbon dioxide gas extinguisher  | 10   | No.  |            |              |
| B  | 4.5kg ABC dry powder extinguisher  | 10   | No.  |            |              |
| C  | Supply and fix signs indicating the words "FIRE POINT" in 80mm high letters  | 10   | No.  |            |              |
|  | <p><b>Testing and Commissioning</b></p>  |      |      |            |              |
| D  | Allow for testing and commissioning of the fire pump installation to the satisfaction of the Engineer.   | 1    | Item |            |              |
| <p><b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b></p> |  |      |      |            |              |

| ITEM | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|------|--|------|-----|------|--------|
|      | <b>DRY RISER</b><br>Supply , deliver and install Galvernised Iron (GI) Pipe KS 06-259 Class B, Groove fittings including fixing and jointing. Tenderers must allow in their pipework prices for Galvanised Support Brackets, Clamping screw, Threaded Rod, Bolts & all the couplings, connectors, joints etc. required in the running length of pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed, brackets and pipe sleeves through structural |      |     |      |        |
| 1    | 100mm diameter Black Pipe  | LM   | 48  |      |        |
|      | <b>Extra over Black Pipe tubing for the following:</b>   |      |     |      |        |
|      | <b>Bends</b>   |      |     |      |        |
| 2    | 100mm diameter bend  | No.  | 8   |      |        |
|      | <b>Tees</b>  |      |     |      |        |
| 3    | 100mm ditto  | No.  | 10  |      |        |
|      | <b>Reducing Bushes</b>   |      |     |      |        |
| 4    | 100x65mm Black Pipe reducing bush  | No.  | 11  |      |        |
|      | <b>Couplers</b>  |      |     |      |        |
| 5    | 100mm diameter Black Pipe union  | No.  | 9   |      |        |
|      | <b>Flanges</b>   |      |     |      |        |
| 6    | 65mm dia Black Pipe flanges(pair, including bolt   | No.  | 11  |      |        |
|      | <b>Landing Valve</b>   |      |     |      |        |
| 7    | 65mm diameter landing valve as Merry - Weather "Equery" constant pressure outlet with flanged inlet and 1No. 65mm dia female instantaneous outlet with blank cap and chain.  | No.  | 11  |      |        |
|      | <b>Fire Hose</b>   |      |     |      |        |
| 8    | 65mmdia x30m long canvas hose as specified   | No.  | 1   |      |        |
| 9    | Hose cradle for above canvas hose  | No.  | 1   |      |        |
| 10   | 65mm dia branch pipe complete with nozzle/sp   | No.  | 1   |      |        |
|      | <b>Gate Valves</b>   |      |     |      |        |
| 11   | 100mm dia approved high pressure screw-down full way non-rising stem solid wedge disc gate valve to BS 5154 PN 16 for Series B Rating with wheel head and joints to steel tubing. As "Crane Model 156 " or equal and approved  | No.  | 1   |      |        |
| 12   | 100mm 2-way horizontal mounted pumping in breeching inlet to BS 5041 Part 3 and horizontal inlet box with door fitted with Georgian wired glass panel to BS5041 Part 5. Inclusive of Breeching inlet cabinet as specified complete with access break glass and painted   | Item | 1   |      |        |
|      | <b>TOTAL TO NEXT PAGE</b>  |      |     |      |        |

| ITEM   | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|--|--|------|-----|------|--------|
|  | <i>Balance brought forward</i>   |      |     |      |        |
| 14   | 25mm dia Air Relief Valve as specified   | No.  | 1   |      |        |
| 15   | Wire brush , clean, and paint complete installation with one coat of red oxide primer, undercoat, and gloss coat to Architects colour including banding and colour coding to British Standards       | Sum  | 1   |      |        |
| 16   | <b><u>Pressure testing and Painting</u></b><br>Allow for pressure testing of the entire Dry riser installation and obtain relevant test certificates endorsed by the Engineer or his representative. | Sum  | 1   |      |        |
|  | Sub Total For 1No. Block   |      |     |      |        |
| <b>TOTAL COST FOR DRY RISER TO MAIN SUMMARY PAGE</b> |  |      |     |      |        |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage (Ground Floor)</u></b>   |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b><u>Piping</u></b>   |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 24   | LM   |               |                 |
| B    | 40mm ditto   | 36   | LM   |               |                 |
| C    | 50mm ditto   | 72   | LM   |               |                 |
| D    | 75mm ditto   | 90   | LM   |               |                 |
| E    | 100mm ditto  | 90   | LM   |               |                 |
| F    | 100mm diameter heavy duty pipe   | 120  | LM   |               |                 |
| G    | 150mm diameter heavy duty pipe   | 300  | LM   |               |                 |
|      | <b><u>Extra over uPVC Pipeworks</u></b>  |      |      |               |                 |
| H    | 32mm sweep bend  | 13   | No.  |               |                 |
| I    | 40mm sweep bend  | 60   | No.  |               |                 |
| J    | 50mm sweep bend  | 13   | No.  |               |                 |
| K    | 75mm sweep bend  | 6    | No.  |               |                 |
| L    | 100mm sweep bend   | 15   | No.  |               |                 |
| M    | 150mm sweep bend   | 6    | No.  |               |                 |
| N    | 40mm 45° bend  | 20   | No.  |               |                 |
| O    | 50mm Ditto   | 15   | No.  |               |                 |
| P    | 75mm Ditto   | 65   | No.  |               |                 |
| Q    | 150mm Ditto  | 60   | No.  |               |                 |
| R    | 40mm sweep tee   | 20   | No.  |               |                 |
| S    | 50mm sweep tee   | 18   | No.  |               |                 |
| T    | 75mm ditto   | 15   | No.  |               |                 |
| U    | 40 x 32mm reducer  | 60   | No.  |               |                 |
| V    | 75 x 40mm ditto  | 20   | No.  |               |                 |
| W    | 150 x 40mm reducer   | 6    | No.  |               |                 |
| X    | 40mm access plug   | 20   | No.  |               |                 |
| Y    | 50mm access plug   | 13   | No.  |               |                 |
| Z    | 75mm access plug   | 13   | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |



| ITEM  | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|---|------|------|---------------|-----------------|
|   | <b>Total From Previous Page</b>   |      |      |               |                 |
| AA  | 100 x 50mm floor trap set complete with polycarbonate flush grating   | 25   | No.  |               |                 |
| BB  | 150MM vent cowl   | 15   | No.  |               |                 |
|   | <b>Gulley Trap</b>  |      |      |               |                 |
| CC  | Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy duty iron cover.  | 25   | No.  |               |                 |
|   | <b>Manholes</b>   |      |      |               |                 |
| DD  | Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal. | 32   | No.  |               |                 |
|   | <b>Excavations</b>  |      |      |               |                 |
| EE  | Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.   | 120  | LM   |               |                 |
| II  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings.  | 1    | Item |               |                 |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |   |      |      |               |                 |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage (1St Floor to 10th Floor)</u></b>  |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b>Piping</b>  |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 18   | LM   |               |                 |
| B    | 40mm ditto   | 60   | LM   |               |                 |
| C    | 50mm ditto   | 36   | LM   |               |                 |
| D    | 100mm ditto  | 30   | LM   |               |                 |
| E    | 150mm ditto  | 120  | LM   |               |                 |
|      | <b>Extra over uPVC Pippings</b>  |      |      |               |                 |
| F    | 32mm sweep bend  | 13   | No.  |               |                 |
| G    | 40mm sweep bend  | 80   | No.  |               |                 |
| H    | 50mm sweep bend  | 13   | No.  |               |                 |
| I    | 40mm 45sweep bend  | 24   | No.  |               |                 |
| J    | 50mm 45sweep bend  | 13   | No.  |               |                 |
| K    | 50mm y-connector   | 6    | No.  |               |                 |
| L    | 50mm sweep tee   | 2    | No.  |               |                 |
| M    | 40mm sweep tee   | 30   | No.  |               |                 |
| N    | 40 x 32mm reducer  | 13   | No.  |               |                 |
| O    | 150 x 40mm reducer   | 6    | No.  |               |                 |
| P    | 150 x 50mm reducer   | 6    | No.  |               |                 |
| Q    | 150 x 100mm reducer  | 20   | No.  |               |                 |
| R    | 40mm access plug   | 23   | No.  |               |                 |
| S    | 100mm access plug  | 13   | No.  |               |                 |
| T    | 100mm single branch  | 1    | No.  |               |                 |
| U    | 150mm single branch  | 15   | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total From Previous Page</b>  |      |      |               |                 |
| V  | 100 x 50mm floor trap set complete with plastic grating  | 15   | No.  |               |                 |
| W  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings. | 1    | Item |               |                 |
|  | <i>Sub Total for 1 Floor</i>   |      |      |               |                 |
|  | <b>TOTAL FOR 9 Floors</b>  | 9    |      | x 9           |                 |
| <b>Total Cost For 1st to 10th floor Foul Drainage Installation</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Rain Water Drainage</b>   |      |      |               |                 |
|  | Supply, deliver and install UPVC<br>(Unplasticized Polyvinyl chloride) to<br>(KS ISO 1452 Part 1, 2, 3, 4 & 5) rainwater<br>pipework. Allow for all flanges, couplings,<br>nipples, connector joints, fixing clips holder bats<br>etc as required in running length of pipework<br>but not measured. |      |      |               |                 |
| <b>A</b>   | <b>Piping</b><br>100mm ditto   | 400  | LM   |               |                 |
|  | Extra over piping for fittings:-   |      |      |               |                 |
| <b>B</b>   | 100mm ditto  | 16   | No.  |               |                 |
| <b>C</b>   | 100mm sweep bend   | 2    | No.  |               |                 |
| <b>D</b>   | 100mm single branch  | 13   | No.  |               |                 |
| <b>E</b>   | 100mm double branch  | 7    | No.  |               |                 |
| <b>F</b>   | 100mm flat roof rain water outlets   | 10   | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| <b>G</b>   | Allow for testing and commissioning of the rain<br>water drainage installation to the satisfaction of<br>the engineer.   | 1    | Item |               |                 |
| <b>Total Cost For Rain Water Drainage Installation</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | AMOUNT<br>(KES) |
|--|--|-----------------|
| <u>SUMMARY PAGE</u>  |  |                 |
| 1.0  | Total Cost for Internal Plumbing                                       |                 |
| 2.0  | Total Cost for Roof + Riser  |                 |
| 3.0  | Total Cost for Sanitary Fittings Install Only                          |                 |
| 4.0  | Total Cost Carried For hose reel and associated pipework Installations |                 |
| 5.0  | Total Cost For Portable fire Extinguishers + Hose Reel Pump            |                 |
| 6.0  | Total Cost For Dry Riser Installation                                  |                 |
| 7.0  | Total Cost For Ground Floor Foul Drainage Installation                 |                 |
| 8.0  | Total Cost For 1st to 10th floor Foul Drainage Installation            |                 |
| 9.0  | Total Cost For Rain Water Drainage Installation                        |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |  |                 |

| ITEM     | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|----------|--|------|------|------------|--------------|
|          | <b><u>EXTERNAL WATER RETICULATION</u></b>  |      |      |            |              |
|          | Supply, install below HDPE PN 16 to (KS ISO 4427 Part 1, 2, 3 & 5) ground pipe providing, fixing, jointing, testing in position & commisioning, including excavation & backfilling   |      |      |            |              |
|          | <b>Note</b>  |      |      |            |              |
|          | Pipe connection, tees must be electrofusion/butt fussion fittings and be included in the pipe lengths rate. he pipes will be pressure tested before the plastering of wall commences and as per the manufacturers recommended testing pressures. |      |      |            |              |
|          | <b>Underground Piping complete with Electro-fusion joining of the pipes works</b>  |      |      |            |              |
| <b>A</b> | 100Ø HDPE  | 1500 | m    |            |              |
| <b>B</b> | Ditto 63Ø  | 100  | m    |            |              |
| <b>C</b> | Ditto 50Ø  | 200  | m    |            |              |
|          | <b>Isolation Valves &amp; Valve Chamber</b>  |      |      |            |              |
|          | Suppy and Install Isolation valves to (KS ISO 4427 Part 1, 2, 3 & 5) Standards. Standard precast concrete valve chamber made of concrete (1:3:6) base, including formwork, excavations backfilling and disposal.                                 |      |      |            |              |
| <b>D</b> | Ditto 100Ø   | 20   | No.  |            |              |
| <b>E</b> | Ditto 75Ø  |      | No.  |            |              |
| <b>F</b> | Ditto 63Ø  |      | No.  |            |              |
| <b>G</b> | Ditto 50Ø  | 28   | No.  |            |              |
|          | <b>Total Carried to Next Page</b>  |      |      |            |              |

| ITEM | DESCRIPTION   | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|------|---|------|------|------------|--------------|
|      | <b>From previous page</b>   |      |      |            |              |
|      | <b>Check/ Non- return Valve Valve Chamber &amp; Valve Chamber</b>   |      |      |            |              |
|      | Supply and Install brass check valves to (KS ISO 4427 Part 1, 2, 3 & 5) Standards. Standard precast concrete valve chamber made of concrete (1:3:6) base, including formwork, excavations backfilling and disposal. |      |      |            |              |
| H    | Ditto 100Ø  | 20   | No.  |            |              |
| I    | Ditto 75Ø   |      | No.  |            |              |
| J    | Ditto 50Ø   | 28   | No.  |            |              |
|      | <b>Water Meter</b>  |      |      |            |              |
|      | Supply and Install brass Water Meter to the engineer's approval as kent or equal and approved. Meters to include meter chambers in the rates  |      |      |            |              |
| K    | Water meter 100Ø  | 1    | No.  |            |              |
| L    | Water meter 75Ø   |      | No.  |            |              |
| M    | Water meter 63Ø   |      | No.  |            |              |
| N    | Water meter 50Ø   | 5    | No.  |            |              |
|      | <b>Garden Stand Pipe</b>  |      |      |            |              |
| O    | Stand pipe 15mm 2Metres long GMS stand pipe each complete with 15mm lockabler bib tap   | 20   | No.  |            |              |
|      | <b>Total Carried to Next Page</b>   |      |      |            |              |

| ITEM | DESCRIPTION   | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|------|---|------|------|------------|--------------|
|      | <b>From previous page</b>   |      |      |            |              |
|      | Supply, deliver install, Test and Commission:<br><b>PP-R (Polypropylene Random Co-polymer)</b><br>pipes PN 20 and fittings and fusion joints to <b>(KS ISO 15874 Part 1, 2, 3 &amp; 5)</b> of approved manufacturer. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints etc. as required in the running lengths of pipework. The pipes shall run in floors and wall chase. The pipes will be pressure tested before the plastering of wall commences and as per the manufacturers |      |      |            |              |
|      | <b>Underground PPR Piping</b>   |      |      |            |              |
| p    | PPR 25Ø   | 250  | m    |            |              |
| Q    | Ditto 32Ø   | 250  | m    |            |              |
|      | <b>Water Connection</b>   |      |      |            |              |
| R    | Making necessary connection from the Local municipal line ( water supply ) which is available near the project site, the scope of work include cutting the corporation road and making the same after connection. The contractor responsibility shall include submitting the  | 1    | Lot  |            |              |
| S    | Pipe Sleeves 100mm diameter heavy duty PVC Class 41 pipe sleeves for crossing over pathways and driveways. The sleeves will be encased in 150mm concrete sorround.  | 60   | m    |            |              |
|      | <b>Total Carried to Next Page</b>   |      |      |            |              |
|      |   |      |      |            |              |



|  |  |   |      |  |  |
|--|--|---|------|--|--|
|  | <p><b>From previous page</b></p> <p><b>Accessories for RC Tanks</b></p> <p>Accessories for <b>1800m3 Reinforced Concrete Underground water Tank</b> and which are to be in paddle flanges: 2 No. 100mm diameter outlet pipe for domestic booster pumpset, 2 No. 100mm diameter for vent/overflow pipe, 2 No. 20mm diameter for level indicator on the side of the tank with well calibrated scale, air release and drain valve complete with connection adaptors and flanges. and 2 No. 100mm diameter high pressure calming inlet for fitting for the</p> |   |      |  |  |
| A  |  | 2 | Item |  |  |
|  | <p><b><u>Sterilization</u></b></p> <p>Allow for flushing out and sterilizing the whole system with chlorine to the satisfaction of the Project Engineer.</p>   |   |      |  |  |
| C  |  | 1 | Sum  |  |  |
|  | <p><b><u>Testing and commissioning</u></b></p> <p>Allow for sterilization of the cold water system, pressure testing and commissioning of the Plumbing installation.</p>   |   |      |  |  |
| D  |  | 1 | Sum  |  |  |
| <b>Total carried to Mechanical Works Main Summary Page</b> |  |   |      |  |  |

| ITEM                              | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|--|------|------|---------------|-----------------|
| 1.0                               | <b><u>Internal Plumbing Installations</u></b><br><br>Supply, deliver install, Test and Commission:<br><br><b>PP-R (Polypropylene Random Co-polymer)</b> pipes PN 20 and fittings and fusion joints to (KS ISO 15874 Part 1, 2, 3 & 5) of approved manufacturer. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints etc. as required in the running lengths of pipework. The pipes shall run in floors and wall chase. The pipes will be pressure tested before the plastering of wall commences and as per the manufacturers |      |      |               |                 |
| (i)                               | <u>Club House</u>  |      |      |               |                 |
|                                   | <b>Pipe Works</b>  |      |      |               |                 |
| A                                 | 32mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B                                 | Ditto 25mm Ø   | 20   | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C                                 | 32mm Ø Elbows/ Bends   | 2    | No.  |               |                 |
| D                                 | Ditto 25mm Ø   | 14   | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E                                 | 32 x 32 x 32mm   | 1    | No.  |               |                 |
| F                                 | 25 x 25 x 25mm   | 7    | No.  |               |                 |
|                                   | <b>Reducers</b>  |      |      |               |                 |
| G                                 | 32 x 25mm reducer  | 1    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J                                 | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| K                                 | 25 x 15mm ditto  | 4    | LM   |               |                 |
| L                                 | 25 x 15mm male threaded bend   | 14   | LM   |               |                 |
| <b>Total Carried to Next Page</b> |  |      |      |               |                 |

| ITEM                                       | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 13   | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 50 mm diameter water check meter   | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
| <b>Total Cost of Plumbing Installation</b> |  |      |      |               |                 |

| ITEM                                  | DESCRIPTION                               | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---------------------------------------|---|------|------|---------------|-----------------|
| <b>2</b>                              | <b>Risers and Roof Levels</b>             |      |      |               |                 |
|                                       | <b>Pipe Works</b>                         |      |      |               |                 |
| A                                     | 50 mm Ø PPR pipe                          | 10   | LM   |               |                 |
| B                                     | Ditto 40mm Ø                              | 12   | LM   |               |                 |
| C                                     | Ditto 32mm Ø                              | 13   | LM   |               |                 |
| D                                     | Ditto 25mm Ø                              | 6    | LM   |               |                 |
|                                       | <b>Extra Over Pipe Work</b>               |      |      |               |                 |
|                                       | <b>Elbows/ Bends</b>                      |      |      |               |                 |
| E                                     | 50mm Ø Elbows/ Bends                      | 4    | No.  |               |                 |
| F                                     | Ditto 40mm Ø                              | 3    | No.  |               |                 |
| G                                     | Ditto 32mm Ø                              | 3    | No.  |               |                 |
| H                                     | Ditto 25mm Ø                              | 2    | No.  |               |                 |
|                                       | <b>Equal/Unequal Tees</b>                 |      |      |               |                 |
| I                                     | 50 x 40 x 50mm                            | 4    | No.  |               |                 |
| J                                     | 40 x 40 x 32mm                            | 3    | No.  |               |                 |
| K                                     | 32 x 32 x 32mm                            | 4    | No.  |               |                 |
| L                                     | 32 x 32 x 25mm                            | 4    | No.  |               |                 |
| M                                     | 25 x 25 x 25mm                            | 2    | No.  |               |                 |
|                                       | <b>Reducers</b>                           |      |      |               |                 |
| O                                     | 50 x 40mm reducer                         | 2    | No.  |               |                 |
| P                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| Q                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| R                                     | 32 x 25mm reducer                         | 1    | No.  |               |                 |
|                                       | <b>Male/Female brass threaded adaptor</b> |      |      |               |                 |
| S                                     | 40 x 32mm male/female threaded adaptor    | 2    | No.  |               |                 |
| T                                     | 32 x 25mm male/female threaded adaptor    | 2    | No.  |               |                 |
| <b>Total Carried to the Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| U  | 50 mm Ø Gate Valve as "Pegler" or Equivalent   | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| V  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
| <b>Total Cost of Riser &amp; Roof Level Plumbing</b> |  |      |      |               |                 |

| ITEM                              | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|---|------|------|---------------|-----------------|
| 3                                 | <b>SANITARY FITTINGS AND ACCESSORIES<br/>INSTALL ONLY</b>   |      |      |               |                 |
| A                                 | <b>Water Closet (WC) Pan</b><br>Close Coupled dual flush Floor Standing Close<br>Coupled WC Bowl complete with seat cover, Wc<br>Connector and cistern or approved equivalent   | 4    | No.  |               |                 |
| B                                 | <b>Wash Basin</b><br>WHB basin Full pedestal Wash Basin<br>450x485x230m White Complte with bottle traps,<br>flexible connection hoses and other accessories<br>with cws only tap  | 12   | No.  |               |                 |
| D                                 | <b>Disabled Water Closet (WC) Pan</b><br>Physically challenges set as Armitage Shanks<br>Doc M Contour 21+ close coupled right hand<br>corner pack, WC pan, Wash basin, water saving<br>delay fill cistern with spatula lever, grab rails,<br>hinged support rail with toilet roll holder, seat<br>no cover with retaining buffers, copper tails on<br>TMV3 mixer tap or equal & approved | 1    | No.  |               |                 |
| E                                 | <b>Urinal</b><br>Urinal bowl in white colour of size 450 x 685mm<br>with built in spreader and concealed waste trap<br>complete with stainless steel fixing bolts and<br>caps. Complete with exposed Flash Valve  | 4    | No.  |               |                 |
| <b>Total Carried to Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
| H  | <b>Flushing and Sterilization</b><br>Allow for flushing and sterilization of the entire system to the satisfaction of the Engineer.  | 1    | Item |               |                 |
| K  | <b>Shower</b><br>Shower fitting c/w 15mm diameter chrome plated stop cork, Instant shower fitting and 1/2" Cobra 211- 15 Star Pillar tap as Pegler or equal and equivalent | 4    | No.  |               |                 |
| <b>Total Cost of Sanitary Fittings &amp; Accessories</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b>FIRE PROTECTION</b>   |      |      |               |                 |
|   | <b>Hose Reel and Associated Pipework</b>   |      |      |               |                 |
| A   | Supply and Install automatic 30 meters long, 25mm diameter hosereel and nozzle installed to KS 2003:2006   | 3    | No.  |               |                 |
|   | <b>Associated Pipework</b>   |      |      |               |                 |
|   | GI Class 'B' tubing to KS06-259 with screwed and socketed joints to KS ISO 7-1:1994 including all range piping, fittings, hanagers, supports, brackets, and supports |      |      |               |                 |
| B   | 50mm diameter  | 34   | LM   |               |                 |
| C   | 25mm ditto   | 12   | LM   |               |                 |
|   | <b>Extra Over Piping For Fittings:-</b>  |      |      |               |                 |
|   | <b>Elbows/Various Bends</b>  |      |      |               |                 |
| D   | 50mm bend/elbow  | 7    | No.  |               |                 |
| E   | 25mm ditto   | 20   | No.  |               |                 |
|   | <b>Equal/Unequal tees</b>  |      |      |               |                 |
| F   | 50 x 50 x 50mm tee   | 10   | No.  |               |                 |
| G   | 50 x 50 x 25mm ditto   | 19   | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| H   | 50 x 25mm reducer  | 10   | No.  |               |                 |
|   | <b>Unions</b>  |      |      |               |                 |
| I   | 50mm diameter union  | 2    | No.  |               |                 |
| J   | 25mm ditto   | 20   | No.  |               |                 |
|   | <b>Valves</b>  |      |      |               |                 |
| K   | 25mm diameter quarter Turn hose reel isolation valve to be as PEGLER or approved equivalent.   | 3    | No.  |               |                 |
| <b>Total Cost Carried For hose reel and associated pipework Installations</b> |  |      |      |               |                 |



| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b><u>Portable Fire Protection Equipment + Hose</u></b>  |      |      |               |                 |
|   | <b>Reel Pump</b>   |      |      |               |                 |
|   | <b>Supply, deliver, install, test and commission</b><br>portable fire protection equipment with initial<br>fill complete with all the necessary mounting<br>accessories. |      |      |               |                 |
| A   | 9 litres, water/ carbon dioxide gas extinguisher   | 4    | No.  |               |                 |
| B   | 4.5kg carbon dioxide gas extinguisher  | 4    | No.  |               |                 |
| C   | 4.5 kg dry powder extinguisher   | 4    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| D   | Allow for testing and commissioning of the fire<br>pump installation to the satisfaction of the<br>Engineer.   | 1    | Item |               |                 |
| <b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b> |  |      |      |               |                 |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage</u></b>  |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b><u>Piping</u></b>   |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 60   | LM   |               |                 |
| B    | 40mm ditto   | 60   | LM   |               |                 |
| C    | 50mm ditto   | 120  | LM   |               |                 |
| D    | 75mm ditto   | 80   | LM   |               |                 |
| E    | 100mm ditto  | 80   | LM   |               |                 |
| F    | 100mm diameter heavy duty golden brown pipe  | 24   | LM   |               |                 |
| G    | 150mm diameter heavy duty golden brown pipe  | 30   | LM   |               |                 |
|      | <b><u>Extra over uPVC Pipeworks</u></b>  |      |      |               |                 |
| H    | 32mm sweep bend  | 15   | No.  |               |                 |
| I    | 40mm sweep bend  | 60   | No.  |               |                 |
| J    | 50mm sweep bend  | 15   | No.  |               |                 |
| K    | 75mm sweep bend  | 8    | No.  |               |                 |
| L    | 100mm sweep bend   | 22   | No.  |               |                 |
| M    | 150mm sweep bend   | 16   | No.  |               |                 |
| N    | 40mm 450 bend  | 22   | No.  |               |                 |
| O    | 50mm 450 bend  | 15   | No.  |               |                 |
| P    | 40mm sweep tee   | 25   | No.  |               |                 |
| Q    | 40 x 32mm reducer  | 15   | No.  |               |                 |
| R    | 75 x 40mm ditto  | 15   | No.  |               |                 |
| S    | 150 x 40mm ditto   | 8    | No.  |               |                 |
| T    | 40mm access plug   | 22   | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b>Total From Previous Page</b>  |      |      |            |              |
| Z   | 100 x 50mm floor trap set complete with polycarbonate flush grating  | 17   | No.  |            |              |
|   | <b>Gulley Trap</b><br>Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy  | 3    | No.  |            |              |
|   | <b>Manholes</b><br>Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal. | 4    | No.  |            |              |
|   | <b>Excavations</b><br>Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.  | 30   | LM   |            |              |
| DD  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings.   | 1    | Item |            |              |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |  |      |      |            |              |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|--|--|------|------|------------|--------------|
|  | <b>Rain Water Drainage</b>   |      |      |            |              |
|  | Supply, deliver and install UPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) rainwater pipework. Allow for all flanges, couplings, nipples, connector joints, fixing clips holder bats etc as required in running length of pipework but not measured. |      |      |            |              |
|  | <b>Piping</b>  |      |      |            |              |
| A  | 100mm ditto  | 70   | LM   |            |              |
|  | Extra over piping for fittings:-   |      |      |            |              |
| B  | 100mm ditto  | 6    | No.  |            |              |
| C  | 100mm sweep bend   | 2    | No.  |            |              |
| D  | 100mm single branch  | 4    | No.  |            |              |
| E  | 100mm double branch  | 3    | No.  |            |              |
| F  | 100mm flat roof rain water outlets   | 6    | No.  |            |              |
|  | <b>Testing and Commissioning</b>   |      |      |            |              |
| G  | Allow for testing and commissioning of the rain water drainage installation to the satisfaction of the engineer.   | 1    | Item |            |              |
| <b>Total Cost For Rain Water Drainage Installation</b> |  |      |      |            |              |

| ITEM   | DESCRIPTION   | AMOUNT<br>(KES) |
|--|---|-----------------|
| <b><u>SUMMARY PAGE</u></b>                                 |   |                 |
| 1.0  | <b>Total Cost for Internal Plumbing</b>   |                 |
| 2.0  | <b>Total Cost for Roof + Riser</b>  |                 |
| 3.0  | <b>Total Cost for Sanitary Fittings Install Only</b>                            |                 |
| 4.0  | <b>Total Cost Carried For hose reel and associated pipework Installations</b>   |                 |
| 6.0  | <b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b> |                 |
| 7.0  | <b>Total Cost For Ground Floor Foul Drainage Installation</b>                   |                 |
| 9.0  | <b>Total Cost For Rain Water Drainage Installation</b>                          |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |   |                 |

| ITEM                              | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|--|------|------|---------------|-----------------|
| 1.0                               | <b><u>Internal Plumbing Installations</u></b>  |      |      |               |                 |
|                                   | Supply, deliver install, Test and Commission:  |      |      |               |                 |
|                                   | <b>PP-R (Polypropylene Random Co-polymer)</b> pipes PN 20 and fittings and fusion joints to (KS ISO 15874 Part 1, 2, 3 & 5) of approved manufacturer. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints etc. as required in the running lengths of pipework. The pipes shall run in floors and wall chase. The pipes will be pressure tested before the plastering of wall commences and as per the manufacturers |      |      |               |                 |
|                                   | <b>Pipe Works</b>  |      |      |               |                 |
| A                                 | 32mm Ø PPR Pipe  | 40   | LM   |               |                 |
| B                                 | Ditto 25mm Ø   | 33   | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C                                 | 32mm Ø Elbows/ Bends   | 20   | No.  |               |                 |
| D                                 | Ditto 25mm Ø   | 18   | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E                                 | 32 x 32 x 32mm   | 21   | No.  |               |                 |
| F                                 | 25 x 25 x 25mm   | 14   | No.  |               |                 |
|                                   | <b>Reducers</b>  |      |      |               |                 |
| G                                 | 32 x 25mm reducer  | 1    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J                                 | 25 x 20mm male/female threaded adaptor   | 12   | No.  |               |                 |
| K                                 | 25 x 15mm ditto  | 10   | LM   |               |                 |
| L                                 | 25 x 15mm male threaded bend   | 13   | LM   |               |                 |
| <b>Total Carried to Next Page</b> |  |      |      |               |                 |

| ITEM                                       | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 32mm Ø Gate Valve as "Pegler" or Equivalent  | 2    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 16   | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 50 mm diameter water check meter   | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <b>TOTAL Internal Plumbing</b>   |      |      |               |                 |
| <b>Total Cost of Plumbing Installation</b> |  |      |      |               |                 |

| ITEM                                  | DESCRIPTION                               | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---------------------------------------|---|------|------|---------------|-----------------|
| <b>2</b>                              | <b>Risers and Roof Levels</b>             |      |      |               |                 |
|                                       | <b>Pipe Works</b>                         |      |      |               |                 |
| A                                     | 50 mm Ø PPR pipe                          | 28   | LM   |               |                 |
| B                                     | Ditto 40mm Ø                              | 12   | LM   |               |                 |
| C                                     | Ditto 32mm Ø                              | 13   | LM   |               |                 |
| D                                     | Ditto 25mm Ø                              | 6    | LM   |               |                 |
|                                       | <b>Extra Over Pipe Work</b>               |      |      |               |                 |
|                                       | <b>Elbows/ Bends</b>                      |      |      |               |                 |
| E                                     | 50mm Ø Elbows/ Bends                      | 4    | No.  |               |                 |
| F                                     | Ditto 40mm Ø                              | 3    | No.  |               |                 |
| G                                     | Ditto 32mm Ø                              | 3    | No.  |               |                 |
| H                                     | Ditto 25mm Ø                              | 2    | No.  |               |                 |
|                                       | <b>Equal/Unequal Tees</b>                 |      |      |               |                 |
| I                                     | 50 x 40 x 50mm                            | 4    | No.  |               |                 |
| J                                     | 40 x 40 x 32mm                            | 3    | No.  |               |                 |
| K                                     | 32 x 32 x 32mm                            | 4    | No.  |               |                 |
| L                                     | 32 x 32 x 25mm                            | 4    | No.  |               |                 |
| M                                     | 25 x 25 x 25mm                            | 2    | No.  |               |                 |
|                                       | <b>Reducers</b>                           |      |      |               |                 |
| O                                     | 50 x 40mm reducer                         | 2    | No.  |               |                 |
| P                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| Q                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| R                                     | 32 x 25mm reducer                         | 1    | No.  |               |                 |
|                                       | <b>Male/Female brass threaded adaptor</b> |      |      |               |                 |
| S                                     | 40 x 32mm male/female threaded adaptor    | 2    | No.  |               |                 |
| T                                     | 32 x 25mm male/female threaded adaptor    | 2    | No.  |               |                 |
| <b>Total Carried to the Next Page</b> |   |      |      |               |                 |



| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
| U  | <b>Isolating valves</b><br>50 mm Ø Gate Valve as "Pegler" or Equivalent  | 2    | No.  |               |                 |
| V  | <b>Testing and Commissioning</b><br>Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
| <b>Total Cost of Riser &amp; Roof Level Plumbing</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|--|--|------|------|------------|--------------|
| 3  | <b>SANITARY FITTINGS AND ACCESSORIES<br/>INSTALL ONLY</b>  |      |      |            |              |
|  | <b>Water Closet (WC) Pan</b>   |      |      |            |              |
| A  | Close Coupled dual flush Floor Standing Close Coupled WC Bowl complete with seat cover, Wc Connector and cistern or approved equivalent  | 6    | No.  |            |              |
|  | <b>Wash Basin</b>  |      |      |            |              |
| B  | WHB basin Full pedestal Wash Basin 450x485x230m White Complete with bottle traps, flexible connection hoses and other accessories with cws only tap  | 8    | No.  |            |              |
|  | <b>Disabled Water Closet (WC) Pan</b>  |      |      |            |              |
| C  | Physically challenges set as Armitage Shanks Doc M Contour 21+ close coupled right hand corner pack, WC pan, Wash basin, water saving delay fill cistern with spatula lever, grab rails, hinged support rail with toilet roll holder, seat no cover with retaining buffers, copper tails on TMV3 mixer tap or equal & approved | 1    | No.  |            |              |
|  | <b>Urinal</b>  |      |      |            |              |
| D  | Urinal bowl in white colour of size 450 x 685mm with built in spreader and concealed waste trap complete with stainless steel fixing bolts and caps. Complete with exposed Flash Valve   | 4    | No.  |            |              |
|  | <b>Flushing and Sterilization</b>  |      |      |            |              |
| E  | Allow for flushing and sterilization of the entire system to the satisfaction of the Engineer.   | 1    | Item |            |              |
| <b>Total Cost of Sanitary Fittings &amp; Accessories</b> |  |      |      |            |              |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b>FIRE PROTECTION</b>   |      |      |               |                 |
|   | <b>Hose Reel and Associated Pipework</b>   |      |      |               |                 |
| A   | Supply and Install automatic 30 meters long, 25mm diameter hosereel and nozzle installed to KS 2003:2006   | 2    | No.  |               |                 |
|   | <b>Associated Pipework</b>   |      |      |               |                 |
|   | GI Class 'B' tubing to KS06-259 with screwed and socketed joints to KS ISO 7-1:1994 including all range piping, fittings, hanagers, supports, brackets, and supports |      |      |               |                 |
| B   | 50mm diameter  | 25   | LM   |               |                 |
| C   | 25mm ditto   | 4    | LM   |               |                 |
|   | <b>Extra Over Piping For Fittings:-<br/>Elbows/Various Bends</b>   |      |      |               |                 |
| D   | 50mm bend/elbow  | 6    | No.  |               |                 |
| E   | 25mm ditto   | 5    | No.  |               |                 |
|   | <b>Equal/Unequal tees</b>  |      |      |               |                 |
| F   | 50 x 50 x 50mm tee   | 3    | No.  |               |                 |
| G   | 50 x 50 x 25mm ditto   | 3    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| H   | 50 x 25mm reducer  | 3    | No.  |               |                 |
|   | <b>Unions</b>  |      |      |               |                 |
| I   | 50mm diameter union  | 2    | No.  |               |                 |
| J   | 25mm ditto   | 8    | No.  |               |                 |
|   | <b>Valves</b>  |      |      |               |                 |
| K   | 25mm diameter quarter Turn hose reel isolation valve to be as PEGLER or approved equivalent.   | 2    | No.  |               |                 |
| <b>Total Cost Carried For hose reel and associated pipework Installations</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|---|------|------|---------------|-----------------|
|   | <b><u>Portable Fire Protection Equipment + Hose Reel Pump</u></b><br><b>Supply, deliver, install, test and commission</b><br>portable fire protection equipment with initial fill complete with all the necessary mounting accessories. |      |      |               |                 |
| A   | 9 litres, water/carbon dioxide gas extinguisher   | 4    | No.  |               |                 |
| B   | 4.5kg carbon dioxide gas extinguisher   | 4    | No.  |               |                 |
| C   | 4.5 kg dry powder extinguisher  | 4    | No.  |               |                 |
|   | <b>Testing and Commissioning</b><br>Allow for testing and commissioning of the fire pump installation to the satisfaction of the Engineer.  |      |      |               |                 |
| D   |   | 1    | Item |               |                 |
| <b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b> |   |      |      |               |                 |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage</u></b>  |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b><u>Piping</u></b>   |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 32   | LM   |               |                 |
| B    | 40mm ditto   | 50   | LM   |               |                 |
| C    | 50mm ditto   | 56   | LM   |               |                 |
| D    | 75mm ditto   | 12   | LM   |               |                 |
| E    | 100mm ditto  | 32   | LM   |               |                 |
| F    | 100mm diameter heavy duty golden brown pipe  | 80   | LM   |               |                 |
| G    | 150mm diameter heavy duty golden brown pipe  | 44   | LM   |               |                 |
|      | <b><u>Extra over uPVC Pipeworks</u></b>  |      |      |               |                 |
| H    | 32mm sweep bend  | 15   | No.  |               |                 |
| I    | 40mm sweep bend  | 60   | No.  |               |                 |
| J    | 50mm sweep bend  | 15   | No.  |               |                 |
| K    | 75mm sweep bend  | 8    | No.  |               |                 |
| L    | 100mm sweep bend   | 22   | No.  |               |                 |
| M    | 150mm sweep bend   | 16   | No.  |               |                 |
| N    | 40mm 450 bend  | 22   | No.  |               |                 |
| O    | 50mm 450 bend  | 15   | No.  |               |                 |
| P    | 40mm sweep tee   | 25   | No.  |               |                 |
| Q    | 40 x 32mm reducer  | 15   | No.  |               |                 |
| R    | 75 x 40mm ditto  | 15   | No.  |               |                 |
| S    | 150 x 40mm ditto   | 8    | No.  |               |                 |
| T    | 40mm access plug   | 22   | No.  |               |                 |
| U    | 100mm bend WC connector  | 13   | No.  |               |                 |
| V    | 40mm bottle 'p' trap   | 15   | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b>Total From Previous Page</b>  |      |      |            |              |
| Z   | 100 x 50mm floor trap set complete with polycarbonate flush grating  | 17   | No.  |            |              |
|   | <b>Gulley Trap</b><br>Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy  | 4    | No.  |            |              |
|   | <b>Manholes</b><br>Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal. | 10   | No.  |            |              |
|   | <b>Excavations</b><br>Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.  | 120  | LM   |            |              |
| DD  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings.   | 1    | Item |            |              |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |  |      |      |            |              |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b>Rain Water Drainage</b>   |      |      |               |                 |
|      | Supply, deliver and install UPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) rainwater pipework. Allow for all flanges, couplings, nipples, connector joints, fixing clips holder bats etc as required in running length of pipework but not measured. |      |      |               |                 |
|      | <b>Piping</b>  |      |      |               |                 |
| A    | 100mm ditto  | 100  | LM   |               |                 |
|      | Extra over piping for fittings:-   |      |      |               |                 |
| B    | 100mm ditto  | 16   | No.  |               |                 |
| C    | 100mm sweep bend   | 2    | No.  |               |                 |
| D    | 100mm single branch  | 13   | No.  |               |                 |
| E    | 100mm double branch  | 7    | No.  |               |                 |
| F    | 100mm flat roof rain water outlets   | 10   | No.  |               |                 |
|      | <b>Testing and Commissioning</b>   |      |      |               |                 |
| G    | Allow for testing and commissioning of the rain water drainage installation to the satisfaction of the engineer.   | 1    | Item |               |                 |
|      | <b>Total Cost For Rain Water Drainage Installation</b>   |      |      |               |                 |

| ITEM   | DESCRIPTION  | AMOUNT<br>(KES) |
|--|--|-----------------|
| <u>SUMMARY PAGE</u>  |  |                 |
| 1.0  | Total Cost for Internal Plumbing   |                 |
| 2.0  | Total Cost for Roof + Riser  |                 |
| 3.0  | Total Cost for Sanitary Fittings Install Only                            |                 |
| 4.0  | Total Cost Carried For hose reel and associated pipework Installations   |                 |
| 5.0  | Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation |                 |
| 6.0  | Total Cost For Ground Floor Foul Drainage Installation                   |                 |
| 7.0  | Total Cost For Rain Water Drainage Installation                          |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |  |                 |



| ITEM                              | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|--|------|------|---------------|-----------------|
| 1.0                               | <b><u>Internal Plumbing Installations</u></b>  |      |      |               |                 |
|                                   | Supply, deliver install, Test and Commission:  |      |      |               |                 |
|                                   | <b>PP-R (Polypropylene Random Co-polymer)</b><br>pipes PN 20 and fittings and fusion joints to (KS<br>ISO 15874 Part 1, 2, 3 & 5) of approved<br>manufacturer. Rates must allow for all<br>Metal/plastic threaded adaptors where required<br>for the connection of sanitary fixtures, valves,<br>sockets, sliding and fixed joints etc. as required<br>in the running lengths of pipework. The pipes<br>shall run in floors and wall chase. The pipes will<br>be pressure tested before the plastering of wall<br>commences and as per the manufacturers |      |      |               |                 |
|                                   | <b>Pipe Works</b>  |      |      |               |                 |
| A                                 | 32mm Ø PPR Pipe  | 60   | LM   |               |                 |
| B                                 | Ditto 25mm Ø   | 50   | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C                                 | 32mm Ø Elbows/ Bends   | 20   | No.  |               |                 |
| D                                 | Ditto 25mm Ø   | 18   | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E                                 | 32 x 32 x 32mm   | 21   | No.  |               |                 |
| F                                 | 25 x 25 x 25mm   | 14   | No.  |               |                 |
|                                   | <b>Reducers</b>  |      |      |               |                 |
| G                                 | 32 x 25mm reducer  | 1    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J                                 | 25 x 20mm male/female threaded adaptor   | 12   | No.  |               |                 |
| K                                 | 25 x 15mm ditto  | 10   | LM   |               |                 |
| L                                 | 25 x 15mm male threaded bend   | 13   | LM   |               |                 |
| <b>Total Carried to Next Page</b> |  |      |      |               |                 |

| ITEM                                       | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 32mm Ø Gate Valve as "Pegler" or Equivalent  | 2    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 16   | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 50 mm diameter water check meter   | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <b>TOTAL Internal Plumbing</b>   |      |      |               |                 |
| <b>Total Cost of Plumbing Installation</b> |  |      |      |               |                 |

| ITEM                                  | DESCRIPTION                               | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---------------------------------------|---|------|------|---------------|-----------------|
| <b>2</b>                              | <b>Risers and Roof Levels</b>             |      |      |               |                 |
|                                       | <b>Pipe Works</b>                         |      |      |               |                 |
| A                                     | 50 mm Ø PPR pipe                          | 28   | LM   |               |                 |
| B                                     | Ditto 40mm Ø                              | 12   | LM   |               |                 |
| C                                     | Ditto 32mm Ø                              | 13   | LM   |               |                 |
| D                                     | Ditto 25mm Ø                              | 6    | LM   |               |                 |
|                                       | <b>Extra Over Pipe Work</b>               |      |      |               |                 |
|                                       | <b>Elbows/ Bends</b>                      |      |      |               |                 |
| E                                     | 50mm Ø Elbows/ Bends                      | 4    | No.  |               |                 |
| F                                     | Ditto 40mm Ø                              | 3    | No.  |               |                 |
| G                                     | Ditto 32mm Ø                              | 3    | No.  |               |                 |
| H                                     | Ditto 25mm Ø                              | 2    | No.  |               |                 |
|                                       | <b>Equal/Unequal Tees</b>                 |      |      |               |                 |
| I                                     | 50 x 40 x 50mm                            | 4    | No.  |               |                 |
| J                                     | 40 x 40 x 32mm                            | 3    | No.  |               |                 |
| K                                     | 32 x 32 x 32mm                            | 4    | No.  |               |                 |
| L                                     | 32 x 32 x 25mm                            | 4    | No.  |               |                 |
| M                                     | 25 x 25 x 25mm                            | 2    | No.  |               |                 |
|                                       | <b>Reducers</b>                           |      |      |               |                 |
| O                                     | 50 x 40mm reducer                         | 2    | No.  |               |                 |
| P                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| Q                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| R                                     | 32 x 25mm reducer                         | 1    | No.  |               |                 |
|                                       | <b>Male/Female brass threaded adaptor</b> |      |      |               |                 |
| S                                     | 40 x 32mm male/female threaded adaptor    | 2    | No.  |               |                 |
| T                                     | 32 x 25mm male/female threaded adaptor    | 2    | No.  |               |                 |
| <b>Total Carried to the Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
| U  | <b>Isolating valves</b><br>50 mm Ø Gate Valve as "Pegler" or Equivalent  | 2    | No.  |               |                 |
| V  | <b>Testing and Commissioning</b><br>Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
| <b>Total Cost of Riser &amp; Roof Level Plumbing</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|--|--|------|------|------------|--------------|
| 3  | <b>SANITARY FITTINGS AND ACCESSORIES<br/>INSTALL ONLY</b>  |      |      |            |              |
|  | <b>Water Closet (WC) Pan</b>   |      |      |            |              |
| A  | Close Coupled dual flush Floor Standing Close Coupled WC Bowl complete with seat cover, Wc Connector and cistern or approved equivalent  | 10   | No.  |            |              |
|  | <b>Wash Basin</b>  |      |      |            |              |
| B  | WHB basin Full pedestal Wash Basin 450x485x230m White Complete with bottle traps, flexible connection hoses and other accessories with cws only tap  | 10   | No.  |            |              |
|  | <b>Disabled Water Closet (WC) Pan</b>  |      |      |            |              |
| C  | Physically challenges set as Armitage Shanks Doc M Contour 21+ close coupled right hand corner pack, WC pan, Wash basin, water saving delay fill cistern with spatula lever, grab rails, hinged support rail with toilet roll holder, seat no cover with retaining buffers, copper tails on TMV3 mixer tap or equal & approved | 1    | No.  |            |              |
|  | <b>Urinal</b>  |      |      |            |              |
| D  | Urinal bowl in white colour of size 450 x 685mm with built in spreader and concealed waste trap complete with stainless steel fixing bolts and caps. Complete with exposed Flash Valve   | 4    | No.  |            |              |
|  | <b>Flushing and Sterilization</b>  |      |      |            |              |
| E  | Allow for flushing and sterilization of the entire system to the satisfaction of the Engineer.   | 1    | Item |            |              |
|  | <b>kitchen sink</b>  |      |      |            |              |
| F  | Stainless steel kitchen sink single drain, single bowl complete overflow and 40mm diameter plastic tubular p-trap PVC Bottle Trap and waste 1.5in x 40, Long Neck Wall type Bib Tap  | 3    | No.  |            |              |
| <b>Total Cost of Sanitary Fittings &amp; Accessories</b> |  |      |      |            |              |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b>FIRE PROTECTION</b>   |      |      |               |                 |
|   | <b>Hose Reel and Associated Pipework</b>   |      |      |               |                 |
| A   | Supply and Install automatic 30 meters long, 25mm diameter hosereel and nozzle installed to KS 2003:2006   | 2    | No.  |               |                 |
|   | <b>Associated Pipework</b>   |      |      |               |                 |
|   | GI Class 'B' tubing to KS06-259 with screwed and socketed joints to KS ISO 7-1:1994 including all range piping, fittings, hanagers, supports, brackets, and supports |      |      |               |                 |
| B   | 50mm diameter  | 25   | LM   |               |                 |
| C   | 25mm ditto   | 4    | LM   |               |                 |
|   | <b>Extra Over Piping For Fittings:-</b>  |      |      |               |                 |
|   | <b>Elbows/Various Bends</b>  |      |      |               |                 |
| D   | 50mm bend/elbow  | 6    | No.  |               |                 |
| E   | 25mm ditto   | 5    | No.  |               |                 |
|   | <b>Equal/Unequal tees</b>  |      |      |               |                 |
| F   | 50 x 50 x 50mm tee   | 3    | No.  |               |                 |
| G   | 50 x 50 x 25mm ditto   | 3    | No.  |               |                 |
|   | <b>Reducers</b>  |      |      |               |                 |
| H   | 50 x 25mm reducer  | 3    | No.  |               |                 |
|   | <b>Unions</b>  |      |      |               |                 |
| I   | 50mm diameter union  | 2    | No.  |               |                 |
| J   | 25mm ditto   | 8    | No.  |               |                 |
|   | <b>Valves</b>  |      |      |               |                 |
| K   | 25mm diameter quarter Turn hose reel isolation valve to be as PEGLER or approved equivalent.   | 2    | No.  |               |                 |
| <b>Total Cost Carried For hose reel and associated pipework Installations</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b><u>Portable Fire Protection Equipment + Hose</u></b>  |      |      |               |                 |
|   | <b>Reel Pump</b>   |      |      |               |                 |
|   | <b>Supply, deliver, install, test and commission</b><br>portable fire protection equipment with initial<br>fill complete with all the necessary mounting<br>accessories. |      |      |               |                 |
| A   | 9 litres, water/ carbon dioxide gas extinguisher   | 4    | No.  |               |                 |
| B   | 4.5kg carbon dioxide gas extinguisher  | 4    | No.  |               |                 |
| C   | 4.5 kg dry powder extinguisher   | 4    | No.  |               |                 |
|   | <b>Testing and Commissioning</b>   |      |      |               |                 |
| D   | Allow for testing and commissioning of the fire<br>pump installation to the satisfaction of the<br>Engineer.   | 1    | Item |               |                 |
| <b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b> |  |      |      |               |                 |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage</u></b>  |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b><u>Piping</u></b>   |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 32   | LM   |               |                 |
| B    | 40mm ditto   | 100  | LM   |               |                 |
| C    | 50mm ditto   | 120  | LM   |               |                 |
| D    | 75mm ditto   | 12   | LM   |               |                 |
| E    | 100mm ditto  | 32   | LM   |               |                 |
| F    | 100mm diameter heavy duty golden brown pipe  | 150  | LM   |               |                 |
| G    | 150mm diameter heavy duty golden brown pipe  | 44   | LM   |               |                 |
|      | <b><u>Extra over uPVC Pipeworks</u></b>  |      |      |               |                 |
| H    | 32mm sweep bend  | 15   | No.  |               |                 |
| I    | 40mm sweep bend  | 60   | No.  |               |                 |
| J    | 50mm sweep bend  | 15   | No.  |               |                 |
| K    | 75mm sweep bend  | 8    | No.  |               |                 |
| L    | 100mm sweep bend   | 22   | No.  |               |                 |
| M    | 150mm sweep bend   | 16   | No.  |               |                 |
| N    | 40mm 450 bend  | 22   | No.  |               |                 |
| O    | 50mm 450 bend  | 15   | No.  |               |                 |
| P    | 40mm sweep tee   | 25   | No.  |               |                 |
| Q    | 40 x 32mm reducer  | 15   | No.  |               |                 |
| R    | 75 x 40mm ditto  | 15   | No.  |               |                 |
| S    | 150 x 40mm ditto   | 8    | No.  |               |                 |
| T    | 40mm access plug   | 22   | No.  |               |                 |
| U    | 100mm bend WC connector  | 13   | No.  |               |                 |
| V    | 40mm bottle 'p' trap   | 15   | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |



| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b>Total From Previous Page</b>  |      |      |            |              |
| Z   | 100 x 50mm floor trap set complete with polycarbonate flush grating  | 17   | No.  |            |              |
| AA  | <b>Gulley Trap</b><br>Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy  | 4    | No.  |            |              |
| BB  | <b>Manholes</b><br>Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal. | 14   | No.  |            |              |
| CC  | <b>Excavations</b><br>Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.  | 120  | LM   |            |              |
| DD  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings.   | 1    | Item |            |              |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |  |      |      |            |              |

| ITEM     | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|----------|--|------|------|---------------|-----------------|
|          | <b>Rain Water Drainage</b>   |      |      |               |                 |
|          | Supply, deliver and install UPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) rainwater pipework. Allow for all flanges, couplings, nipples, connector joints, fixing clips holder bats etc as required in running length of pipework but not measured. |      |      |               |                 |
| <b>A</b> | <b>Piping</b><br>100mm ditto   | 150  | LM   |               |                 |
|          | Extra over piping for fittings:-   |      |      |               |                 |
| <b>B</b> | 100mm ditto  | 20   | No.  |               |                 |
| <b>C</b> | 100mm sweep bend   | 20   | No.  |               |                 |
| <b>D</b> | 100mm single branch  | 18   | No.  |               |                 |
| <b>E</b> | 100mm double branch  | 12   | No.  |               |                 |
| <b>F</b> | 100mm flat roof rain water outlets   | 10   | No.  |               |                 |
|          | <b>Testing and Commissioning</b>   |      |      |               |                 |
| <b>G</b> | Allow for testing and commissioning of the rain water drainage installation to the satisfaction of the engineer.   | 1    | Item |               |                 |
|          | <b>Total Cost For Rain Water Drainage Installation</b>   |      |      |               |                 |

| ITEM   | DESCRIPTION  | AMOUNT<br>(KES) |
|--|--|-----------------|
| <u>SUMMARY PAGE</u>  |  |                 |
| 1.0  | Total Cost for Internal Plumbing   |                 |
| 2.0  | Total Cost for Roof + Riser  |                 |
| 3.0  | Total Cost for Sanitary Fittings Install Only                            |                 |
| 4.0  | Total Cost Carried For hose reel and associated pipework Installations   |                 |
| 5.0  | Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation |                 |
| 6.0  | Total Cost For Ground Floor Foul Drainage Installation                   |                 |
| 7.0  | Total Cost For Rain Water Drainage Installation                          |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |  |                 |

| ITEM                              | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|---|------|------|---------------|-----------------|
| 1.0                               | <b><u>Internal Plumbing Installations</u></b>   |      |      |               |                 |
|                                   | Supply, deliver install, Test and Commission:   |      |      |               |                 |
|                                   | <b>PP-R (Polypropylene Random Co-polymer)</b> pipes PN 20 and fittings and fusion joints to (KS ISO 15874 Part 1, 2, 3 & 5) of approved manufacturer. Rates must allow for all Metal/ plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints etc. as required in the running lengths of pipework. The pipes shall run in floors and wall chase. The pipes will be pressure tested before the plastering of wall commences and as per the manufacturers |      |      |               |                 |
|                                   | <b>Pipe Works</b>   |      |      |               |                 |
| A                                 | 32mm Ø PPR Pipe   | 40   | LM   |               |                 |
| B                                 | Ditto 25mm Ø  | 33   | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>   |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>  |      |      |               |                 |
| C                                 | 32mm Ø Elbows/ Bends  | 20   | No.  |               |                 |
| D                                 | Ditto 25mm Ø  | 18   | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>   |      |      |               |                 |
| E                                 | 32 x 32 x 32mm  | 21   | No.  |               |                 |
| F                                 | 25 x 25 x 25mm  | 14   | No.  |               |                 |
|                                   | <b>Reducers</b>   |      |      |               |                 |
| G                                 | 32 x 25mm reducer   | 1    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>   |      |      |               |                 |
| J                                 | 25 x 20mm male/female threaded adaptor  | 12   | No.  |               |                 |
| K                                 | 25 x 15mm ditto   | 10   | LM   |               |                 |
| L                                 | 25 x 15mm male threaded bend  | 13   | LM   |               |                 |
| <b>Total Carried to Next Page</b> |   |      |      |               |                 |

| ITEM                                       | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 32mm Ø Gate Valve as "Pegler" or Equivalent  | 2    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 16   | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 50 mm diameter water check meter   | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <b>TOTAL Internal Plumbing</b>   |      |      |               |                 |
| <b>Total Cost of Plumbing Installation</b> |  |      |      |               |                 |

| ITEM                                  | DESCRIPTION                               | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---------------------------------------|---|------|------|---------------|-----------------|
| <b>2</b>                              | <b>Risers and Roof Levels</b>             |      |      |               |                 |
|                                       | <b>Pipe Works</b>                         |      |      |               |                 |
| A                                     | 50 mm Ø PPR pipe                          | 28   | LM   |               |                 |
| B                                     | Ditto 40mm Ø                              | 12   | LM   |               |                 |
| C                                     | Ditto 32mm Ø                              | 13   | LM   |               |                 |
| D                                     | Ditto 25mm Ø                              | 6    | LM   |               |                 |
|                                       | <b>Extra Over Pipe Work</b>               |      |      |               |                 |
|                                       | <b>Elbows/ Bends</b>                      |      |      |               |                 |
| E                                     | 50mm Ø Elbows/ Bends                      | 4    | No.  |               |                 |
| F                                     | Ditto 40mm Ø                              | 3    | No.  |               |                 |
| G                                     | Ditto 32mm Ø                              | 3    | No.  |               |                 |
| H                                     | Ditto 25mm Ø                              | 2    | No.  |               |                 |
|                                       | <b>Equal/Unequal Tees</b>                 |      |      |               |                 |
| I                                     | 50 x 40 x 50mm                            | 4    | No.  |               |                 |
| J                                     | 40 x 40 x 32mm                            | 3    | No.  |               |                 |
| K                                     | 32 x 32 x 32mm                            | 4    | No.  |               |                 |
| L                                     | 32 x 32 x 25mm                            | 4    | No.  |               |                 |
| M                                     | 25 x 25 x 25mm                            | 2    | No.  |               |                 |
|                                       | <b>Reducers</b>                           |      |      |               |                 |
| O                                     | 50 x 40mm reducer                         | 2    | No.  |               |                 |
| P                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| Q                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| R                                     | 32 x 25mm reducer                         | 1    | No.  |               |                 |
|                                       | <b>Male/Female brass threaded adaptor</b> |      |      |               |                 |
| S                                     | 40 x 32mm male/female threaded adaptor    | 2    | No.  |               |                 |
| T                                     | 32 x 25mm male/female threaded adaptor    | 2    | No.  |               |                 |
| <b>Total Carried to the Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
| U  | <b>Isolating valves</b><br>50 mm Ø Gate Valve as "Pegler" or Equivalent  | 2    | No.  |               |                 |
| V  | <b>Testing and Commissioning</b><br>Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
| <b>Total Cost of Riser &amp; Roof Level Plumbing</b> |  |      |      |               |                 |

| ITEM                              | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|---|------|------|---------------|-----------------|
| 3                                 | <b>SANITARY FITTINGS AND ACCESSORIES<br/>INSTALL ONLY</b>   |      |      |               |                 |
| A                                 | <b>Water Closet (WC) Pan</b><br>Close Coupled dual flush Floor Standing Close<br>Coupled WC Bowl complete with seat cover, Wc<br>Connector and cistern or approved equivalent   | 8    | No.  |               |                 |
| B                                 | <b>Wash Basin</b><br>WHB basin Full pedestal Wash Basin<br>450x485x230m White Complete with bottle<br>traps, flexible connection hoses and other<br>accessories with cws only tap   | 6    | No.  |               |                 |
| C                                 | <b>Disabled Water Closet (WC) Pan</b><br>Physically challenges set as Armitage Shanks<br>Doc M Contour 21+ close coupled right hand<br>corner pack, WC pan, Wash basin, water saving<br>delay fill cistern with spatula lever, grab rails,<br>hinged support rail with toilet roll holder, seat<br>no cover with retaining buffers, copper tails on<br>TMV3 mixer tap or equal & approved | 2    | No.  |               |                 |
| D                                 | <b>Urinal</b><br>Urinal bowl in white colour of size 450 x 685mm<br>with built in spreader and concealed waste trap<br>complete with stainless steel fixing bolts and<br>caps. Complete with exposed Flash Valve  | 3    | No.  |               |                 |
| <b>Total Carried to Next Page</b> |   |      |      |               |                 |



| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
| E  | <p><b>Total from Previous Page</b></p> <p><b>Flushing and Sterilization</b><br/>Allow for flushing and sterilization of the entire system to the satisfaction of the Engineer.</p> | 1    | Item |               |                 |
| <b>Total Cost of Sanitary Fittings &amp; Accessories</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b>FIRE PROTECTION</b>   |      |      |            |              |
|   | <b>Hose Reel and Associated Pipework</b>   |      |      |            |              |
| A   | Supply and Install automatic 30 meters long, 25mm diameter hosereel and nozzle installed to KS 2003:2006   | 2    | No.  |            |              |
|   | <b>Associated Pipework</b>   |      |      |            |              |
|   | GI Class 'B' tubing to KS06-259 with screwed and socketed joints to KS ISO 7-1:1994 including all range piping, fittings, hanagers, supports, brackets, and supports |      |      |            |              |
| B   | 50mm diameter  | 25   | LM   |            |              |
| C   | 25mm ditto   | 4    | LM   |            |              |
|   | <b>Extra Over Piping For Fittings:-</b>  |      |      |            |              |
|   | <b>Elbows/Various Bends</b>  |      |      |            |              |
| D   | 50mm bend/elbow  | 6    | No.  |            |              |
| E   | 25mm ditto   | 5    | No.  |            |              |
|   | <b>Equal/Unequal tees</b>  |      |      |            |              |
| F   | 50 x 50 x 50mm tee   | 3    | No.  |            |              |
| G   | 50 x 50 x 25mm ditto   | 3    | No.  |            |              |
|   | <b>Reducers</b>  |      |      |            |              |
| H   | 50 x 25mm reducer  | 3    | No.  |            |              |
|   | <b>Unions</b>  |      |      |            |              |
| I   | 50mm diameter union  | 2    | No.  |            |              |
| J   | 25mm ditto   | 8    | No.  |            |              |
|   | <b>Valves</b>  |      |      |            |              |
| K   | 25mm diameter quarter Turn hose reel isolation valve to be as PEGLER or approved equivalent.   | 2    | No.  |            |              |
| <b>Total Cost Carried For hose reel and associated pipework Installations</b> |  |      |      |            |              |

| ITEM  | DESCRIPTION   | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|---|------|------|------------|--------------|
|   | <b><u>Portable Fire Protection Equipment + Hose Reel Pump</u></b>   |      |      |            |              |
|   | <b>Supply, deliver, install, test and commission</b> portable fire protection equipment with initial fill complete with all the necessary mounting accessories. |      |      |            |              |
| A   | 9 litres, water/ carbon dioxide gas extinguisher  | 4    | No.  |            |              |
| B   | 4.5kg carbon dioxide gas extinguisher   | 4    | No.  |            |              |
| C   | 4.5 kg dry powder extinguisher  | 4    | No.  |            |              |
|   | <b>Hose Reel Pump</b>   |      |      |            |              |
| D   | Supply, Install hose reel water supply boosting set. Flow 8 m <sup>3</sup> /h at a head of 20 m , Duty + Standby  | 1    | Set  |            |              |
|   | <b>Testing and Commissioning</b>  |      |      |            |              |
| E   | Allow for testing and commissioning of the fire pump installation to the satisfaction of the Engineer.  | 1    | Item |            |              |
| <b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b> |   |      |      |            |              |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|------|--|------|------|------------|--------------|
|      | <b><u>Foul Drainage</u></b>  |      |      |            |              |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |            |              |
|      | <b><u>Piping</u></b>   |      |      |            |              |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 32   | LM   |            |              |
| B    | 40mm ditto   | 50   | LM   |            |              |
| C    | 50mm ditto   | 56   | LM   |            |              |
| D    | 75mm ditto   | 12   | LM   |            |              |
| E    | 100mm ditto  | 32   | LM   |            |              |
| F    | 100mm diameter heavy duty golden brown pipe  | 80   | LM   |            |              |
| G    | 150mm diameter heavy duty golden brown pipe  | 44   | LM   |            |              |
|      | <b><u>Extra over uPVC Pipeworks</u></b>  |      |      |            |              |
| H    | 32mm sweep bend  | 15   | No.  |            |              |
| I    | 40mm sweep bend  | 60   | No.  |            |              |
| J    | 50mm sweep bend  | 15   | No.  |            |              |
| K    | 75mm sweep bend  | 8    | No.  |            |              |
| L    | 100mm sweep bend   | 22   | No.  |            |              |
| M    | 150mm sweep bend   | 16   | No.  |            |              |
| N    | 40mm 450 bend  | 22   | No.  |            |              |
| O    | 50mm 450 bend  | 15   | No.  |            |              |
| P    | 40mm sweep tee   | 25   | No.  |            |              |
| Q    | 40 x 32mm reducer  | 15   | No.  |            |              |
| R    | 75 x 40mm ditto  | 15   | No.  |            |              |
| S    | 150 x 40mm ditto   | 8    | No.  |            |              |
| T    | 40mm access plug   | 22   | No.  |            |              |
| U    | 100mm bend WC connector  | 13   | No.  |            |              |
| V    | 40mm bottle 'p' trap   | 15   | No.  |            |              |
|      | <b>Total Carried to Next Page</b>  |      |      |            |              |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b>Total From Previous Page</b>  |      |      |            |              |
| Z   | 100 x 50mm floor trap set complete with polycarbonate flush grating  | 17   | No.  |            |              |
| AA  | <b>Gulley Trap</b><br>Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy  | 4    | No.  |            |              |
| BB  | <b>Manholes</b><br>Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal. | 10   | No.  |            |              |
| CC  | <b>Excavations</b><br>Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.  | 120  | LM   |            |              |
| DD  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings.   | 1    | Item |            |              |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |  |      |      |            |              |

| ITEM   | DESCRIPTION   | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|--|---|------|------|------------|--------------|
|  | <p><b>Rain Water Drainage</b></p> <p>Supply, deliver and install UPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 &amp; 5) rainwater pipework. Allow for all flanges, couplings, nipples, connector joints, fixing clips holder bats etc as required in running length of pipework but not measured.</p> |      |      |            |              |
| <b>A</b>   | <p><b>Piping</b></p> <p>100mm ditto</p>   | 200  | LM   |            |              |
|  | Extra over piping for fittings:-  |      |      |            |              |
| <b>B</b>   | 100mm ditto   | 16   | No.  |            |              |
| <b>C</b>   | 100mm sweep bend  | 2    | No.  |            |              |
| <b>D</b>   | 100mm single branch   | 13   | No.  |            |              |
| <b>E</b>   | 100mm double branch   | 7    | No.  |            |              |
| <b>F</b>   | 100mm flat roof rain water outlets  | 10   | No.  |            |              |
|  | <p><b>Testing and Commissioning</b></p> <p>Allow for testing and commissioning of the rain water drainage installation to the satisfaction of the engineer.</p>   |      |      |            |              |
| <b>G</b>   |   | 1    | Item |            |              |
| <b>Total Cost For Rain Water Drainage Installation</b> |   |      |      |            |              |

| ITEM   | DESCRIPTION   | AMOUNT<br>(KES) |
|--|---|-----------------|
| <b><u>SUMMARY PAGE</u></b>                                 |   |                 |
| 1.0  | <b>Total Cost for Internal Plumbing</b>   |                 |
| 2.0  | <b>Total Cost for Roof + Riser</b>  |                 |
| 3.0  | <b>Total Cost for Sanitary Fittings Install Only</b>                            |                 |
| 4.0  | <b>Total Cost Carried For hose reel and associated pipework Installations</b>   |                 |
| 5.0  | <b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b> |                 |
| 6.0  | <b>Total Cost For Ground Floor Foul Drainage Installation</b>                   |                 |
| 7.0  | <b>Total Cost For Rain Water Drainage Installation</b>                          |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |   |                 |

| ITEM                              | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|--|------|------|---------------|-----------------|
| 1.0                               | <b>Internal Plumbing Installations</b>   |      |      |               |                 |
|                                   | Supply, deliver install, Test and Commission:  |      |      |               |                 |
|                                   | <b>PP-R (Polypropylene Random Co-polymer)</b><br>pipes PN 20 and fittings and fusion joints to (KS<br>ISO 15874 Part 1, 2, 3 & 5) of approved<br>manufacturer. Rates must allow for all<br>Metal/plastic threaded adaptors where required<br>for the connection of sanitary fixtures, valves,<br>sockets, sliding and fixed joints etc. as required<br>in the running lengths of pipework. The pipes<br>shall run in floors and wall chase. The pipes will<br>be pressure tested before the plastering of wall<br>commences and as per the manufacturers |      |      |               |                 |
|                                   | <b>Pipe Works</b>  |      |      |               |                 |
| A                                 | 32mm Ø PPR Pipe  | 40   | LM   |               |                 |
| B                                 | Ditto 25mm Ø   | 33   | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C                                 | 32mm Ø Elbows/ Bends   | 20   | No.  |               |                 |
| D                                 | Ditto 25mm Ø   | 18   | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E                                 | 32 x 32 x 32mm   | 21   | No.  |               |                 |
| F                                 | 25 x 25 x 25mm   | 14   | No.  |               |                 |
|                                   | <b>Reducers</b>  |      |      |               |                 |
| G                                 | 32 x 25mm reducer  | 1    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| J                                 | 25 x 20mm male/female threaded adaptor   | 12   | No.  |               |                 |
| K                                 | 25 x 15mm ditto  | 10   | LM   |               |                 |
| L                                 | 25 x 15mm male threaded bend   | 13   | LM   |               |                 |
| <b>Total Carried to Next Page</b> |  |      |      |               |                 |



| ITEM                                       | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| M  | 32mm Ø Gate Valve as "Pegler" or Equivalent  | 2    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| N  | Brass plated 1/2" angle valve  | 16   | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| O  | 50 mm diameter water check meter   | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| P  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <b>TOTAL Internal Plumbing</b>   |      |      |               |                 |
| <b>Total Cost of Plumbing Installation</b> |  |      |      |               |                 |

| ITEM                                  | DESCRIPTION                               | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---------------------------------------|---|------|------|---------------|-----------------|
| <b>2</b>                              | <b>Risers and Roof Levels</b>             |      |      |               |                 |
|                                       | <b>Pipe Works</b>                         |      |      |               |                 |
| A                                     | 50 mm Ø PPR pipe                          | 28   | LM   |               |                 |
| B                                     | Ditto 40mm Ø                              | 12   | LM   |               |                 |
| C                                     | Ditto 32mm Ø                              | 13   | LM   |               |                 |
| D                                     | Ditto 25mm Ø                              | 6    | LM   |               |                 |
|                                       | <b>Extra Over Pipe Work</b>               |      |      |               |                 |
|                                       | <b>Elbows/ Bends</b>                      |      |      |               |                 |
| E                                     | 50mm Ø Elbows/ Bends                      | 4    | No.  |               |                 |
| F                                     | Ditto 40mm Ø                              | 3    | No.  |               |                 |
| G                                     | Ditto 32mm Ø                              | 3    | No.  |               |                 |
| H                                     | Ditto 25mm Ø                              | 2    | No.  |               |                 |
|                                       | <b>Equal/Unequal Tees</b>                 |      |      |               |                 |
| I                                     | 50 x 40 x 50mm                            | 4    | No.  |               |                 |
| J                                     | 40 x 40 x 32mm                            | 3    | No.  |               |                 |
| K                                     | 32 x 32 x 32mm                            | 4    | No.  |               |                 |
| L                                     | 32 x 32 x 25mm                            | 4    | No.  |               |                 |
| M                                     | 25 x 25 x 25mm                            | 2    | No.  |               |                 |
|                                       | <b>Reducers</b>                           |      |      |               |                 |
| O                                     | 50 x 40mm reducer                         | 2    | No.  |               |                 |
| P                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| Q                                     | 40 x 32mm reducer                         | 2    | No.  |               |                 |
| R                                     | 32 x 25mm reducer                         | 1    | No.  |               |                 |
|                                       | <b>Male/Female brass threaded adaptor</b> |      |      |               |                 |
| S                                     | 40 x 32mm male/female threaded adaptor    | 2    | No.  |               |                 |
| T                                     | 32 x 25mm male/female threaded adaptor    | 2    | No.  |               |                 |
| <b>Total Carried to the Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
| U  | <b>Isolating valves</b><br>50 mm Ø Gate Valve as "Pegler" or Equivalent  | 2    | No.  |               |                 |
| V  | <b>Testing and Commissioning</b><br>Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
| <b>Total Cost of Riser &amp; Roof Level Plumbing</b> |  |      |      |               |                 |

| ITEM                              | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|---|------|------|---------------|-----------------|
| 3                                 | <b>SANITARY FITTINGS AND ACCESSORIES<br/>INSTALL ONLY</b>   |      |      |               |                 |
| A                                 | <b>Water Closet (WC) Pan</b><br>Close Coupled dual flush Floor Standing Close<br>Coupled WC Bowl complete with seat cover, Wc<br>Connector and cistern or approved equivalent   | 8    | No.  |               |                 |
| B                                 | <b>Wash Basin</b><br>WHB basin Full pedestal Wash Basin<br>450x485x230m White Complete with bottle<br>traps, flexible connection hoses and other<br>accessories with cws only tap   | 13   | No.  |               |                 |
| C                                 | <b>Disabled Water Closet (WC) Pan</b><br>Physically challenges set as Armitage Shanks<br>Doc M Contour 21+ close coupled right hand<br>corner pack, WC pan, Wash basin, water saving<br>delay fill cistern with spatula lever, grab rails,<br>hinged support rail with toilet roll holder, seat<br>no cover with retaining buffers, copper tails on<br>TMV3 mixer tap or equal & approved | 2    | No.  |               |                 |
| D                                 | <b>Urinal</b><br>Urinal bowl in white colour of size 450 x 685mm<br>with built in spreader and concealed waste trap<br>complete with stainless steel fixing bolts and<br>caps. Complete with exposed Flash Valve  | 6    | No.  |               |                 |
| <b>Total Carried to Next Page</b> |   |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
| E  | <p><b>Total from Previous Page</b></p> <p><b>Flushing and Sterilization</b><br/>Allow for flushing and sterilization of the entire system to the satisfaction of the Engineer.</p> | 1    | Item |               |                 |
| <b>Total Cost of Sanitary Fittings &amp; Accessories</b> |  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b>FIRE PROTECTION</b>   |      |      |            |              |
|   | <b>Hose Reel and Associated Pipework</b>   |      |      |            |              |
| A   | Supply and Install automatic 30 meters long, 25mm diameter hosereel and nozzle installed to KS 2003:2006   | 2    | No.  |            |              |
|   | <b>Associated Pipework</b>   |      |      |            |              |
|   | GI Class 'B' tubing to KS06-259 with screwed and socketed joints to KS ISO 7-1:1994 including all range piping, fittings, hanagers, supports, brackets, and supports |      |      |            |              |
| B   | 50mm diameter  | 25   | LM   |            |              |
| C   | 25mm ditto   | 4    | LM   |            |              |
|   | <b>Extra Over Piping For Fittings:-</b>  |      |      |            |              |
|   | <b>Elbows/Variou s Bends</b>   |      |      |            |              |
| D   | 50mm bend/elbow  | 6    | No.  |            |              |
| E   | 25mm ditto   | 5    | No.  |            |              |
|   | <b>Equal/Unequal tees</b>  |      |      |            |              |
| F   | 50 x 50 x 50mm tee   | 3    | No.  |            |              |
| G   | 50 x 50 x 25mm ditto   | 3    | No.  |            |              |
|   | <b>Reducers</b>  |      |      |            |              |
| H   | 50 x 25mm reducer  | 3    | No.  |            |              |
|   | <b>Unions</b>  |      |      |            |              |
| I   | 50mm diameter union  | 2    | No.  |            |              |
| J   | 25mm ditto   | 8    | No.  |            |              |
|   | <b>Valves</b>  |      |      |            |              |
| K   | 25mm diameter quarter Turn hose reel isolation valve to be as PEGLER or approved equivalent.   | 2    | No.  |            |              |
| <b>Total Cost Carried For hose reel and associated pipework Installations</b> |  |      |      |            |              |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b><u>Portable Fire Protection Equipment + Hose Reel Pump</u></b><br><b>Supply, deliver, install, test and commission</b> portable fire protection equipment with initial fill complete with all the necessary mounting accessories. |      |      |            |              |
| A   | 9 litres, water/ carbon dioxide gas extinguisher   | 4    | No.  |            |              |
| B   | 4.5kg carbon dioxide gas extinguisher  | 4    | No.  |            |              |
| C   | 4.5 kg dry powder extinguisher   | 4    | No.  |            |              |
|   | <b>Hose Reel Pump</b>  |      |      |            |              |
| D   | Supply, Install hose reel water supply boosting set. Flow 8 m <sup>3</sup> /h at a head of 20 m , Duty + Standby   | 1    | Set  |            |              |
|   | <b>Testing and Commissioning</b>   |      |      |            |              |
| E   | Allow for testing and commissioning of the fire pump installation to the satisfaction of the Engineer.   | 1    | Item |            |              |
| <b>Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation</b> |  |      |      |            |              |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage</u></b>  |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b><u>Piping</u></b>   |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 32   | LM   |               |                 |
| B    | 40mm ditto   | 50   | LM   |               |                 |
| C    | 50mm ditto   | 56   | LM   |               |                 |
| D    | 75mm ditto   | 12   | LM   |               |                 |
| E    | 100mm ditto  | 32   | LM   |               |                 |
| F    | 100mm diameter heavy duty golden brown pipe  | 80   | LM   |               |                 |
| G    | 150mm diameter heavy duty golden brown pipe  | 44   | LM   |               |                 |
|      | <b><u>Extra over uPVC Pipeworks</u></b>  |      |      |               |                 |
| H    | 32mm sweep bend  | 15   | No.  |               |                 |
| I    | 40mm sweep bend  | 60   | No.  |               |                 |
| J    | 50mm sweep bend  | 15   | No.  |               |                 |
| K    | 75mm sweep bend  | 8    | No.  |               |                 |
| L    | 100mm sweep bend   | 22   | No.  |               |                 |
| M    | 150mm sweep bend   | 16   | No.  |               |                 |
| N    | 40mm 450 bend  | 22   | No.  |               |                 |
| O    | 50mm 450 bend  | 15   | No.  |               |                 |
| P    | 40mm sweep tee   | 25   | No.  |               |                 |
| Q    | 40 x 32mm reducer  | 15   | No.  |               |                 |
| R    | 75 x 40mm ditto  | 15   | No.  |               |                 |
| S    | 150 x 40mm ditto   | 8    | No.  |               |                 |
| T    | 40mm access plug   | 22   | No.  |               |                 |
| U    | 100mm bend WC connector  | 13   | No.  |               |                 |
| V    | 40mm bottle 'p' trap   | 15   | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |



| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b>Total From Previous Page</b>  |      |      |            |              |
| Z   | 100 x 50mm floor trap set complete with polycarbonate flush grating  | 17   | No.  |            |              |
| AA  | <b>Gulley Trap</b><br>Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy  | 4    | No.  |            |              |
| BB  | <b>Manholes</b><br>Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal. | 10   | No.  |            |              |
| CC  | <b>Excavations</b><br>Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.  | 120  | LM   |            |              |
| DD  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings.   | 1    | Item |            |              |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |  |      |      |            |              |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|--|--|------|------|------------|--------------|
|  | <b>Rain Water Drainage</b>   |      |      |            |              |
|  | Supply, deliver and install UPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) rainwater pipework. Allow for all flanges, couplings, nipples, connector joints, fixing clips holder bats etc as required in running length of pipework but not measured. |      |      |            |              |
|  | <b>Piping</b>  |      |      |            |              |
| A  | 100mm ditto  | 200  | LM   |            |              |
|  | Extra over piping for fittings:-   |      |      |            |              |
| B  | 100mm ditto  | 16   | No.  |            |              |
| C  | 100mm sweep bend   | 2    | No.  |            |              |
| D  | 100mm single branch  | 13   | No.  |            |              |
| E  | 100mm double branch  | 7    | No.  |            |              |
| F  | 100mm flat roof rain water outlets   | 10   | No.  |            |              |
|  | <b>Testing and Commissioning</b>   |      |      |            |              |
| G  | Allow for testing and commissioning of the rain water drainage installation to the satisfaction of the engineer.   | 1    | Item |            |              |
| <b>Total Cost For Rain Water Drainage Installation</b> |  |      |      |            |              |

| ITEM   | DESCRIPTION  | AMOUNT<br>(KES) |
|--|--|-----------------|
| <u>SUMMARY PAGE</u>  |  |                 |
| 1.0  | Total Cost for Internal Plumbing   |                 |
| 2.0  | Total Cost for Roof + Riser  |                 |
| 3.0  | Total Cost for Sanitary Fittings Install Only                            |                 |
| 4.0  | Total Cost Carried For hose reel and associated pipework Installations   |                 |
| 5.0  | Total Cost For Portable fire Extinguishers + Hose Reel Pump Installation |                 |
| 6.0  | Total Cost For Ground Floor Foul Drainage Installation                   |                 |
| 7.0  | Total Cost For Rain Water Drainage Installation                          |                 |
|  |  |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |  |                 |

| ITEM                              | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|--|------|------|---------------|-----------------|
| 1.0                               | <b><u>Internal Plumbing Installations</u></b><br><br>Supply, deliver install, Test and Commission:<br><br><b>PP-R (Polypropylene Random Co-polymer)</b> pipes PN 20 and fittings and fusion joints to (KS ISO 15874 Part 1, 2, 3 & 5) of approved manufacturer. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints etc. as required in the running lengths of pipework. The pipes shall run in floors and wall chase. The pipes will be pressure tested before the plastering of wall commences and as per the manufacturers |      |      |               |                 |
| (i)                               | <b><u>3 BR AHP</u></b>   |      |      |               |                 |
|                                   | <b>Pipe Works</b>  |      |      |               |                 |
| A                                 | 25mm Ø PPR Pipe  | 6    | LM   |               |                 |
| B                                 | Ditto 20mm Ø   | 4    | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C                                 | 25mm Ø Elbows/ Bends   | 3    | No.  |               |                 |
| D                                 | Ditto 20mm Ø   | 2    | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E                                 | 25 x 20 x 25mm   | 1    | No.  |               |                 |
|                                   | <b>Reducers</b>  |      |      |               |                 |
| F                                 | 25 x 20mm reducer  | 2    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| G                                 | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| H                                 | 25 x 15mm ditto  | 1    | LM   |               |                 |
| I                                 | 25 x 15mm male threaded bend   | 1    | LM   |               |                 |
| <b>Total Carried to Next Page</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
|  | <b>Isolating valves</b>  |      |      |               |                 |
| J  | 25mm Ø Gate Valve as "Pegler" or Equivalent  | 1    | No.  |               |                 |
|  | <b>Shut off Angle Valve</b>  |      |      |               |                 |
| K  | Brass plated 1/2" angle valve  | 3    | No.  |               |                 |
|  | <b>Check Meter</b>   |      |      |               |                 |
| L  | 25mm diameter water check meter  | 1    | No.  |               |                 |
|  | <b>Testing and Commissioning</b>   |      |      |               |                 |
| M  | Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <i>Sub Total for 1</i>   |      |      |               |                 |
|  | <b>TOTAL</b>   | 1    |      | x 1           |                 |
| <b>Total Cost of Plumbing Installation Guard House</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|---|------|------|---------------|-----------------|
| 2.0  | <b>SANITARY FITTINGS AND ACCESSORIES</b>  |      |      |               |                 |
| A  | <b>Water Closet (WC) Pan</b><br>Close Coupled dual flush Floor Standing Close Coupled WC Bowl complete with seat cover and cistern, WC connector relevant fittings & accessories    | 1    | No.  |               |                 |
| B  | <b>Wash Basin</b><br>WHB basin Full pedestal Wash Basin 450x485x230m White Complte with bottle traps, flexible connection hoses and other accessories with cws only tap             | 1    | No.  |               |                 |
| C  | <b>Shower Fittings</b><br>Shower fitting c/w 15mm diameter chrome plated stop cork, Instant shower fitting and 1/2" Cobra 211- 15 Star Pillar tap as Pegler or equal and equivalent | 1    | No.  |               |                 |
|  | <i>Sub Total for 1</i>  |      |      |               |                 |
|  | <b>TOTAL</b>  | 1    |      | x 1           |                 |
| <b>Total Cost of Sanitary Fittings &amp; Accessories</b> |   |      |      |               |                 |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage</u></b>  |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b><u>Piping</u></b>   |      |      |               |                 |
| A    | 32mm diameter heavy duty grey uPVC pipe  | 2    | LM   |               |                 |
| B    | 40mm ditto   | 3    | LM   |               |                 |
| C    | 50mm ditto   | 6    | LM   |               |                 |
| D    | 100mm ditto  | 4    | LM   |               |                 |
| E    | 100mm diameter heavy duty pipe   | 8    | LM   |               |                 |
|      | <b><u>Extra over uPVC Pipeworks</u></b>  |      |      |               |                 |
| F    | 32mm sweep bend  | 1    | No.  |               |                 |
| G    | 40mm sweep bend  | 1    | No.  |               |                 |
| H    | 50mm sweep bend  | 2    | No.  |               |                 |
| I    | 100mm sweep bend   | 1    | No.  |               |                 |
| J    | 40mm 45° bend  | 1    | No.  |               |                 |
| K    | 50mm Ditto   | 1    | No.  |               |                 |
| L    | 50mm sweep tee   | 2    | No.  |               |                 |
| M    | 40 x 32mm reducer  | 1    | No.  |               |                 |
| N    | 40mm access plug   | 1    | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|---|--|------|------|---------------|-----------------|
|   | <b>Total From Previous Page</b>  |      |      |               |                 |
| AA  | 100 x 50mm floor trap set complete with plastic flush grating  | 2    | No.  |               |                 |
| BB  | <b>Gulley Trap</b><br>Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy duty iron cover.   | 1    | No.  |               |                 |
| CC  | <b>Manholes</b><br>Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal. | 1    | No.  |               |                 |
| DD  | <b>Excavations</b><br>Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.  | 8    | LM   |               |                 |
| EE  | Allow for hydrostatic pressure testing of drainage installation including provision of pipe plugs and other required fittings.   | 1    | Item |               |                 |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |  |      |      |               |                 |



| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b>Rain Water Drainage</b>   |      |      |               |                 |
|      | Supply, deliver and install UPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) rainwater pipework. Allow for all flanges, couplings, nipples, connector joints, fixing clips holder bats etc as required in running length of pipework but not measured. |      |      |               |                 |
|      | <b>Piping</b>  |      |      |               |                 |
| A    | 100mm ditto  | 6    | LM   |               |                 |
|      | Extra over piping for fittings:-   |      |      |               |                 |
| B    | 100mm ditto  | 2    | No.  |               |                 |
| C    | 100mm sweep bend   | 2    | No.  |               |                 |
| D    | 100mm single branch  | 2    | No.  |               |                 |
| E    | 100mm double branch  | 2    | No.  |               |                 |
| F    | 100mm flat roof rain water outlets   | 1    | No.  |               |                 |
|      | <b>Total Cost For Rain Water Drainage Installation</b>   |      |      |               |                 |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
| A    | <p><b>ROOF WATER STORAGE TANK</b></p> <p>Top Tank Deluxe heavy duty rotationally moulded polyethylene cylindrical vertical close end tank of nominal capacity of 1000 Litres and complete with lid and ball valve, float switch. Tanks to be complete with inlet, outlet and overflow connections and tank connectors for the same as described below: -</p> <ul style="list-style-type: none"> <li>- 1 No. 32mm diameter inlet pipe connection</li> <li>- 1 No. 50mm diameter outlet pipe connection</li> <li>- 1 No. 40 mm diameter overflow pipe connection</li> </ul> <p>Tank Capacity : 1000 litres</p> | 1    | No   |               |                 |
|      | <b>Total Cost For Roof Tanks</b>   |      |      |               |                 |

| ITEM   | DESCRIPTION  | AMOUNT<br>(KES) |
|--|--|-----------------|
| <u>SUMMARY PAGE</u>  |  |                 |
| 1.0  | Total Cost for Internal Plumbing                       |                 |
| 3.0  | Total Cost for Sanitary Fittings                       |                 |
| 6.0  | Total Cost For Ground Floor Foul Drainage Installation |                 |
| 8.0  | Total Cost For Rain Water Drainage Installation        |                 |
| 9.0  | Total Cost For Roof Tanks                              |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |  |                 |

| ITEM                              | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|-----------------------------------|--|------|------|---------------|-----------------|
| 1.0                               | <b><u>Internal Plumbing Installations</u></b><br><br>Supply, deliver install, Test and Commission:<br><br><b>PP-R (Polypropylene Random Co-polymer)</b> pipes PN 20 and fittings and fusion joints to (KS ISO 15874 Part 1, 2, 3 & 5) of approved manufacturer. Rates must allow for all Metal/ plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints etc. as required in the running lengths of pipework. The pipes shall run in floors and wall chase. The pipes will be pressure tested before the plastering of wall commences and as per the manufacturers recommended testing pressures. |      |      |               |                 |
|                                   | <b>Pipe Works</b>  |      |      |               |                 |
| A                                 | 25mm Ø PPR Pipe  | 2    | LM   |               |                 |
| B                                 | Ditto 20mm Ø   | 2    | LM   |               |                 |
|                                   | <b>Extra Over Pipe Work</b>  |      |      |               |                 |
|                                   | <b>Elbows/ Bends</b>   |      |      |               |                 |
| C                                 | 25mm Ø Elbows/ Bends   | 3    | No.  |               |                 |
| D                                 | Ditto 20mm Ø   | 2    | No.  |               |                 |
|                                   | <b>Equal/Unequal Tees</b>  |      |      |               |                 |
| E                                 | 25 x 20 x 25mm   | 1    | No.  |               |                 |
|                                   | <b>Reducers</b>  |      |      |               |                 |
| F                                 | 25 x 20mm reducer  | 2    | No.  |               |                 |
|                                   | <b>Male/Female brass threaded adaptor</b>  |      |      |               |                 |
| G                                 | 25 x 20mm male/female threaded adaptor   | 2    | No.  |               |                 |
| H                                 | 25 x 15mm ditto  | 1    | LM   |               |                 |
| I                                 | 25 x 15mm male threaded bend   | 1    | LM   |               |                 |
| <b>Total Carried to Next Page</b> |  |      |      |               |                 |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|--|--|------|------|---------------|-----------------|
|  | <b>Total from Previous Page</b>  |      |      |               |                 |
| J  | <b>Isolating valves</b><br>25mm Ø Gate Valve as "Pegler" or Equivalent   | 1    | No.  |               |                 |
| L  | <b>Testing and Commissioning</b><br>Allow for pressure testing of the Plumbing installation to the satisfaction of the Engineer including provision of necessary pipe plugs. | 1    | Item |               |                 |
|  | <i>Sub Total</i>   |      |      |               |                 |
|  | <b>TOTAL</b>   | 1    |      | x 1           |                 |
| <b>Total Cost of Plumbing Installation Guard House</b> |  |      |      |               |                 |

| ITEM | DESCRIPTION  | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|--|------|------|---------------|-----------------|
|      | <b><u>Foul Drainage</u></b>  |      |      |               |                 |
|      | Supply, deliver and install the following uPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) Heavy gauge soil and waste system. Allow for all the various sizes of adaptor, connectors, sockets, holderbats, clips etc not measured but required for the satisfactory functioning of the system. |      |      |               |                 |
|      | <b>Piping</b>  |      |      |               |                 |
| A    | 50mm ditto   | 6    | LM   |               |                 |
| B    | 100mm ditto  | 4    | LM   |               |                 |
| C    | 100mm diameter heavy duty pipe   | 4    | LM   |               |                 |
|      | <b>Extra over uPVC Pipeworks</b>   |      |      |               |                 |
| D    | 50mm sweep bend  | 2    | No.  |               |                 |
| E    | 100mm sweep bend   | 1    | No.  |               |                 |
|      | <b>Total Carried to Next Page</b>  |      |      |               |                 |

| ITEM  | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|---|--|------|------|------------|--------------|
|   | <b>Total From Previous Page</b>  |      |      |            |              |
| EE  | <p><b>Gulley Trap</b><br/>Gully trap comprising of 100mm diameter golden brown uPVC gully piece, 100mm diameter uPVC trap spigot outlet with screws and washers, and 300 x 300mm masonry gully trap chamber with mild steel plate and a heavy</p>  | 1    | No.  |            |              |
| GG  | <p><b>Manholes</b><br/>Construct manhole/ inspection chamber size 450 x 600 x 750mm deep internally in 200mm stone walls, 150mm concrete bed, water proof plaster, forming drain channels, medium duty cover frame in cast iron with recessed cover with concrete infill and all necessary formwork, excavation and soil disposal.</p> | 1    | No.  |            |              |
| HH  | <p><b>Excavations</b><br/>Excavate trench for pipe not exceeding 100mm diameter and not exceeding 1.5m deep (average 600mm deep) and make good as before.</p>  | 4    | LM   |            |              |
| <b>Total Cost For Ground Floor Foul Drainage Installation</b> |  |      |      |            |              |

| ITEM   | DESCRIPTION  | QTY. | UNIT | RATE (KES) | AMOUNT (KES) |
|--|--|------|------|------------|--------------|
|  | <b>Rain Water Drainage</b>   |      |      |            |              |
|  | Supply, deliver and install UPVC (Unplasticized Polyvinyl chloride) to (KS ISO 1452 Part 1, 2, 3, 4 & 5) rainwater pipework. Allow for all flanges, couplings, nipples, connector joints, fixing clips holder bats etc as required in running length of pipework but not measured. |      |      |            |              |
|  | <b>Piping</b>  |      |      |            |              |
| A  | 100mm ditto  | 6    | LM   |            |              |
|  | Extra over piping for fittings:-   |      |      |            |              |
| B  | 100mm ditto  | 2    | No.  |            |              |
| C  | 100mm sweep bend   | 2    | No.  |            |              |
| D  | 100mm single branch  | 2    | No.  |            |              |
| E  | 100mm double branch  | 2    | No.  |            |              |
| F  | 100mm flat roof rain water outlets   | 1    | No.  |            |              |
| <b>Total Cost For Rain Water Drainage Installation</b> |  |      |      |            |              |



| ITEM | DESCRIPTION   | QTY. | UNIT | RATE<br>(KES) | AMOUNT<br>(KES) |
|------|---|------|------|---------------|-----------------|
| A    | <p><b>ROOF WATER STORAGE TANK</b></p> <p>Top Tank Deluxe heavy duty rotationally moulded polyethylene cylindrical vertical close end tank of nominal capacity of 1000 Litres and complete with lid and ball valve, float switch. Tanks to be complete with inlet, outlet and overflow connections and tank connectors for the same as described below: -</p> <ul style="list-style-type: none"> <li>- 1 No. 32mm diameter inlet pipe connection</li> <li>- 1 No. 50mm diameter outlet pipe connection</li> <li>- 1 No. 40 mm diameter overflow pipe connection</li> </ul> <p>Tank Capacity : 500 litres</p> | 1    | No   |               |                 |
|      | <b>Total Cost For Roof Tanks</b>  |      |      |               |                 |

| ITEM   | DESCRIPTION  | AMOUNT<br>(KES) |
|--|--|-----------------|
| <u>SUMMARY PAGE</u>  |  |                 |
| 1.0  | Total Cost for Internal Plumbing                       |                 |
| 2.0  | Total Cost For Ground Floor Foul Drainage Installation |                 |
| 3.0  | Total Cost For Rain Water Drainage Installation        |                 |
| 4.0  | Total Cost For Roof Tanks                              |                 |
| <b>Total carried to Mechanical Works Main Summary Page</b> |  |                 |

NGONG GRAND SUMMARY PAGE

| ITEM  | DESCRIPTION   | Unit | Qty | RATE (KSHS) | AMOUNT (KSHS) |
|---|---|------|-----|-------------|---------------|
| 1   | SUMMARY FOR MECHANICAL SERVICES FOR AFFORDABLE HOUSING BLOCK TYPE A | No   | 10  |             |               |
| 2   | SUMMARY FOR MECHANICAL SERVICES FOR AFFORDABLE HOUSING BLOCK TYPE B | No   | 10  |             |               |
| 3   | SUMMARY FOR EXTERNAL RETICULATION                                   | No   | 1   |             |               |
| 4   | SUMMARY FOR MECHANICAL SERVICES FOR CLUB HOUSE                      | No   | 1   |             |               |
| 5   | SUMMARY FOR MECHANICAL INSTALLATION FCD                             | No   | 1   |             |               |
| 6   | SUMMARY FOR MECHANICAL INSTALLATION SCHOOL                          | No   | 1   |             |               |
| 7   | SUMMARY FOR MECHANICAL SERVICES FOR COMMERCIAL CENTRE               | No   | 1   |             |               |
| 8   | SUMMARY FOR MECHANICAL SERVICES FOR MIXED USED BUILDING             | No   | 1   |             |               |
| 9   | SUMMARY FOR MECHANICAL SERVICES FOR GUARD HOUSE                     | No   | 1   |             |               |
| 10  | SUMMARY FOR MECHANICAL SERVICES FOR GARBAGE RECEPTACLE              | No   | 1   |             |               |
| TOTALS FOR MECHANICAL INSTALLATION SERVICES FOR PROPOSED NGONG AFFORDABLE HOUSING PROJECT |   |      |     |             |               |

Amount in Words: Kenya Shillings.....

.....

Official Stamp & Address:.....

.....

Tenderer's Signature:.....Date:.....

Witness' Name:.....Witness' Signature:.....

Address:.....

Date:.....

**PROVISIONAL SUMS & PRIME COST  
SUMS**

| ITEM                         | DESCRIPTION  | UNIT | QTY | RATE        | AMOUNT     |
|------------------------------|--|------|-----|-------------|------------|
|                              | <b><u>PRIME COST SUMS</u></b>  |      |     |             |            |
|                              | <b><u>Ground Breaking &amp; Project Launch</u></b>   |      |     |             |            |
| A                            | Allow a prime cost of Five Hundred Thousand Only (KSHs. 500,000) for ground breaking, project launch, commissioning and project handover | SUM  | 1   | 500,000     | 500,000    |
| B                            | Allow for profits and overheads  | %    |     |             |            |
| C                            | Allow for attendance   | Sum  |     |             |            |
|                              | <b><u>Marketing and sales support</u></b>  |      |     |             |            |
| D                            | Allow a prime cost of One Million (KSHs. 1,000,000) for Marketing and sales support to Boma Yangu  | SUM  | 1   | 1,000,000   | 1,000,000  |
| E                            | Allow for profits and overheads  | %    |     |             |            |
| F                            | Allow for attendance   | Sum  |     |             |            |
|                              | <b><u>Renders and Printing</u></b>   |      |     |             |            |
| G                            | Allow a prime cost of Five Hundred Thousand (KSHs. 500,000) for preparation of renders and printing                                      | SUM  | 1   | 500,000     | 500,000    |
| H                            | Allow for profits and overheads  | %    |     |             |            |
| I                            | Allow for attendance   | Sum  |     |             |            |
|                              | <b><u>Signage</u></b>  |      |     |             |            |
| J                            | Allow a provisional sum of Ksh. Five hundred thousand (Ksh. 500,000) for signage.  | SUM  | 1   | 500,000     | 500,000    |
|                              | <b><u>PROVISIONAL SUMS</u></b>   |      |     |             |            |
| K                            | Clothes Drying Areas   | Item |     | 900,000     | 900,000    |
| L                            | Landscaping  | Item |     | 5,400,000   | 5,400,000  |
| M                            | Retaining Walls and Existing Ground Improvements   | Item |     | 18,000,000  | 18,000,000 |
| <b>TOTAL CARRIED FORWARD</b> |  |      |     | <b>Kshs</b> |            |
|                              |  |      |     |             |            |

|   |  |     |   |             |             |
|---|--|-----|---|-------------|-------------|
|   | <b>TOTAL BROUGHT FORWARD</b>   |     |   |             |             |
|   | <b><u>ELECTRICAL INSTALLATIONS PROVISIONAL SUMS / EXCLUSIONS</u></b>             |     |   |             |             |
| A | Supply, Installation and Commissioning of lifts to Apartment Blocks              | SUM | 1 | 220,000,000 | 220,000,000 |
| B | Supply, Installation and Commissioning of Backup Generators                      | SUM | 1 | 40,000,000  | 40,000,000  |
| C | Supply, Installation and Commissioning of CCTV Installations                     | SUM | 1 | 3,900,000   | 3,900,000   |
| D | Fabrication, Supply and commissioning of LV Switchboards Distribution Boards     | SUM | 1 | 70,000,000  | 70,000,000  |
| E | Capital Contribution to KPLC For Power Connection                                | SUM | 1 | 24,000,000  | 24,000,000  |
| C | Supply, Installation and Commissioning of MATV Installations                     | SUM | 1 | 20,000,000  | 20,000,000  |
|   | <b><u>MECHANICAL INSTALLATIONS PROVISIONAL SUMS / EXCLUSIONS</u></b>             |     |   |             |             |
| F | Supply only of Sanitary Fittings   | SUM | 1 | 43,000,000  | 43,000,000  |
| G | Supply & Installations of Water Booster Pumps                                    | SUM | 1 | 12,000,000  | 12,000,000  |
| H | Supply of GRP Roof Level Water Tanks   | SUM | 1 | 46,000,000  | 46,000,000  |
| I | Hose Reel Pumps  | SUM | 1 | 5,000,000   | 5,000,000   |
| J | Borehole Drilling & Equipping  | SUM | 1 | 45,000,000  | 45,000,000  |
|   | 7000 P.E Waste Water Treatment Plant (Equipping Cost Only)                       | SUM | 1 | 60,000,000  | 60,000,000  |
| K | External Reticulation Borehole Water   | SUM | 1 | 101,800     | 101,800.00  |
| L | External Reticulation Council Water  | SUM | 1 | 131,800     | 131,800     |
| M | LPG External Reticulation Provision  | SUM | 1 | 1,700,000   | 1,700,000   |
|   | <b>TOTAL FOR SERVICES INSTALLATIONS PROVISIONAL SUM CARRIED TO GRAND SUMMARY</b> |     |   |             |             |

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## **GRAND SUMMARY**

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**AFFORDABLE HOUSING PROGRAMME**  
**PROPOSED CONSTRUCTION OF AFFORDABLE HOUSING UNITS AND ASSOCIATED**  
**SOCIAL INFRASTRUCTURE AT NGONG IN KAJIADO COUNTY**

| <b>GRAND SUMMARY</b>   |                             |             |                              |                         |
|--|-----------------------------|-------------|------------------------------|-------------------------|
| <b>ITEM</b>  | <b>DESCRIPTION</b>          | <b>PAGE</b> | <b>FOR TENDERER USE ONLY</b> | <b>FOR OFFICIAL USE</b> |
| 1.00   | PARTICULAR PRELIMINARIES    | PP/7        |                              |                         |
| 2.00   | GENERAL PRELIMINARIES       | GP/22       |                              |                         |
| 3.00   | PROJECT PROVISIONS          | PR/2        |                              |                         |
| 4.00   | BUILDERS WORK BLOCK TYPE A  | A/20        |                              |                         |
| 5.00   | BUILDERS WORK BLOCK TYPE B  | B/20        |                              |                         |
| 6.00   | CLUB HOUSE                  | CH/21       |                              |                         |
| 7.00   | SCHOOL                      | LPS/17      |                              |                         |
| 8.00   | KINDERGARTEN                | K/17        |                              |                         |
| 9.00   | COMMERCIAL CENTRE           | CC/21       |                              |                         |
| 10.00  | MIXED USE DEVELOPMENT       | MUD/S       |                              |                         |
| 11.00  | BASKET BALL PITCH           | BP/7        |                              |                         |
| 12.00  | GUARD HOUSE                 | GH/19       |                              |                         |
| 13.00  | GARBAGE RECEPTACLE          | GR/12       |                              |                         |
| 14.00  | BOUNDARY WALLING            | BW/2        |                              |                         |
| 15.00  | CIVIL WORKS - ROADS         | RW/S        |                              |                         |
| 16.00  | CIVIL WORKS - SEWER         | SW/9        |                              |                         |
| 17.00  | UNDERGROUND WATER TANK      | UG/3        |                              |                         |
| 18.00  | ELECTRICAL WORKS            | EW/S        |                              |                         |
| 19.00  | MECHANICAL WORKS            | MW/S        |                              |                         |
| 20.00  | PROVISIONAL SUMS & P C SUMS | PS/2        |                              |                         |
| <b>SUB-TOTAL</b>   |                             |             |                              |                         |
| ADD CONTINGENCY (2%)   |                             |             |                              |                         |
| <b>GRAND TOTAL CARRIED TO FORM OF TENDER (VAT INCLUSIVE)</b>   |                             |             |                              |                         |
| AMOUNT IN WORDS : KENYA SHILLINGS .....<br>.....<br>TENDERER'S NAME .....<br>ADDRESS .....<br>DATE .....<br>TENDERER'S SIGNATURE .....<br>WITNESS'S NAME.....<br>ADDRESS .....<br>DATE .....<br>WITNESS SIGNATURE..... |                             |             |                              |                         |



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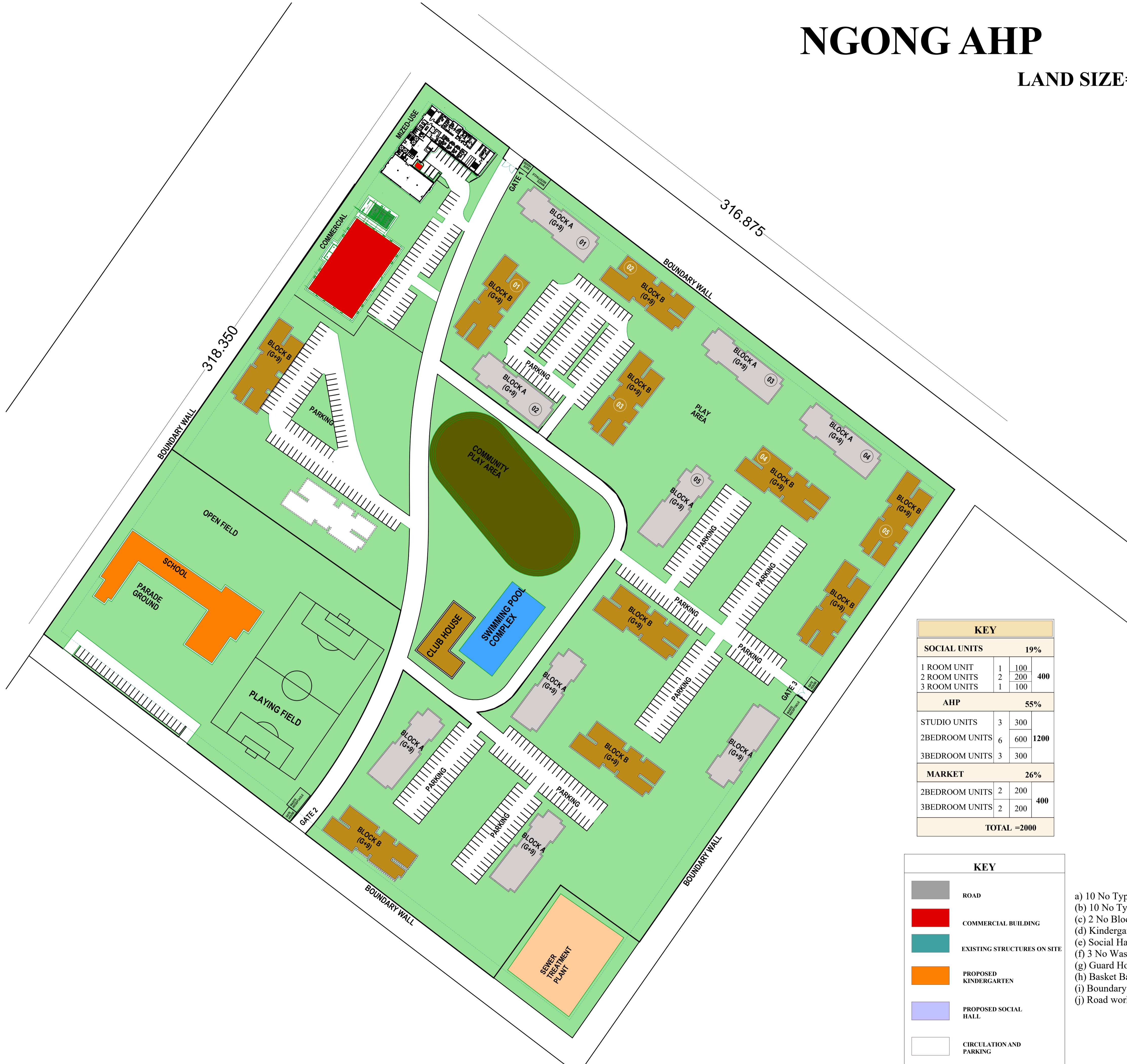
# ARCHITECTURAL DRAWINGS

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AFFORDABLE HOUSING PROGRAMME

# NGONG AHP

LAND SIZE= 24.20 ACRES



| KEY                 |   |            |             |
|---------------------|---|------------|-------------|
| <b>SOCIAL UNITS</b> |   | <b>19%</b> |             |
| 1 ROOM UNIT         | 1 | 100        | <b>400</b>  |
| 2 ROOM UNITS        | 2 | 200        |             |
| 3 ROOM UNITS        | 1 | 100        |             |
| <b>AHP</b>          |   | <b>55%</b> |             |
| STUDIO UNITS        | 3 | 300        | <b>1200</b> |
| 2BEDROOM UNITS      | 6 | 600        |             |
| 3BEDROOM UNITS      | 3 | 300        |             |
| <b>MARKET</b>       |   | <b>26%</b> |             |
| 2BEDROOM UNITS      | 2 | 200        | <b>400</b>  |
| 3BEDROOM UNITS      | 2 | 200        |             |
| <b>TOTAL =2000</b>  |   |            |             |

| KEY |                             |
|-----|-----------------------------|
|     | ROAD                        |
|     | COMMERCIAL BUILDING         |
|     | EXISTING STRUCTURES ON SITE |
|     | PROPOSED KINDERGARTEN       |
|     | PROPOSED SOCIAL HALL        |
|     | CIRCULATION AND PARKING     |

- a) 10 No Type A Hostel Block with a plinth area of 48,470 SM
- b) 10 No Type B Hostel Block with a plinth area of 58,250 SM
- c) 2 No Blocks Commercial center Plinth area 860 SM
- d) Kindergarten Plinth area 452 SM
- e) Social Hall Plinth area 328 SM
- f) 3 No Waste receptacle Plinth area 42 SM
- g) Guard House Plinth area 10 SM
- h) Basket Ball Pitch 574 Sm
- i) Boundary wall - 3.3m high with a length of 933LM
- j) Road works -6180 SM

## GENERAL NOTES

1. This drawing to be read in conjunction with Engineers' drawings.
2. All dimensions are in mm unless otherwise specified.
3. Drawings are not to be scaled. Only figured dimensions should be used.
4. The contractor must check and verify all dimensions before commencement of work and if necessary confirm with the architect.

## CONSTRUCTION

Approved anti-termite treatment & 1000 gauge polythene sheeting cover to be provided under all ground floor concrete slab on compacted hardcore to approval.  
DPC to be 3ply bituminous felt to be provided under all walls.

## STRUCTURAL

1. All Black cotton soil to be removed from below all building and paved surfaces
2. All reinforced concrete work will be in accordance with structural drawings.
3. Foundation depths to be determined on site to S.E approval
4. All walls less than 200mm thick to be reinforced with hoop iron at every alternate course.
5. All adjacent R.C work and masonry walls to be tied with strap irons at every course

## MECHANICAL

1. All Plumbing and Drainage Work to comply with specifications
2. S.V.P denotes soil vent pipe and to be provided at the head of the drainage
3. Where drainage is shown under driveways and slabs, to be encased in 150mm thick concrete surround.
4. All underground foul and waste drain pipes shall be of PVC to comply with BS5255
5. All ICs within building area, driveway and parking to have heavy duty, double-seal airtight covers and walls to be 200mm.
6. Minimum slope in the drain pipes to be 1%
7. No chases for pipes will be allowed in the slabs
8. Sleeves will be allowed with written approval from S.E.
9. No cutting of concrete without express approval of the Architect or S.E
10. All testing of pipes must be coordinated with electrical and any conflicts must be resolved before works begin
11. Permanent vents denoted as P.V to be provided as shown on plan.

## ELECTRICAL

All conduits must be laid before plastering

## PROJECT:

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

## CLIENT:

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

## DRAWING TITLE:

WORKING DRAWINGS

## SCALE:

**DRAWN BY:** ARCH JMO

## CHECKED BY:

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

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

## DATE:

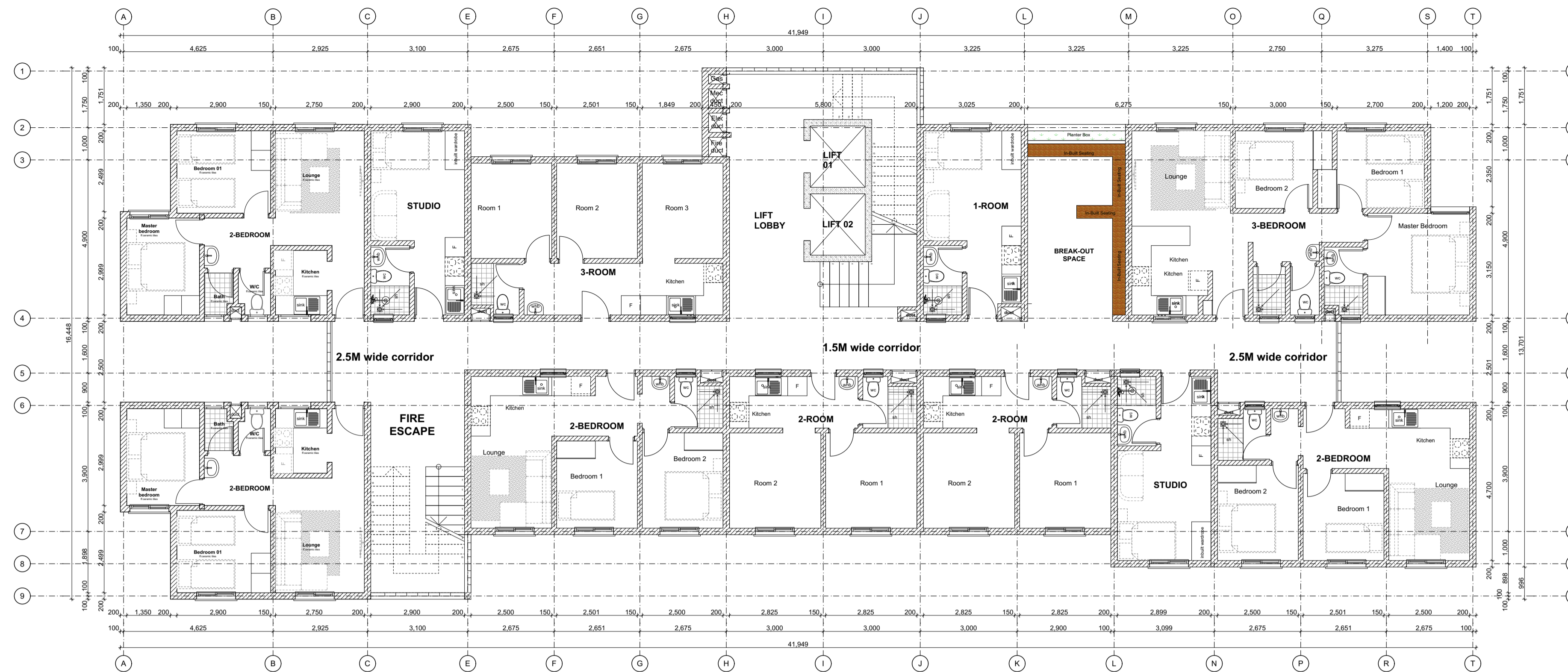
MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



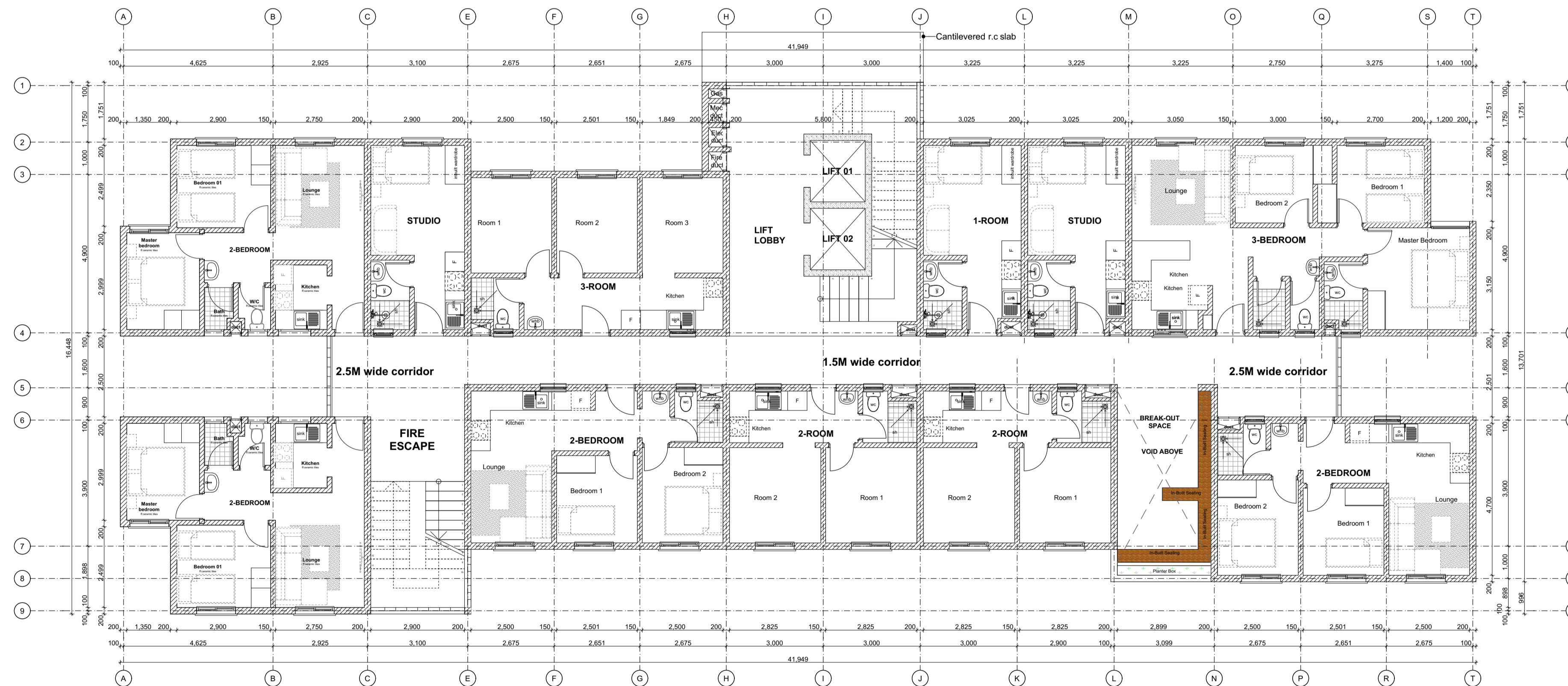
FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA





PROPOSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A\_TYPICAL 2ND AND 9TH FLOOR PLAN

| UNIT BREAK DOWN |        | UNIT BREAK DOWN |        |
|-----------------|--------|-----------------|--------|
| 1_ROOM          | 2_ROOM | 3_ROOM          | STUDIO |
| 1               | 2      | 1               | 2      |
|                 |        | 4               |        |
|                 |        |                 | 1      |



PROPOSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A\_TYPICAL 3RD AND 7TH FLOOR PLAN

| UNIT BREAK DOWN |        | UNIT BREAK DOWN |        |
|-----------------|--------|-----------------|--------|
| 1_ROOM          | 2_ROOM | 3_ROOM          | STUDIO |
| 1               | 2      | 1               | 2      |
|                 |        | 4               |        |
|                 |        |                 | 1      |

**GENERAL NOTES**

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2. All dimensions are in mm unless otherwise specified.
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4. The contractor must check and verify all dimensions before commencement of work and if necessary confirm with the architect.

**CONSTRUCTION**

Approved anti-termite treatment & 1000 gauge polythene sheeting cover to be provided under all ground floor concrete slab on compacted hardcore to approval.  
DPC to be 3ply bituminous felt to be provided under all walls.

**STRUCTURAL**

1. All Black cotton soil to be removed from below all building and paved surfaces
2. All reinforced concrete work will be in accordance with structural drawings.
3. Foundation depths to be determined on site to S.E approval
4. All walls less than 200mm thick to be reinforced with hoop iron at every alternate course.
5. All adjacent R.C work and masonry walls to be tied with strap irons at every course

**MECHANICAL**

1. All Plumbing and Drainage Work to comply with specifications
2. S.V.P denotes soil vent pipe and to be provided at the head of the drainage
3. Where drainage is shown under driveways and slabs, to be encased in 150mm thick concrete surround.
4. All underground foul and waste drain pipes shall be of PVC to comply with BS5255
5. All ICs within building area driveway and parking to have heavy duty, double-seal airtight covers and walls to be 200mm.
6. Minimum slope in the drain pipes to be 1%
7. No chases for pipes will be allowed in the slabs
8. Sleeves will be allowed with written approval from S.E.
9. No cutting of concrete without express approval of the Architect or S.E
10. All testing of pipes must be coordinated with electrical and any conflicts must be resolved before works begin
11. Permanent vents denoted as P.V to be provided as shown on plan.

**ELECTRICAL**

All conduits must be laid before plastering

**PROJECT:**

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

**CLIENT:**

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

**DRAWING TITLE:**

BLOCK A\_FLOOR PLANS

SCALE: 1:100

**DRAWN BY:**

ML

**CHECKED BY:**

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

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

**DATE:**

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

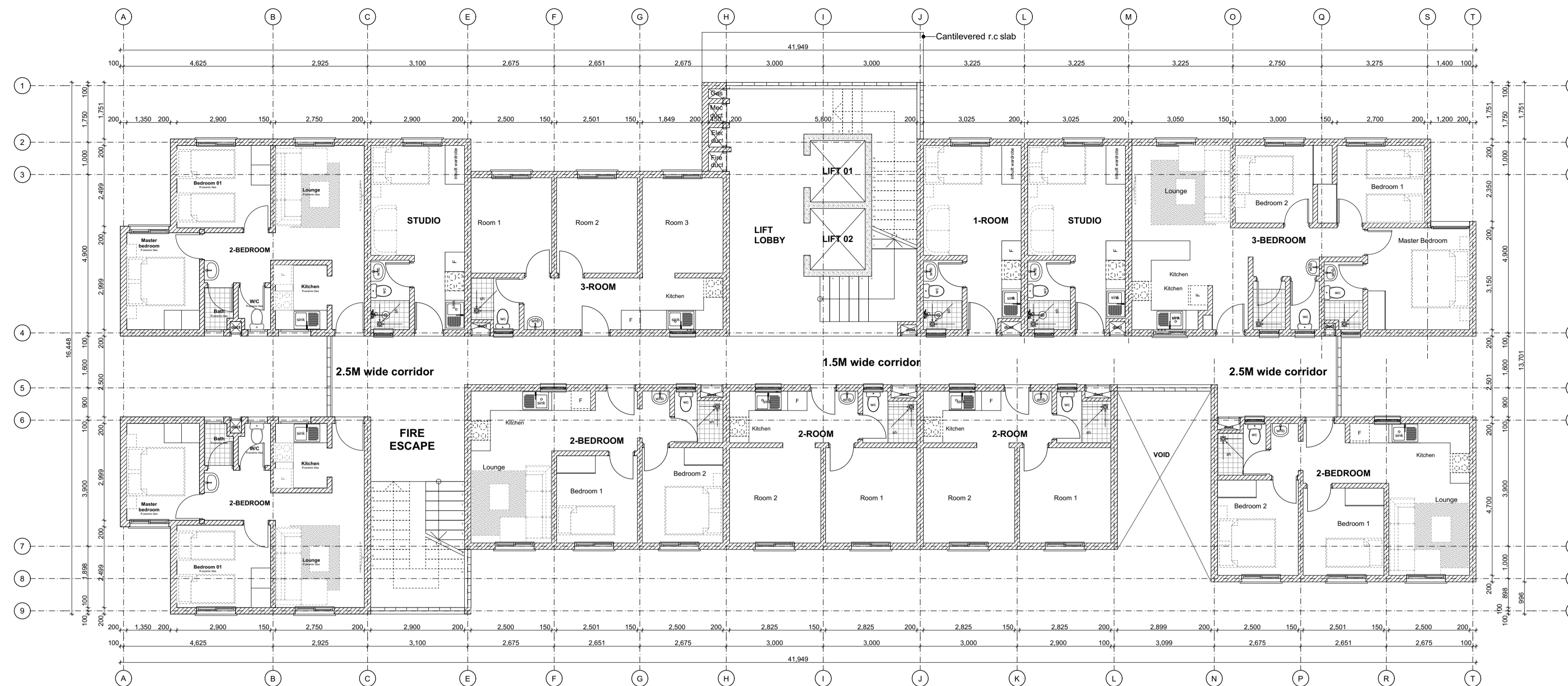
STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA

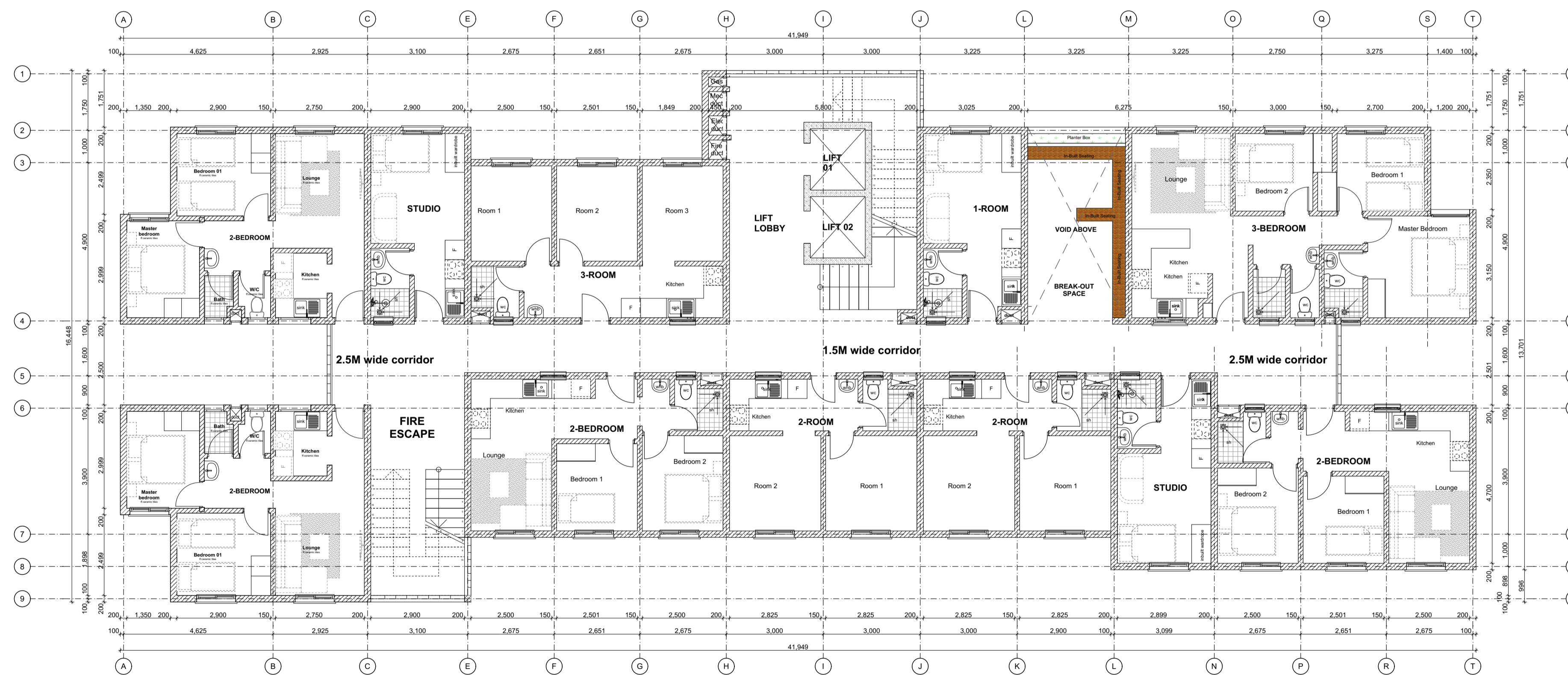
# BLOCK TYPOLOGY A [G+9]

REVISION 01



PROPOSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A\_TYPICAL 4TH AND 8TH FLOOR PLAN

| UNIT BREAK DOWN |        | UNIT BREAK DOWN |        |
|-----------------|--------|-----------------|--------|
| 1_ROOM          | 2_ROOM | 3_ROOM          | STUDIO |
| 1               | 2      | 1               | 2      |
|                 |        |                 | 4      |
|                 |        |                 |        |
|                 |        |                 | 1      |



PROPOSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A\_TYPICAL 5TH FLOOR PLAN

| UNIT BREAK DOWN |        | UNIT BREAK DOWN |        |
|-----------------|--------|-----------------|--------|
| 1_ROOM          | 2_ROOM | 3_ROOM          | STUDIO |
| 1               | 2      | 1               | 2      |
|                 |        |                 | 4      |
|                 |        |                 |        |
|                 |        |                 | 1      |

# BLOCK TYPOLOGY A [G+9]

## GENERAL NOTES

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3. Drawings are not to be scaled. Only figured dimensions should be used.
4. The contractor must check and verify all dimensions before commencement of work and if necessary confirm with the architect.

## CONSTRUCTION

Approved anti-termite treatment & 1000 gauge polythene sheeting cover to be provided under all ground floor concrete slab on compacted hardcore to approval.  
DPC to be 3ply bituminous felt to be provided under all walls.

## STRUCTURAL

1. All Black cotton soil to be removed from below all building and paved surfaces
2. All reinforced concrete work will be in accordance with structural drawings.
3. Foundation depths to be determined on site to S.E approval
4. All walls less than 200mm thick to be reinforced with hoop iron at every alternate course.
5. All adjacent R.C work and masonry walls to be tied with strap irons at every course

## MECHANICAL

1. All Plumbing and Drainage Work to comply with specifications
2. S.V.P denotes soil vent pipe and to be provided at the head of the drainage
3. Where drainage is shown under driveways and slabs, to be encased in 150mm thick concrete surround.
4. All underground foul and waste drain pipes shall be of PVC to comply with BS5255
5. All ICs within building area driveway and parking to have heavy duty, double-seal airtight covers and walls to be 200mm.
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9. No cutting of concrete without express approval of the Architect or S.E
10. All testing of pipes must be coordinated with electrical and any conflicts must be resolved before works begin
11. Permanent vents denoted as P.V to be provided as shown on plan.

## ELECTRICAL

All conduits must be laid before plastering

## PROJECT:

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

## CLIENT:

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

## DRAWING TITLE:

BLOCK A\_FLOOR PLANS

SCALE: 1:100

## DRAWN BY:

ML

## CHECKED BY:

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

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

## DATE:

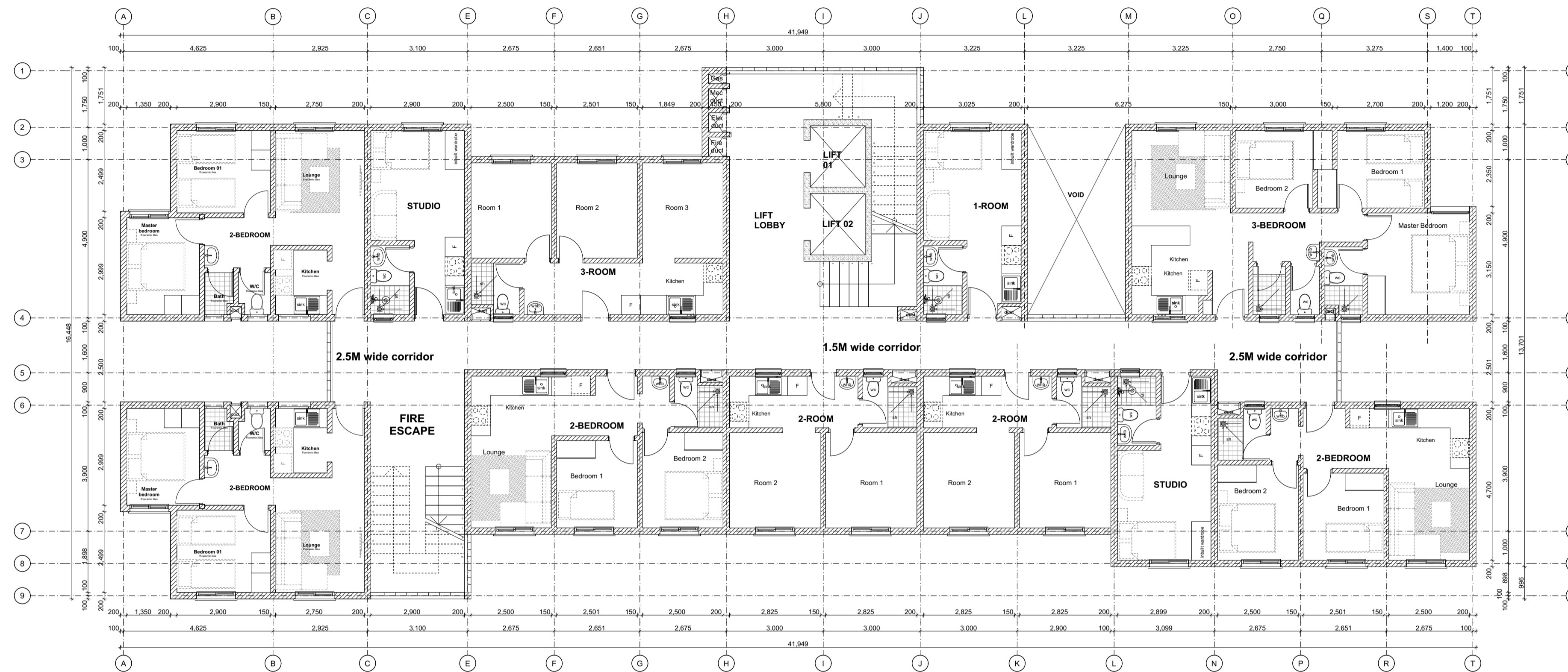
MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA

REVISION 01



PROPOSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A\_TYPICAL 6TH FLOOR PLAN

| UNIT BREAK DOWN |        | UNIT BREAK DOWN |        |           |           |
|-----------------|--------|-----------------|--------|-----------|-----------|
| 1_ROOM          | 2_ROOM | 3_ROOM          | STUDIO | 2_BEDROOM | 3_BEDROOM |
| 1               | 2      | 1               | 2      | 4         | 1         |

**GENERAL NOTES**

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2. All dimensions are in mm unless otherwise specified.
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**CONSTRUCTION**

Approved anti-termite treatment & 1000 gauge polythene sheeting cover to be provided under all ground floor concrete slab on compacted hardcore to approval.  
DPC to be 3ply bituminous felt to be provided under all walls.

**STRUCTURAL**

1. All Black cotton soil to be removed from below all building and paved surfaces
2. All reinforced concrete work will be in accordance with structural drawings.
3. Foundation depths to be determined on site to S.E approval
4. All walls less than 200mm thick to be reinforced with hoop iron at every alternate course.
5. All adjacent R.C work and masonry walls to be tied with strap irons at every course

**MECHANICAL**

1. All Plumbing and Drainage Work to comply with specifications
2. S.V.P denotes soil vent pipe and to be provided at the head of the drainage
3. Where drainage is shown under driveways and slabs, to be encased in 150mm thick concrete surround.
4. All underground foul and waste drain pipes shall be of PVC to comply with BS5255
5. All ICs within building area driveway and parking to have heavy duty, double-seal airtight covers and walls to be 200mm.
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10. All testing of pipes must be coordinated with electrical and any conflicts must be resolved before works begin
11. Permanent vents denoted as P.V to be provided as shown on plan.

**ELECTRICAL**

All conduits must be laid before plastering

**PROJECT:**

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

**CLIENT:**

STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

**DRAWING TITLE:**

BLOCK A\_FLOOR PLANS

SCALE: 1:100

**DRAWN BY:**

ML

**CHECKED BY:**

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

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

**DATE:**

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA

# BLOCK TYPOLOGY A [G+9]

REVISION 01

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**ELECTRICAL**

All conduits must be laid before plastering

**PROJECT:**

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

**CLIENT:**

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

**DRAWING TITLE:**

BLOCK A\_SECTION & ELEVATION

SCALE: 1:100

**DRAWN BY:**

ML

**CHECKED BY:**

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

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

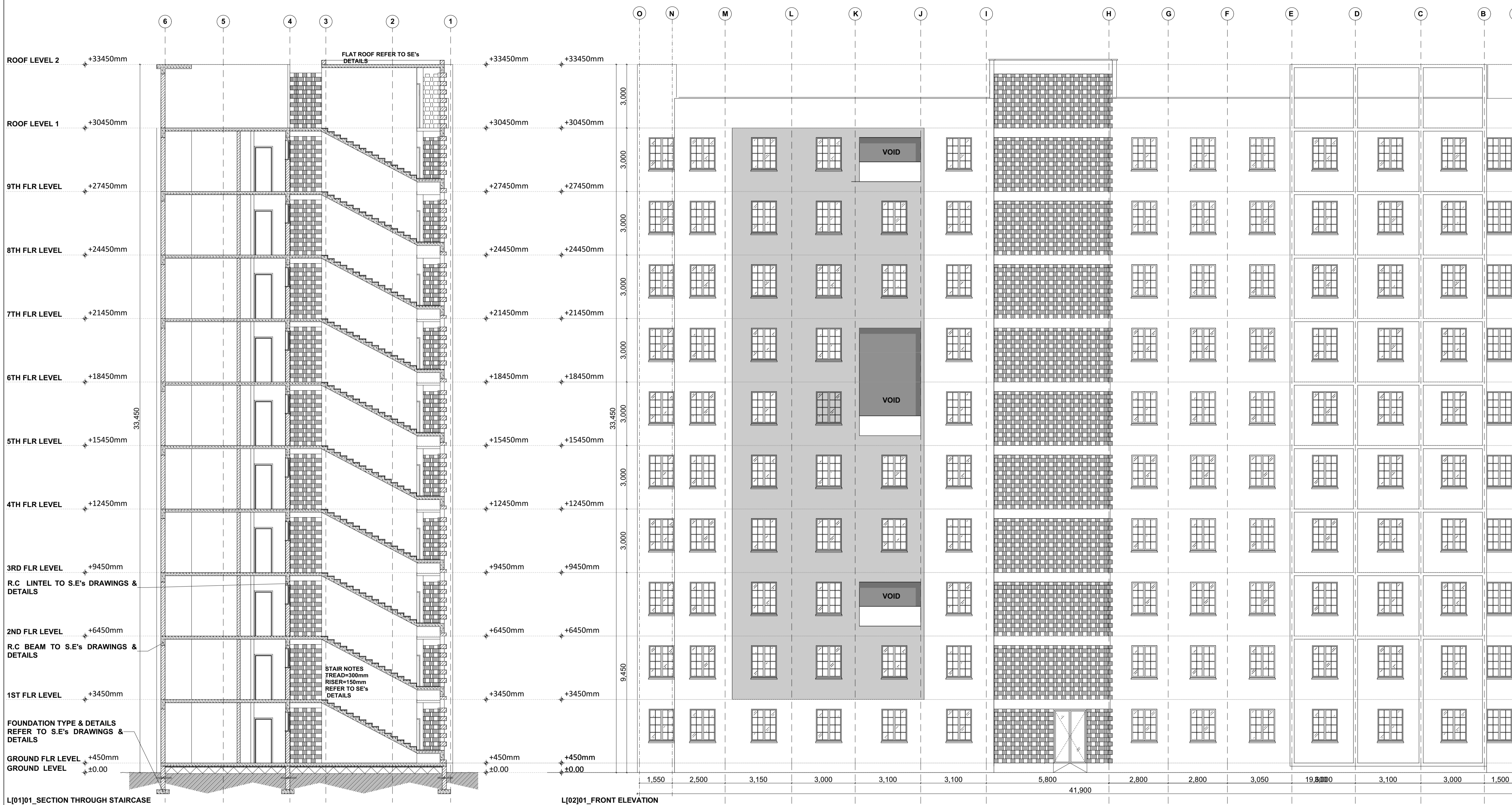
**DATE:**

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT

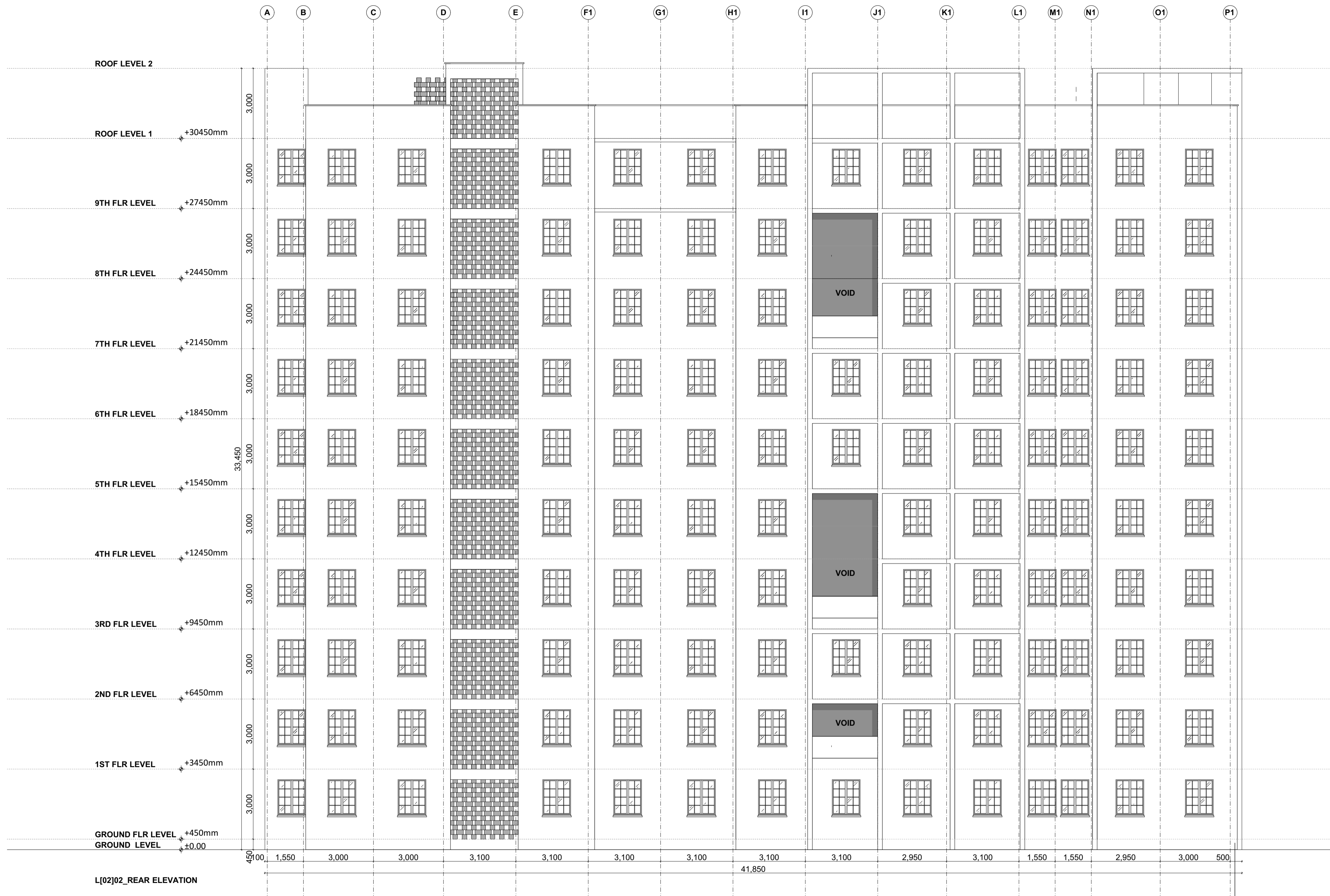


FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA



# BLOCK TYPOLOGY A [G+9]

REVISION 01



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**PROJECT:**

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

**CLIENT:**

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

**DRAWING TITLE:**

BLOCK A \_SECTION & ELEVATION

SCALE: 1:100

**DRAWN BY:**

ML

**CHECKED BY:**

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

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

**DATE:**

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT

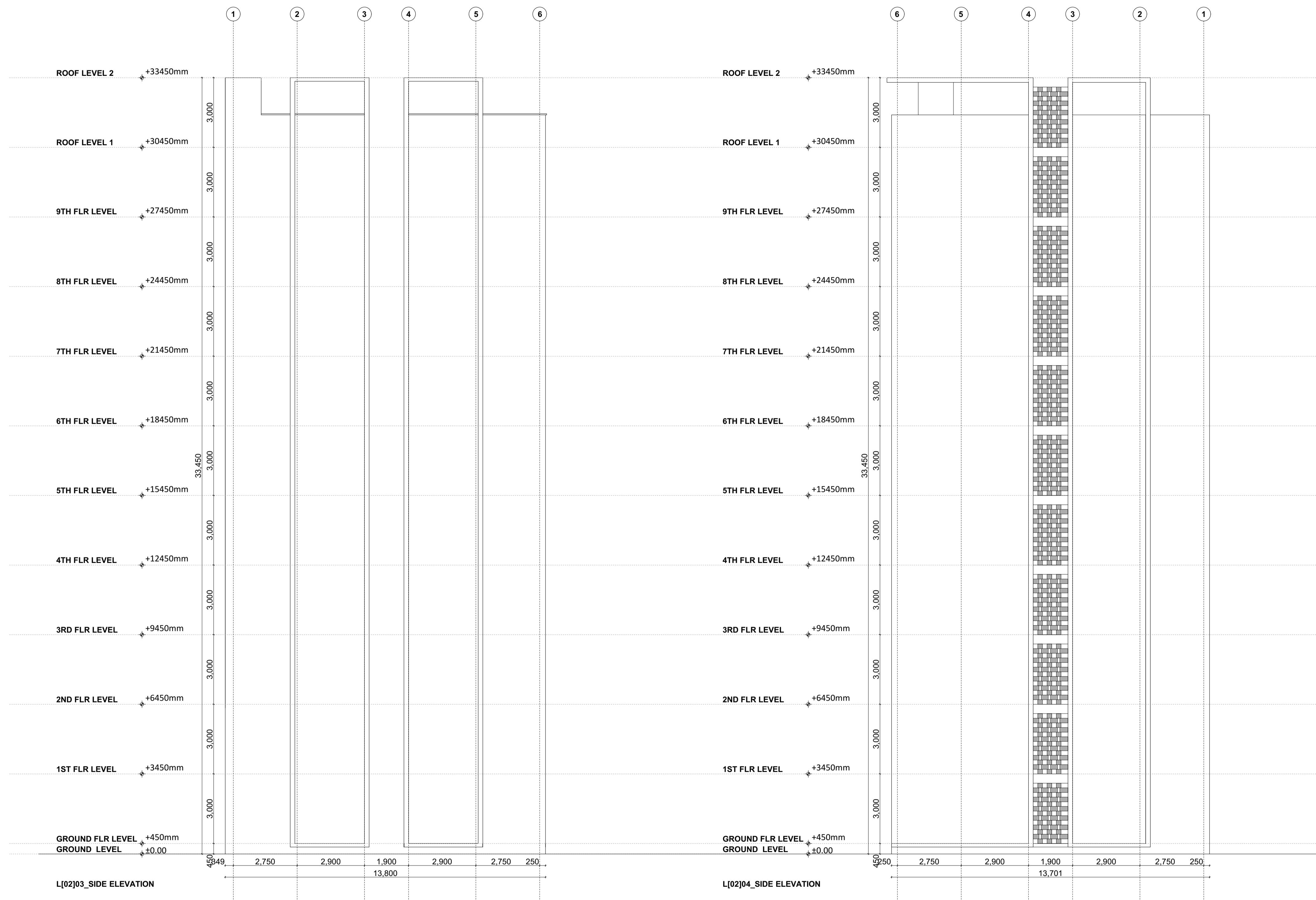


FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA

# BLOCK TYPOLOGY A [G+9]

REVISION 01





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**ELECTRICAL**

All conduits must be laid before plastering

**PROJECT:**

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

**CLIENT:**

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

**DRAWING TITLE:**

BLOCK A\_SECTION & ELEVATION

SCALE: 1:100

**DRAWN BY:**

ML

**CHECKED BY:**

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

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

**DATE:**

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA

# BLOCK TYPOLOGY A [G+9]

REVISION 01



PROPOSED REVISED TYPICAL AFFORDABLE + MARKET UNITS BLOCK TYPE B\_GROUND FLOOR PLAN

| UNIT BREAK DOWN  |           | UNIT BREAK DOWN |           |
|------------------|-----------|-----------------|-----------|
| AFFORDABLE UNITS |           | MARKET UNITS    |           |
| 2_BEDROOM        | 3_BEDROOM | 2_BEDROOM       | 3_BEDROOM |
| 1                | 1         | 3               | 3         |



PROPOSED TYPICAL AFFORDABLE + MARKET UNITS BLOCK TYPE B\_TYPICAL 1ST-9TH FLOOR LEVEL

| UNIT BREAK DOWN  |           | UNIT BREAK DOWN |           |
|------------------|-----------|-----------------|-----------|
| AFFORDABLE UNITS |           | MARKET UNITS    |           |
| 2_BEDROOM        | 3_BEDROOM | 2_BEDROOM       | 3_BEDROOM |
| 1                | 1         | 3               | 3         |

**GENERAL NOTES**

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**CONSTRUCTION**

1. Approved anti-termite treatment & 1000 gauge polythene sheeting cover to be provided under all ground floor concrete slab on compacted hardcore to approval.
2. DPC to be 3ply bituminous felt to be provided under all walls.

**STRUCTURAL**

1. All Black cotton soil to be removed from below all building and paved surfaces
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**MECHANICAL**

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11. Permanent vents denoted as P.V to be provided as shown on plan.

**ELECTRICAL**

All conduits must be laid before plastering

**PROJECT:**

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

**CLIENT:** STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

**DRAWING TITLE:**

BLOCK B\_FLOOR PLANS

SCALE: 1:100

**DRAWN BY:**

ML

**CHECKED BY:**

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

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

**DATE:**

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



REVISION 01

FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA

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**ELECTRICAL**

All conduits must be laid before plastering

**PROJECT:**

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

**CLIENT:**

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

**DRAWING TITLE:**

BLOCK B\_SECTION & ELEVATION

SCALE: 1:100

**DRAWN BY:**

ML

**CHECKED BY:**

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

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

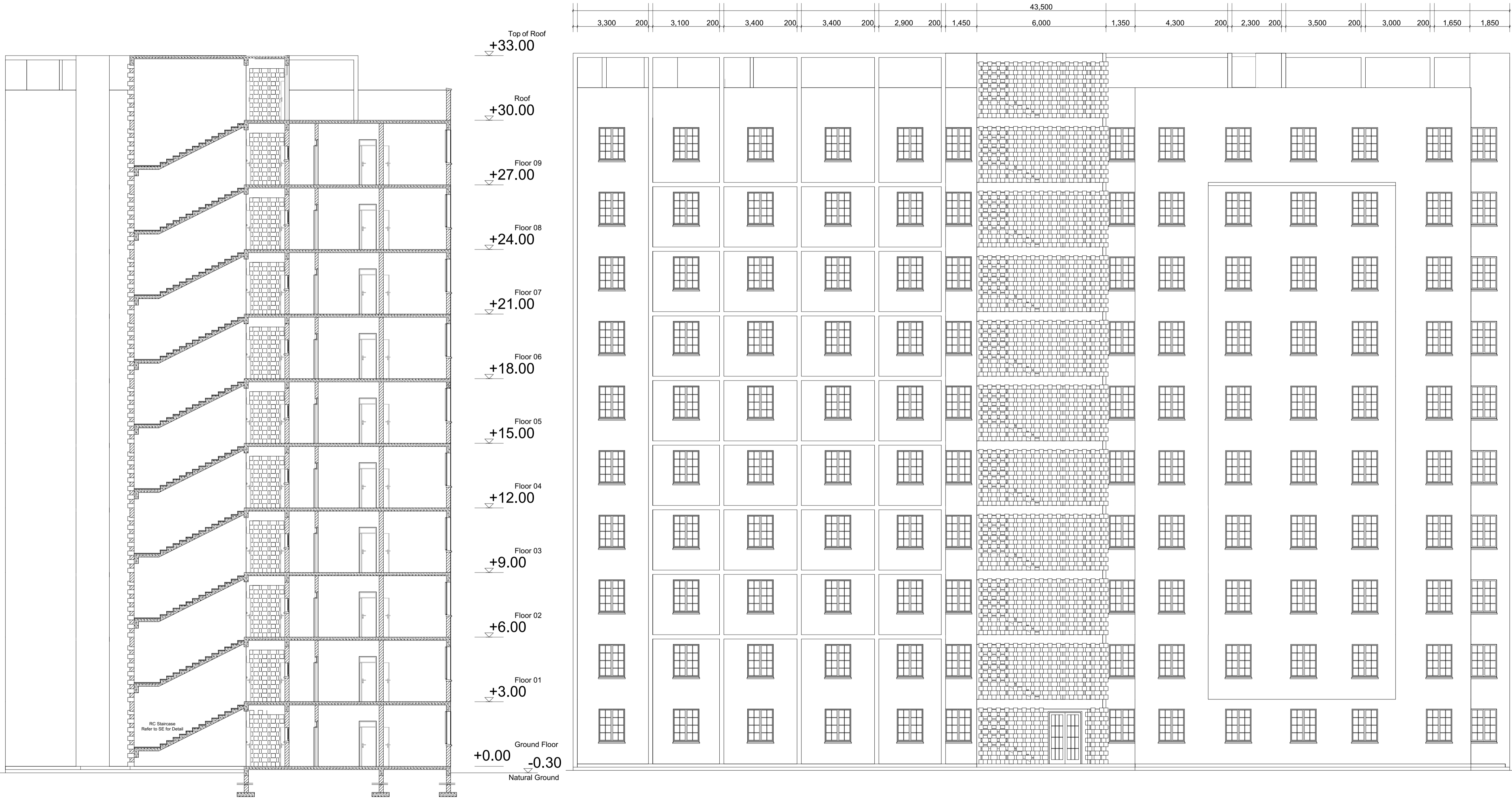
**DATE:**

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



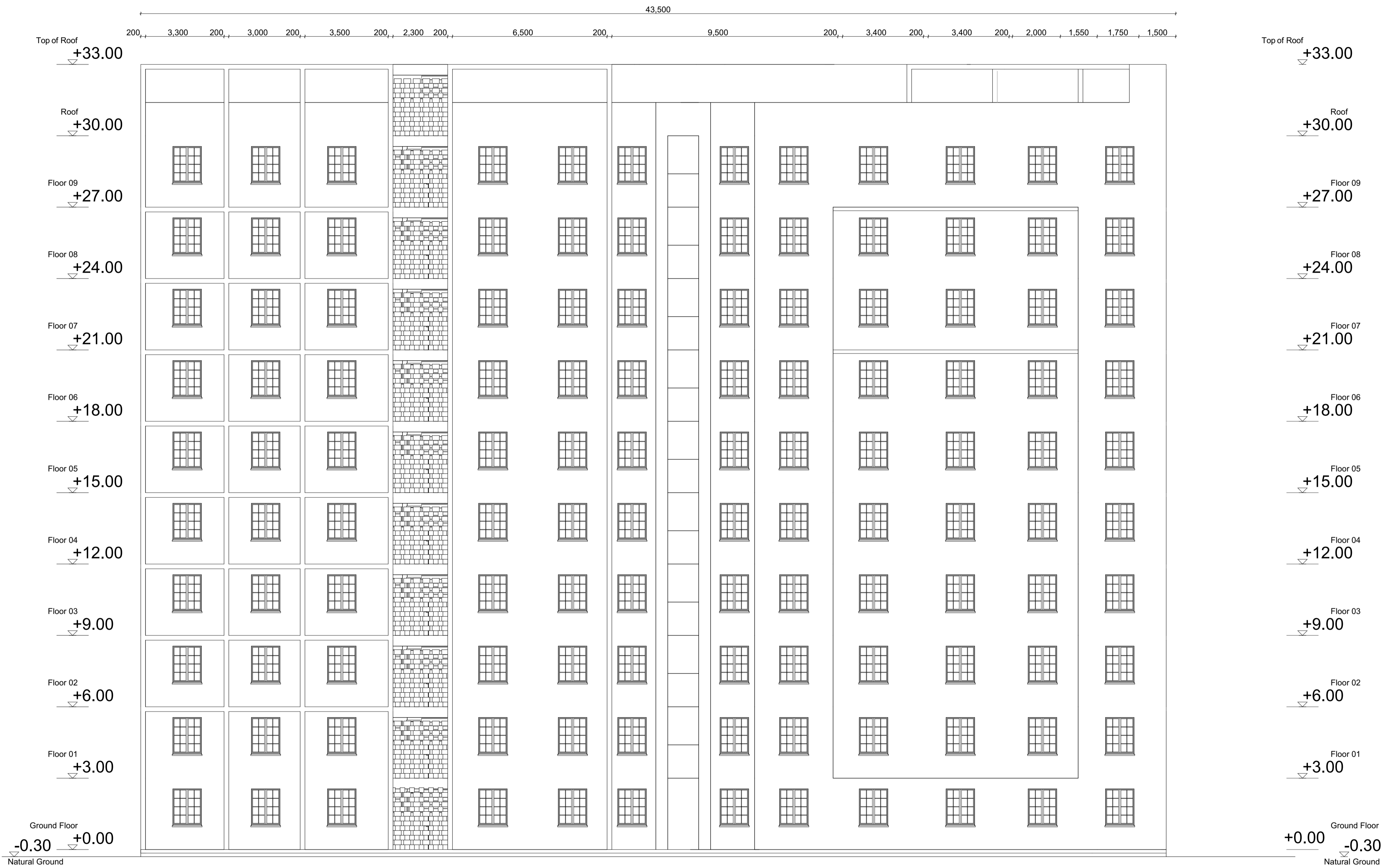
FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA



Foundation Type and Specifications to SE Details Refer to SE Drawings

# BLOCK TYPOLOGY B [G+9]

REVISION 01



# BLOCK TYPOLOGY B [G+9]

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## CONSTRUCTION

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All conduits must be laid before plastering

## PROJECT:

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

## CLIENT:

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

## DRAWING TITLE:

BLOCK B\_SECTION & ELEVATION

SCALE: 1:100

## DRAWN BY:

ML

## CHECKED BY:

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

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

## DATE:

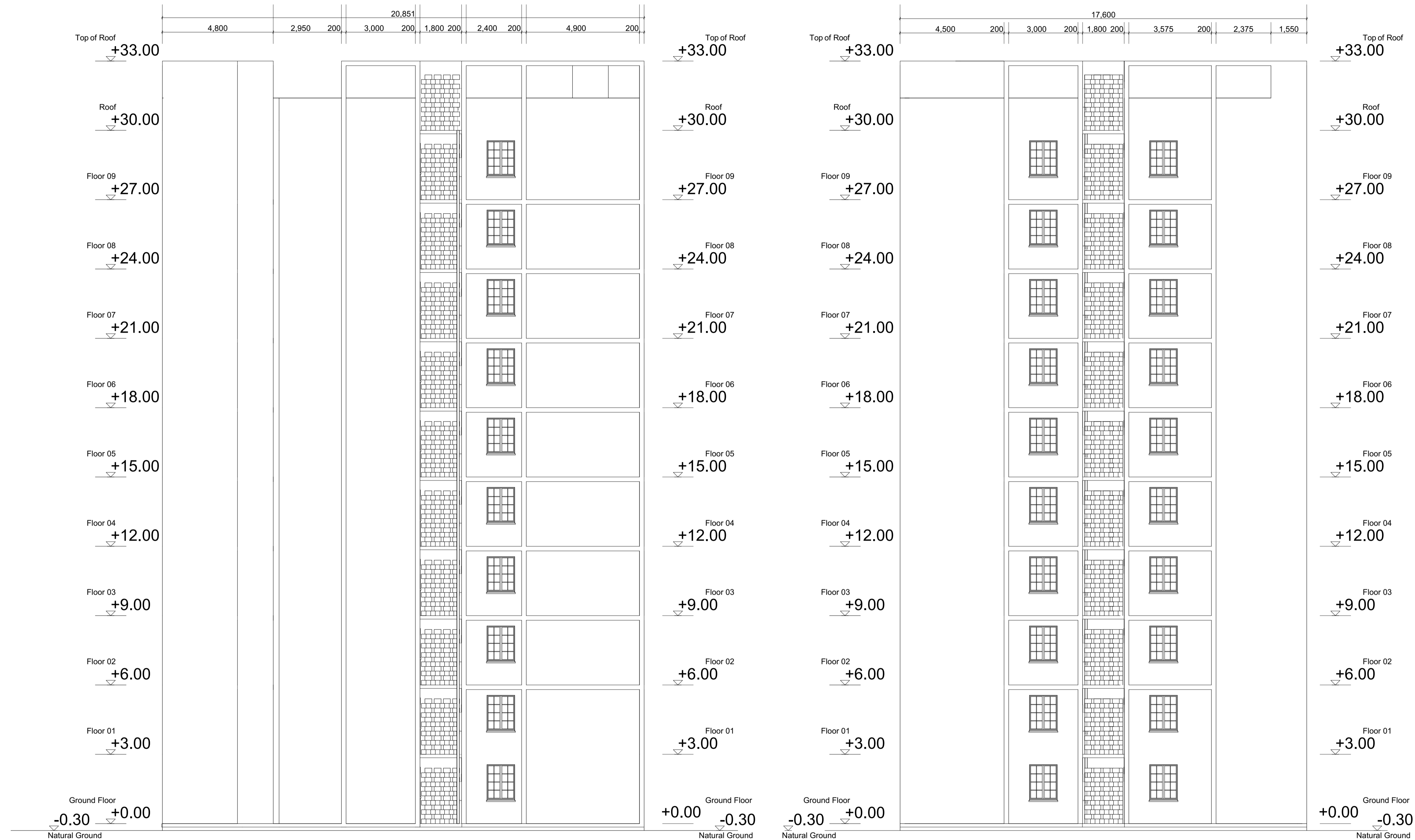
MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



REVISION 01

FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA



# BLOCK TYPOLOGY B [G+9]

## GENERAL NOTES

1. This drawing to be read in conjunction with Engineers' drawings.
2. All dimensions are in mm unless otherwise specified.
3. Drawings are not to be scaled. Only figured dimensions should be used.
4. The contractor must check and verify all dimensions before commencement of work and if necessary confirm with the architect.

## CONSTRUCTION

Approved anti-termite treatment & 1000 gauge polythene sheeting cover to be provided under all ground floor concrete slab on compacted hardcore to approval.  
DPC to be 3ply bituminous felt to be provided under all walls.

## STRUCTURAL

1. All Black cotton soil to be removed from below all building and paved surfaces
2. All reinforced concrete work will be in accordance with structural drawings.
3. Foundation depths to be determined on site to S.E approval
4. All walls less than 200mm thick to be reinforced with hoop iron at every alternate course.
5. All adjacent R.C work and masonry walls to be tied with strap irons at every course

## MECHANICAL

1. All Plumbing and Drainage Work to comply with specifications
2. S.V.P denotes soil vent pipe and to be provided at the head of the drainage
3. Where drainage is shown under driveways and slabs, to be encased in 150mm thick concrete surround.
4. All underground foul and waste drain pipes shall be of PVC to comply with BS5255
5. All ICs within building area, driveway and parking to have heavy duty, double-seal airtight covers and walls to be 200mm.
6. Minimum slope in the drain pipes to be 1%
7. No chases for pipes will be allowed in the slabs
8. Sleeves will be allowed with written approval from S.E.
9. No cutting of concrete without express approval of the Architect or S.E
10. All testing of pipes must be coordinated with electrical and any conflicts must be resolved before works begin
11. Permanent vents denoted as P.V to be provided as shown on plan.

## ELECTRICAL

All conduits must be laid before plastering

## PROJECT:

PROPOSED AFFORDABLE HOUSING DEVELOPMENT IN NGONG

## CLIENT:

Name: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

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

## DRAWING TITLE:

BLOCK B\_SECTION & ELEVATION

SCALE: 1:100

## DRAWN BY:

ML

## CHECKED BY:

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

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

## DATE:

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT

STATE DEPARTMENT FOR HOUSING & URBAN DEVELOPMENT



FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA

REVISION 01

# STRUCTURAL DRAWINGS

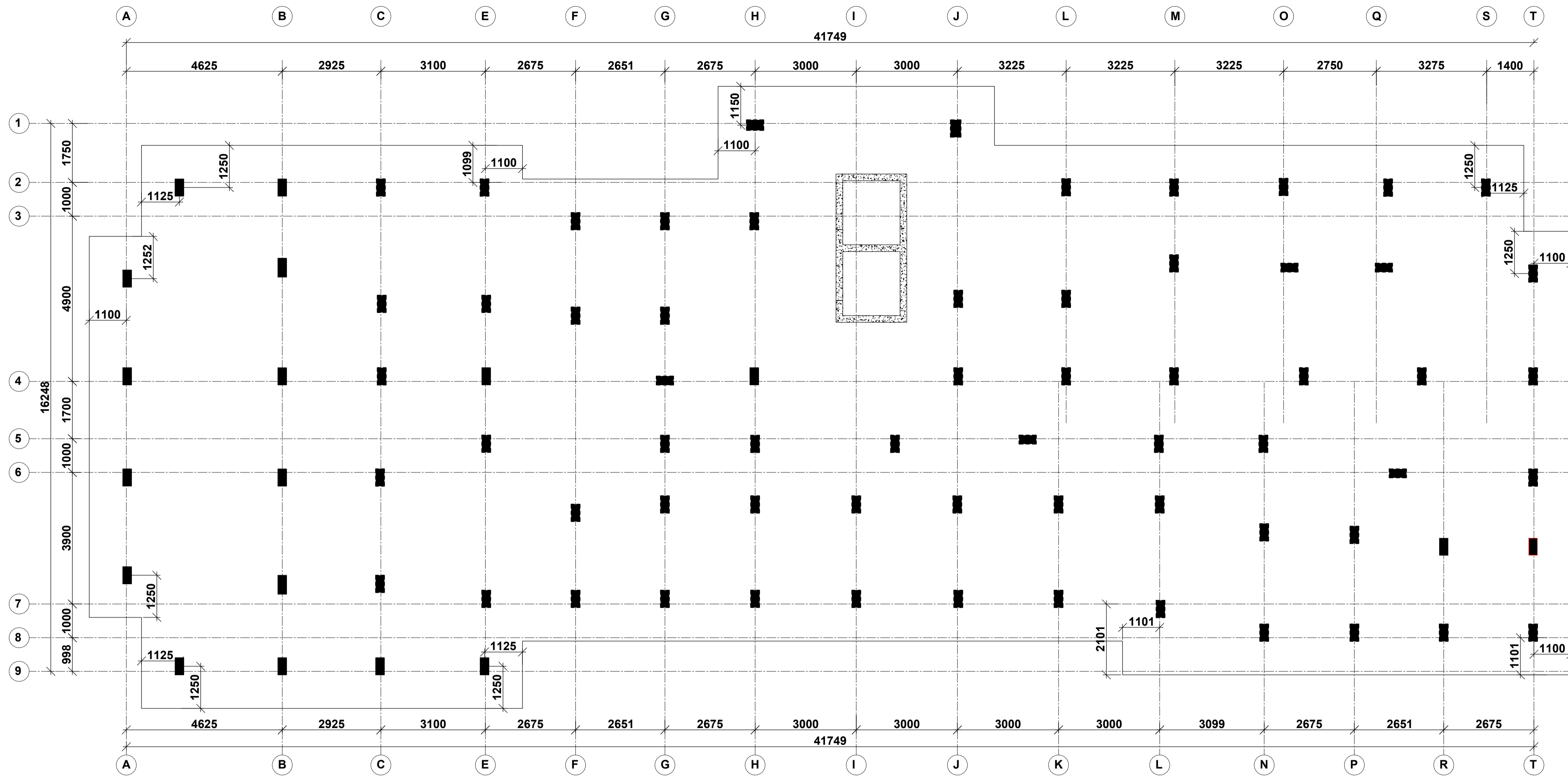
---

AFFORDABLEHOUSING PROGRAMME

# BLOCK A

---

AFFORDABLEHOUSING PROGRAMME



FOUNDATION LAYOUT  
750mm THICK RAFT  
SCALE 1:75

**NOTE:**

- Foundations to be excavated to a minimum depth of 3.5m
- Introduce a 300x200 ground beam over all the foundation wallings
- All masonry units to be machine cut blocks

**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
- All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
- Only figured dimensions to be taken from this drawing.
- Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

- Symbols: T-TMT Rebars to BS 4461: T - Top face  
B - Bottom face
- Cover to reinforcement; Slabs - 20mm,  
Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

**Client**  
MINISTRY OF LANDS, PUBLIC WORKS,  
HOUSING AND URBAN DEVELOPMENT  
STATE DEPARTMENT FOR HOUSING AND URBAN  
DEVELOPMENT

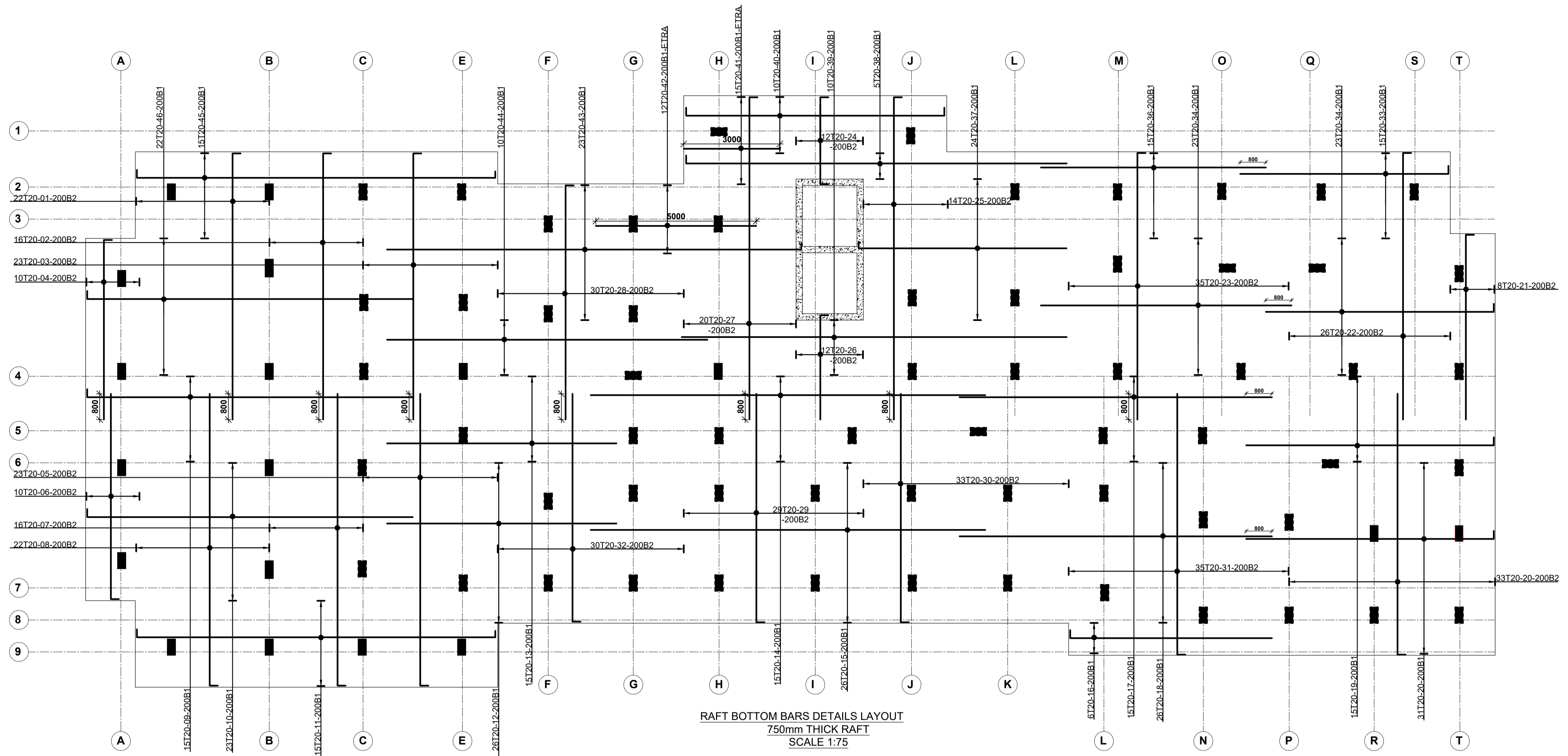
**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 17TH APRIL 2024      Scale: As shown  
Drawing Number: AHP-G+9-BLKA 01

**Project**  
PROPOSED AFFORDABLE HOUSING  
PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
FOUNDATION LAYOUT

| Revisions |             |      |
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| No.       | Description | Date |
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RAFT BOTTOM BARS DETAILS LAYOUT  
750mm THICK RAFT  
SCALE 1:75

**NOTE:**  
 1. Foundations to be excavated to a minimum depth of 3.5m  
 2. Introduce a 300x200 ground beam over all the foundation wallings  
 3. All masonry units to be machine cut blocks

**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
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 7. Cover to reinforcement; Slabs - 20mm,  
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 8. All structural steel be grade 43A.  
 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

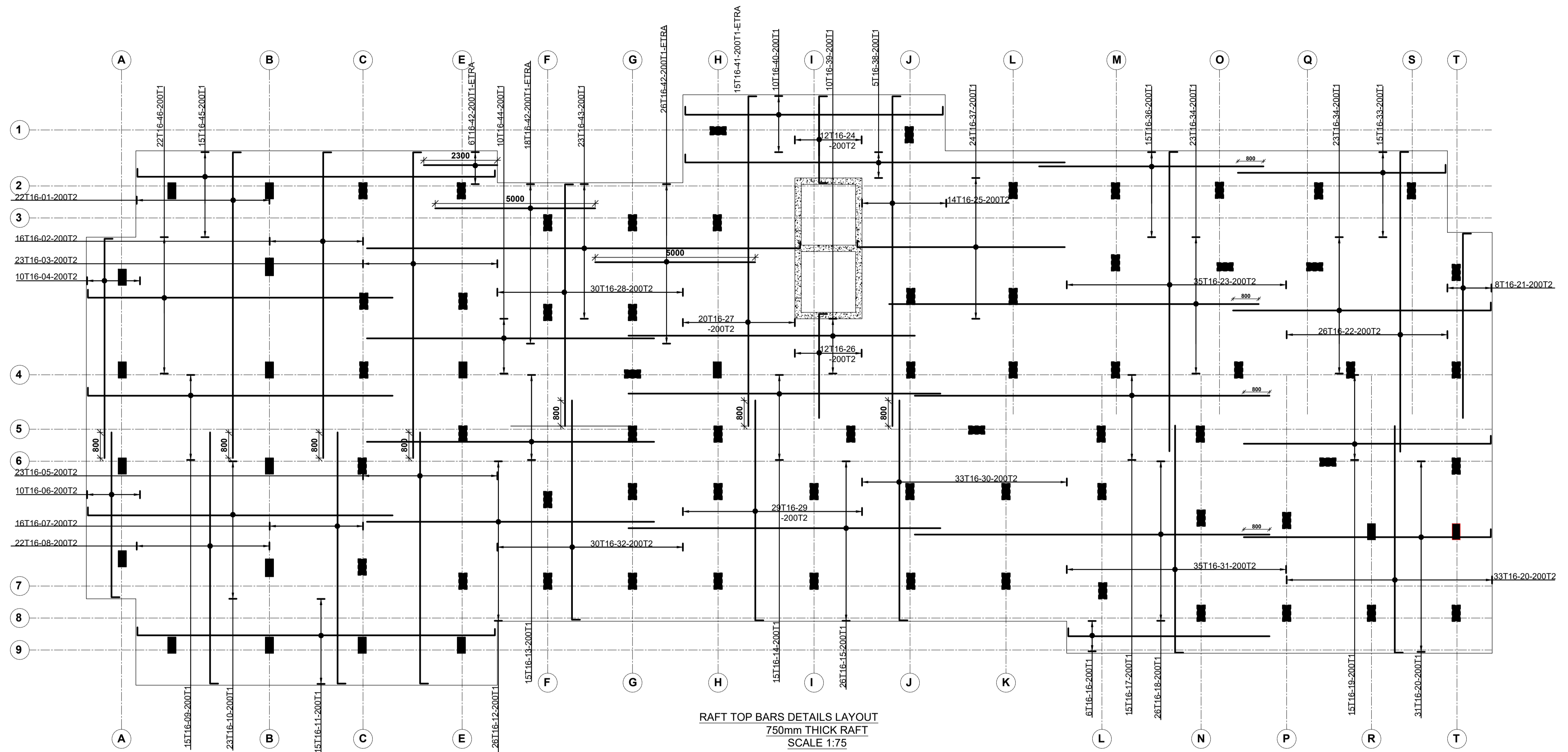
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 18TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 02

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
 RAFT BOTTOM BAR DETAILS.

| Revisions |             |      |
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RAFT TOP BARS DETAILS LAYOUT  
750mm THICK RAFT  
SCALE 1:75

**NOTE:**

- Foundations to be excavated to a minimum depth of 3.5m
- Introduce a 300x200 ground beam over all the foundation wallings
- All masonry units to be machine cut blocks

**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
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6. Symbols: T-TMT Rebars to BS 4461: T - Top face  
B - Bottom face  
 7. Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm  
 8. All structural steel be grade 43A.  
 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

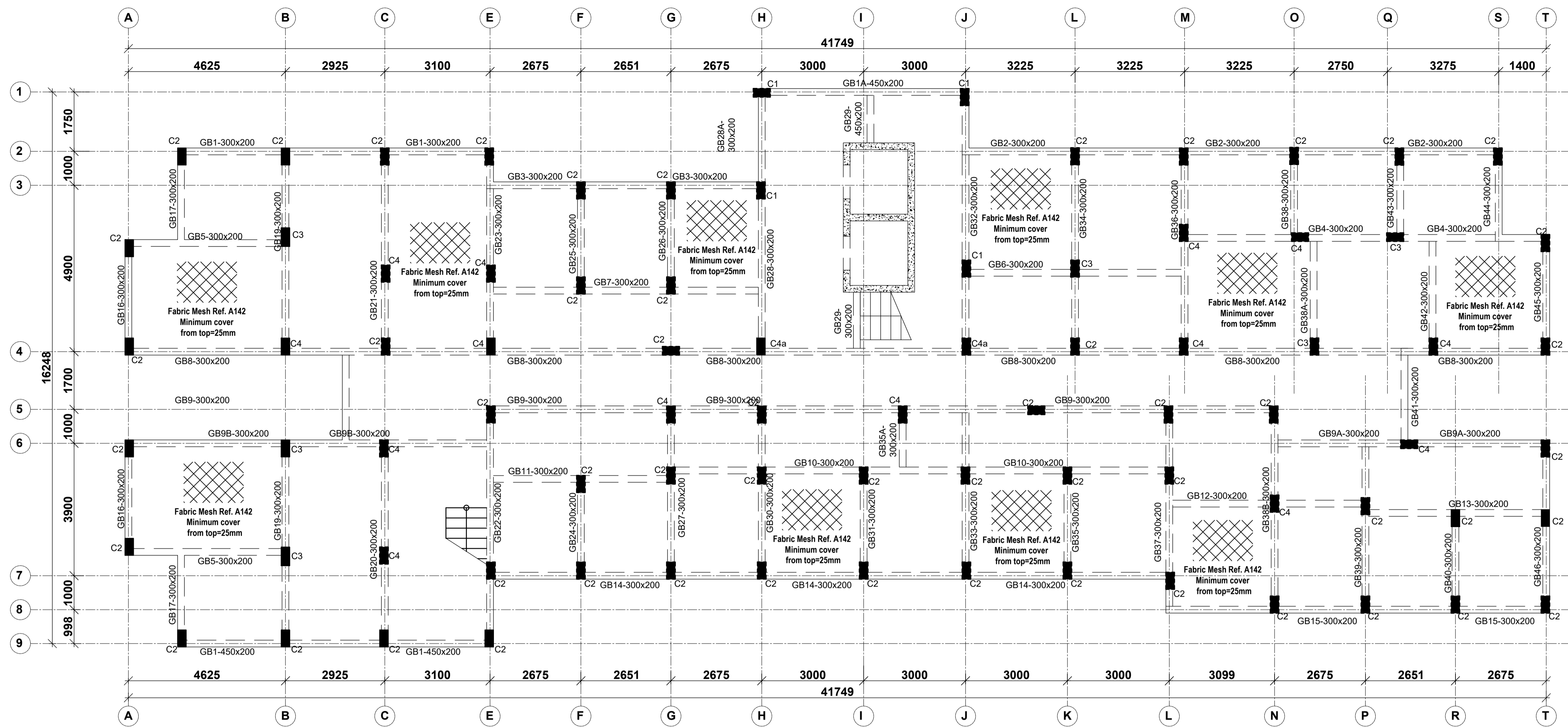
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

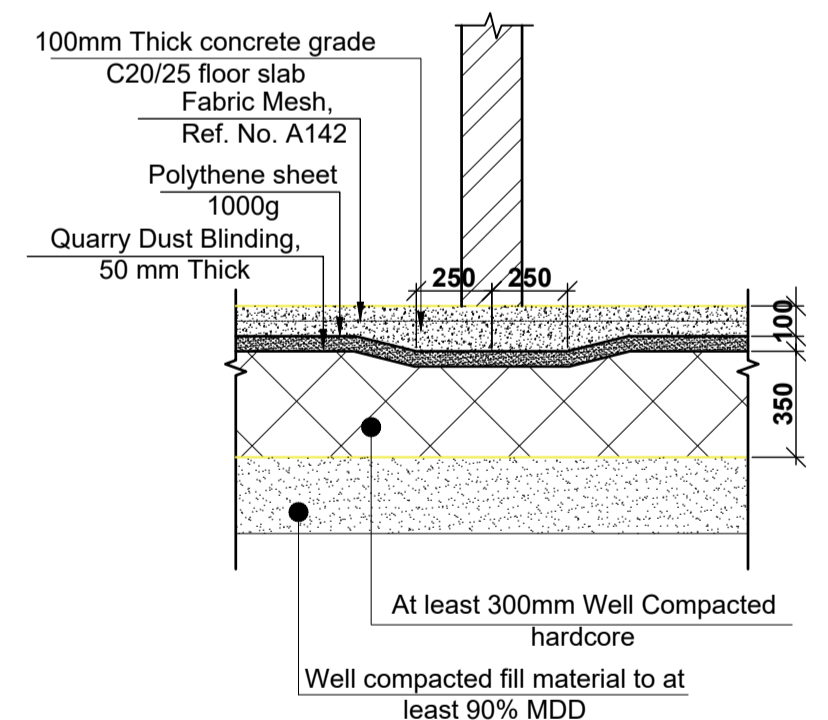
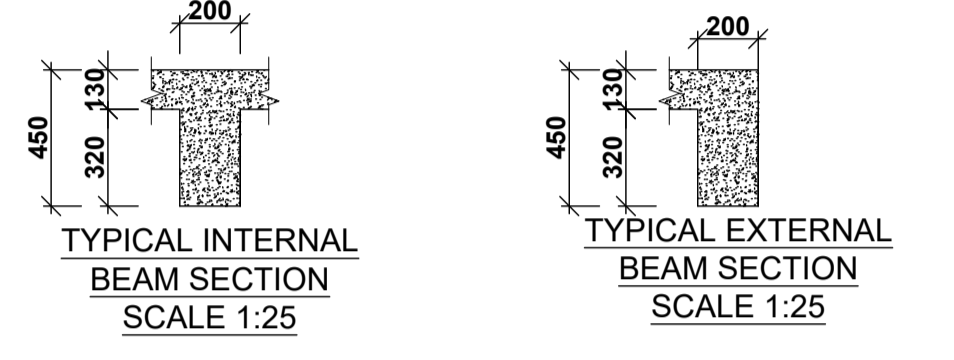
Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 18TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 03

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
 RAFT TOP BAR DETAILS.

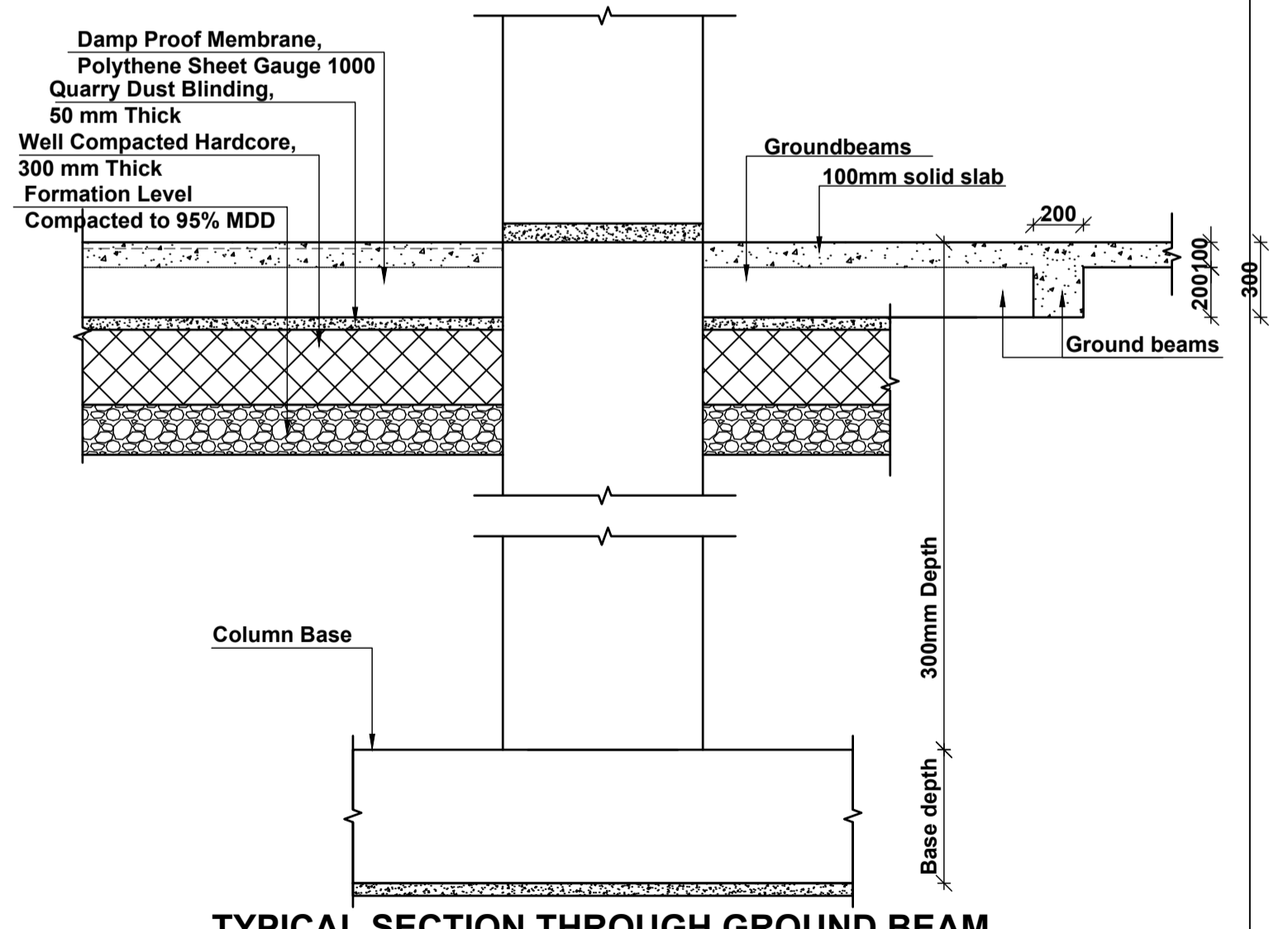
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GROUND FLOOR LAYOUT  
100mm THICK SOLID SLAB ON GRADE  
SCALE 1:75



TYPICAL SLAB THICKENING THROUGH WALLS WITHOUT GROUND BEAMS  
SCALE 1:25



TYPICAL SECTION THROUGH GROUND BEAM  
SCALE 1:25

**NOTE:**  
1. Foundations to be excavated to a minimum depth of 3.5m  
2. Introduce a 300x200 ground beam over all the foundation wallings  
3. All masonry units to be machine cut blocks

**NOTES**  
1. All dimensions are in millimetres unless otherwise stated.  
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
4. Only figured dimensions to be taken from this drawing.  
5. Any discrepancy in dimensions to be reported to the project consultants i.e. architect or engineer.

6. Symbols: T-TMT Rebars to BS 4461: T - Top face B - Bottom face  
7. Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm  
8. All structural steel be grade 43A.  
9. All welds are 6mm thick.  
10. All structural steel to be painted with anti-rust primer paint.

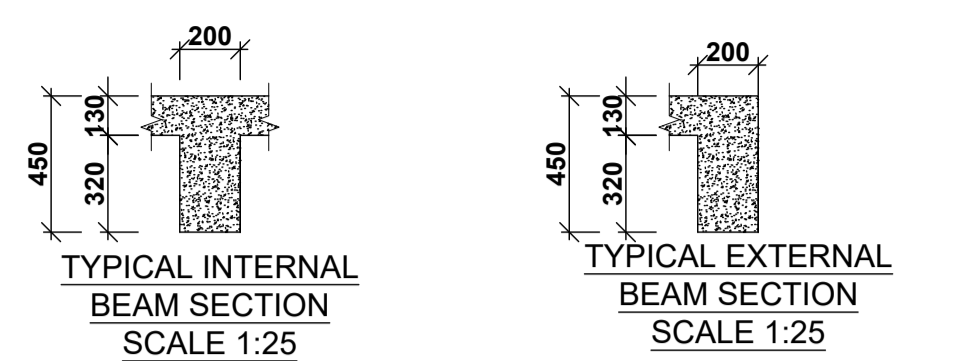
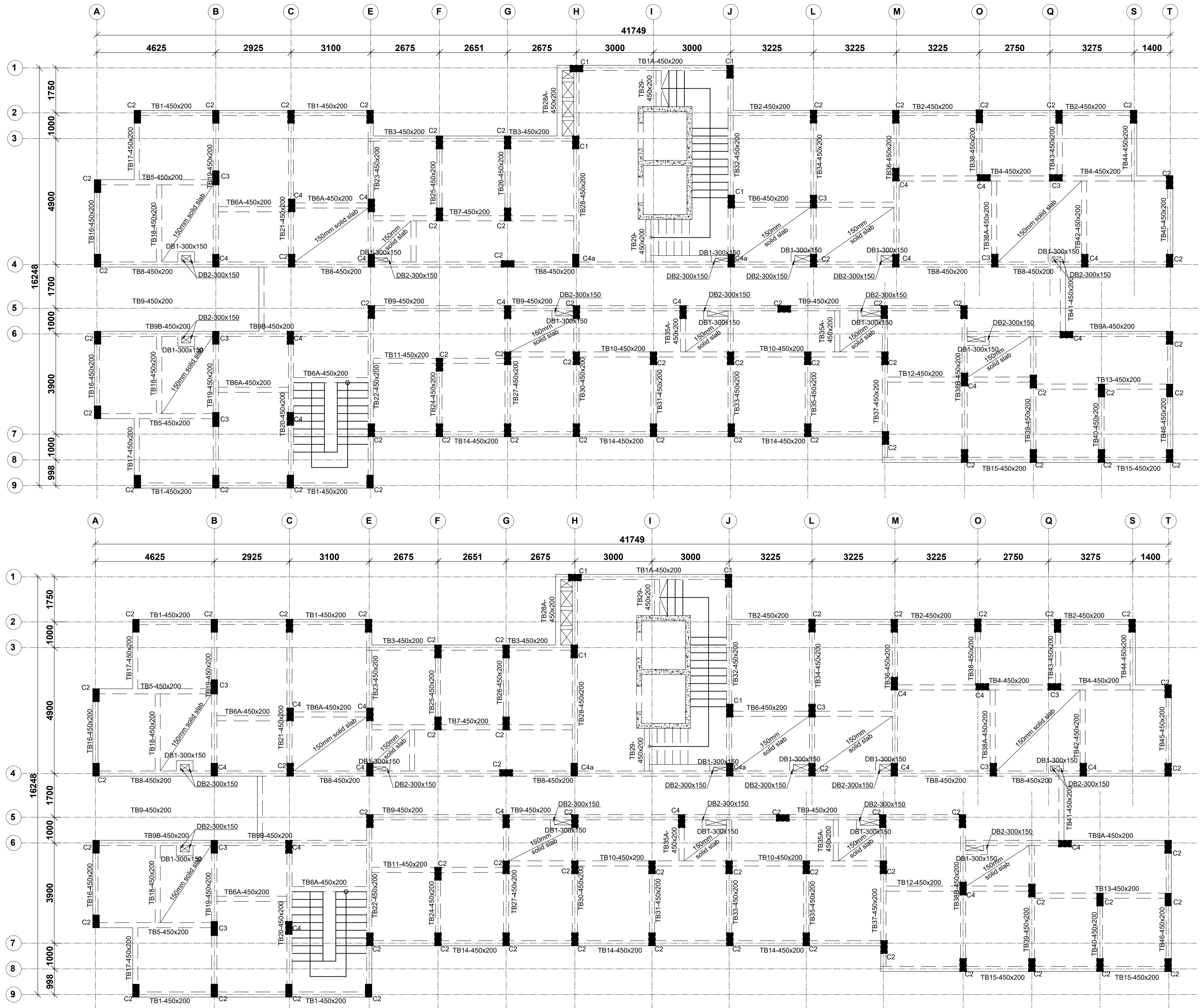
**Client**  
MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT  
STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H Checked by: R.M.O  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 17TH APRIL 2024 Scale: As shown  
Drawing Number: AHP-G+9-BLKA 04

**Project**  
PROPOSED AFFORDABLE HOUSING PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
GROUND FLOOR LAYOUT

| Revisions |             |      |
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| No.       | Description | Date |
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TYPICAL 1ST FLOOR LAYOUT  
130mm THICK SOLID SLAB UNLESS SPECIFIED OTHERWISE  
SCALE 1:75

TYPICAL 2ND & 9TH FLOOR LAYOUT  
130mm THICK SOLID SLAB UNLESS SPECIFIED OTHERWISE  
SCALE 1:75

**NOTE:**  
 1. Foundations to be excavated to a minimum depth of 3.5m  
 2. Introduce a 300x200 ground beam over all the foundation wallings  
 3. All masonry units to be machine cut blocks

**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
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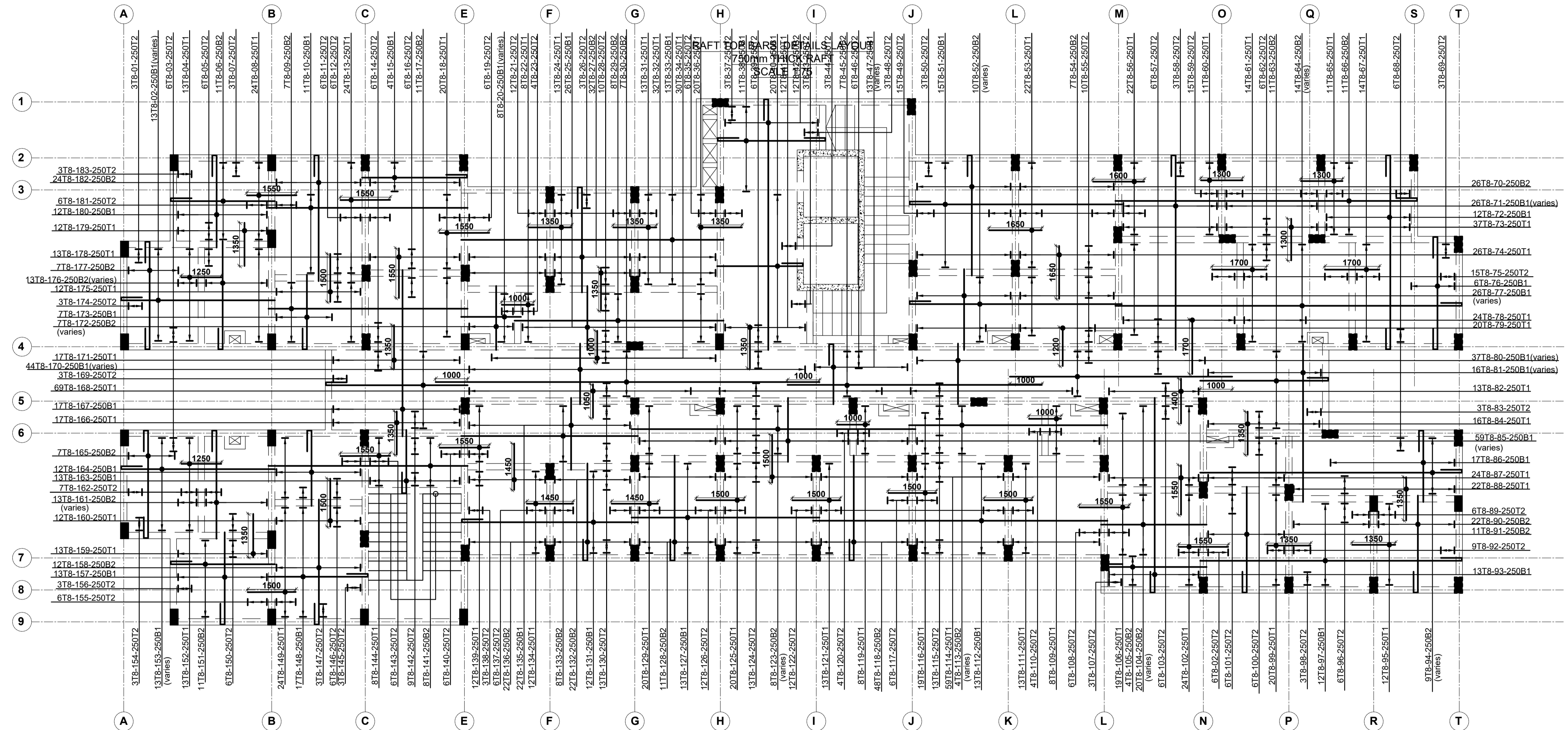
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H  
 Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024  
 Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 05

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
 TYPICAL FLOOR LAYOUTS

| Revisions |             |      |
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TYPICAL 1ST FLOOR SLAB DETAILS  
 130mm THICK SOLID SLAB UNLESS  
 SPECIFIED OTHERWISE  
 SCALE 1:75

**NOTE:**  
 1. Foundations to be excavated to a minimum depth of 3.5m  
 2. Introduce a 300x200 ground beam over all the foundation wallings  
 3. All masonry units to be machine cut blocks

**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
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 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

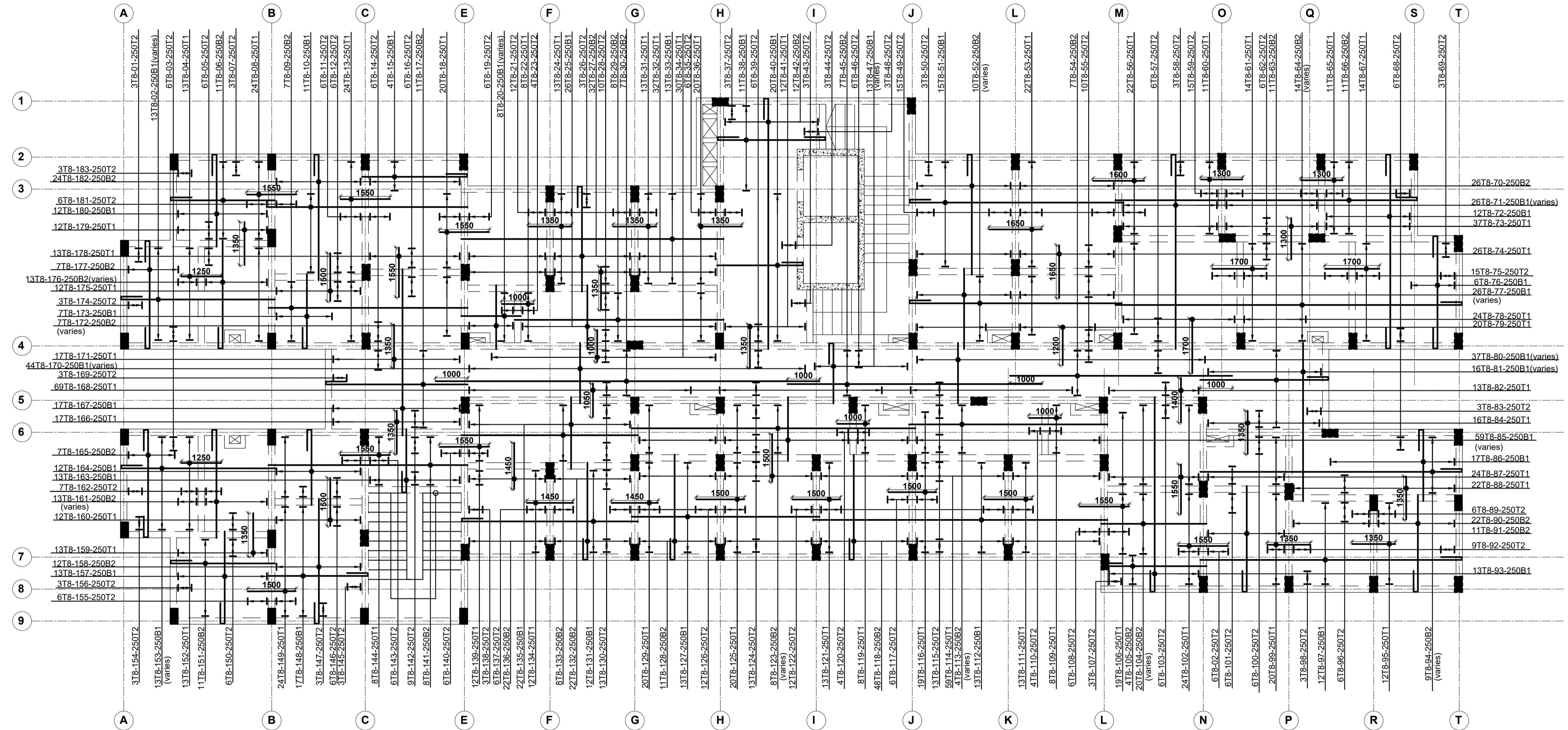
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 06

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
 TYPICAL 1ST FLOOR SLAB DETAILS

| Revisions |             |      |
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| No.       | Description | Date |
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TYPICAL 2ND & 9TH FLOOR SLAB DETAILS  
 130mm THICK SOLID SLAB UNLESS  
 SPECIFIED OTHERWISE  
 SCALE 1:75

**NOTE:**

- Foundations to be excavated to a minimum depth of 3.5m
- Introduce a 300x200 ground beam over all the foundation wallings
- All masonry units to be machine cut blocks

**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
- All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
- Only figured dimensions to be taken from this drawing.
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6. Symbols: T-TMT Rebars to BS 4461: T - Top face  
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- Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

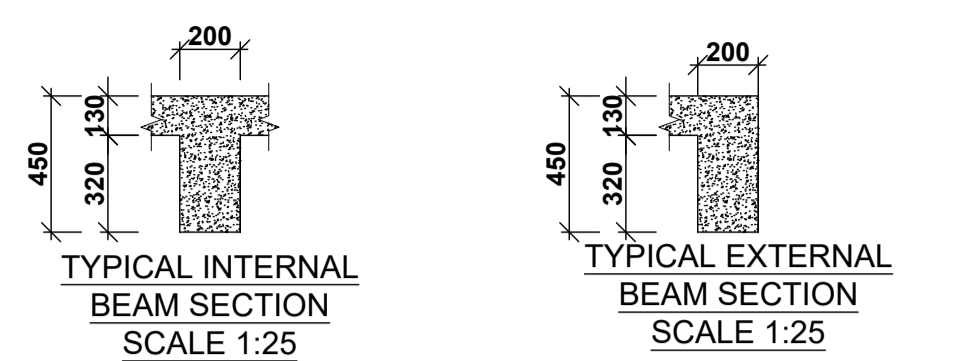
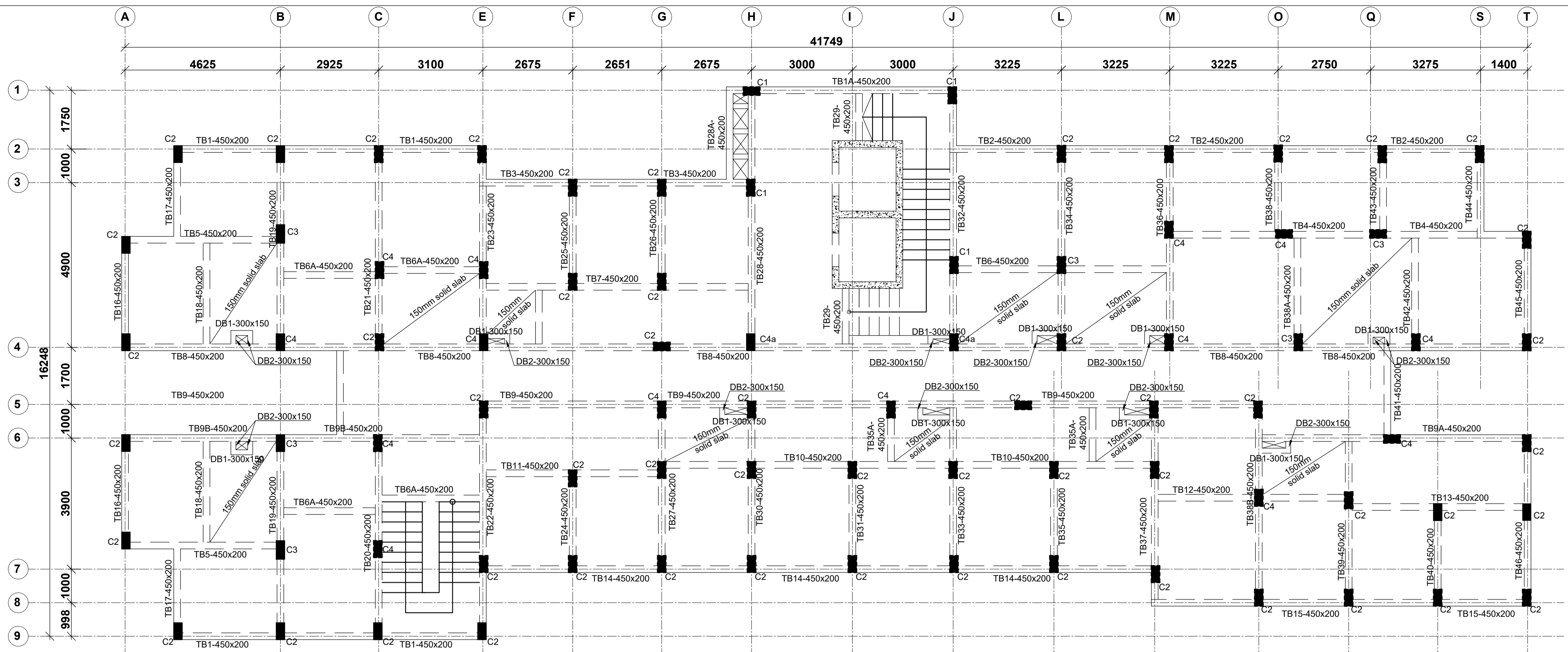
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

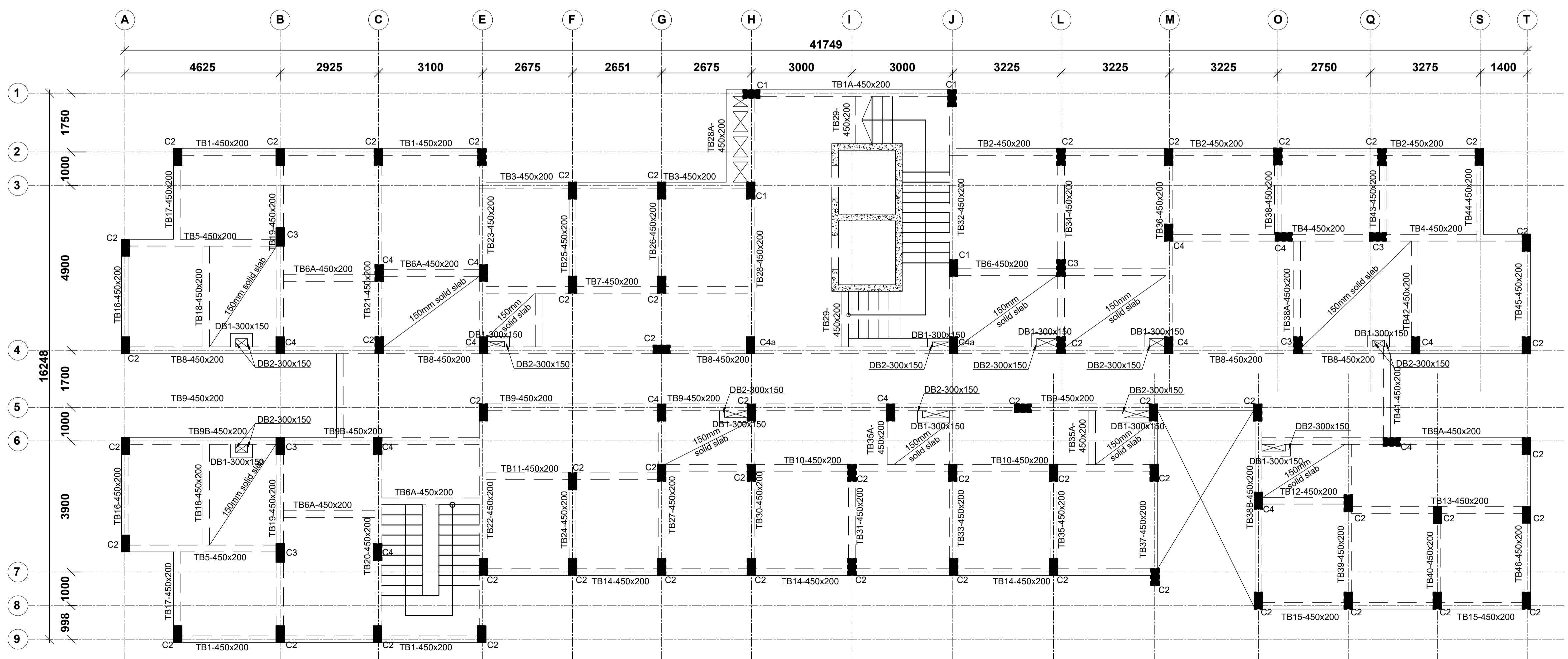
Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 07

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title** TYPICAL 2ND & 9TH  
 FLOOR SLAB DETAILS

| Revisions |             |      |
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| No.       | Description | Date |
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TYPICAL 3RD & 7TH FLOOR LAYOUT  
130mm THICK SOLID SLAB UNLESS SPECIFIED OTHERWISE  
SCALE 1:75



TYPICAL 4TH & 8TH FLOOR LAYOUT  
130mm THICK SOLID SLAB UNLESS SPECIFIED OTHERWISE  
SCALE 1:75

**NOTE:**  
1. Foundations to be excavated to a minimum depth of 3.5m  
2. Introduce a 300x200 ground beam over all the foundation wallings  
3. All masonry units to be machine cut blocks

**NOTES**  
1. All dimensions are in millimetres unless otherwise stated.  
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9. All welds are 6mm thick.  
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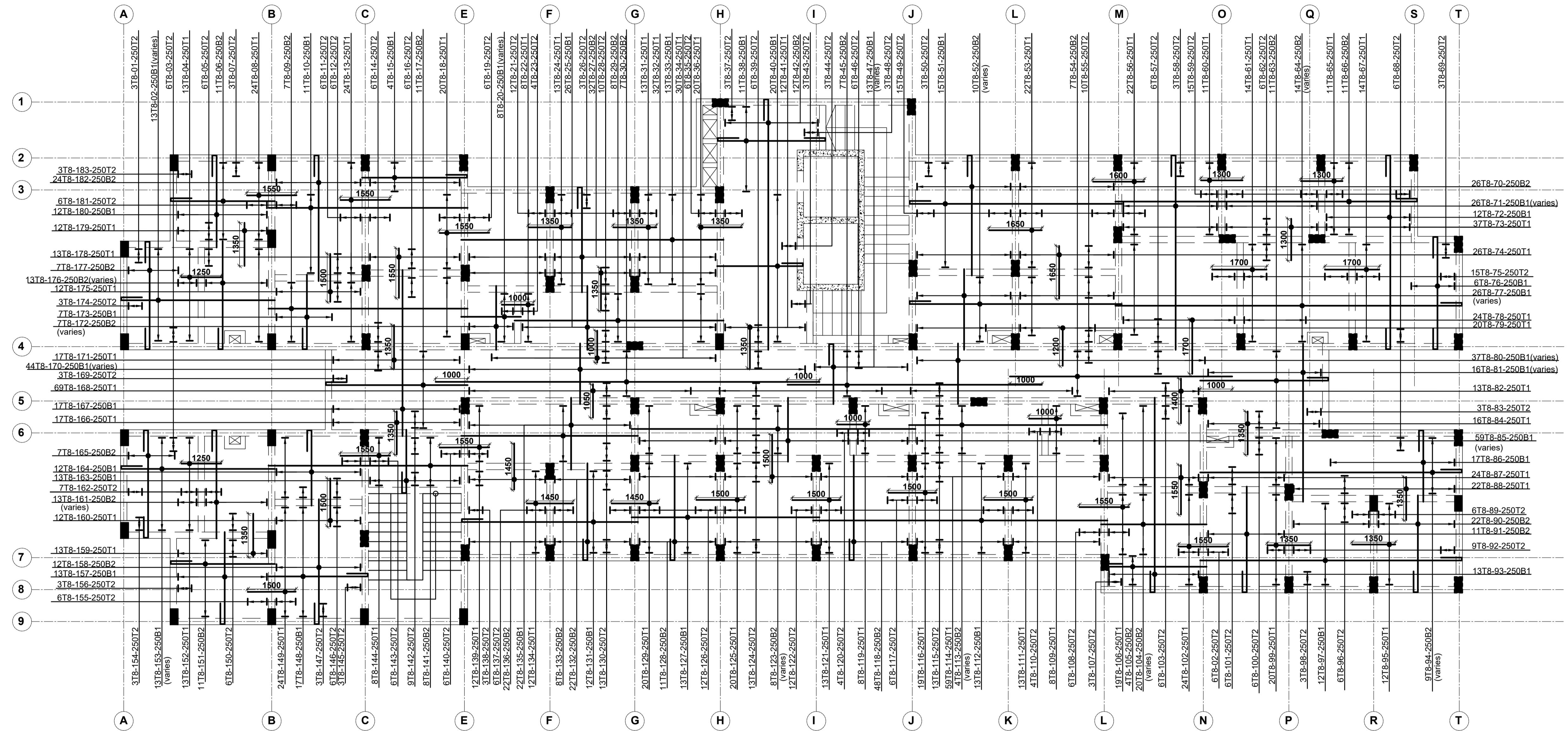
**Client**  
MINISTRY OF LANDS, PUBLIC WORKS,  
HOUSING AND URBAN DEVELOPMENT  
STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H  
Checked by: R.M.O  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 17TH APRIL 2024  
Scale: As shown  
Drawing Number: AHP-G+9-BLKA 08

**Project**  
PROPOSED AFFORDABLE HOUSING PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
TYPICAL FLOOR LAYOUTS

| Revisions |             |      |
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| No.       | Description | Date |
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TYPICAL 3RD & 7TH FLOOR SLAB DETAILS  
 130mm THICK SOLID SLAB UNLESS  
 SPECIFIED OTHERWISE  
 SCALE 1:75

**NOTE:**

- Foundations to be excavated to a minimum depth of 3.5m
- Introduce a 300x200 ground beam over all the foundation wallings
- All masonry units to be machine cut blocks

**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
- All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
- Only figured dimensions to be taken from this drawing.
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- Symbols: T-TMT Rebars to BS 4461: T - Top face  
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- Cover to reinforcement; Slabs - 20mm,  
Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

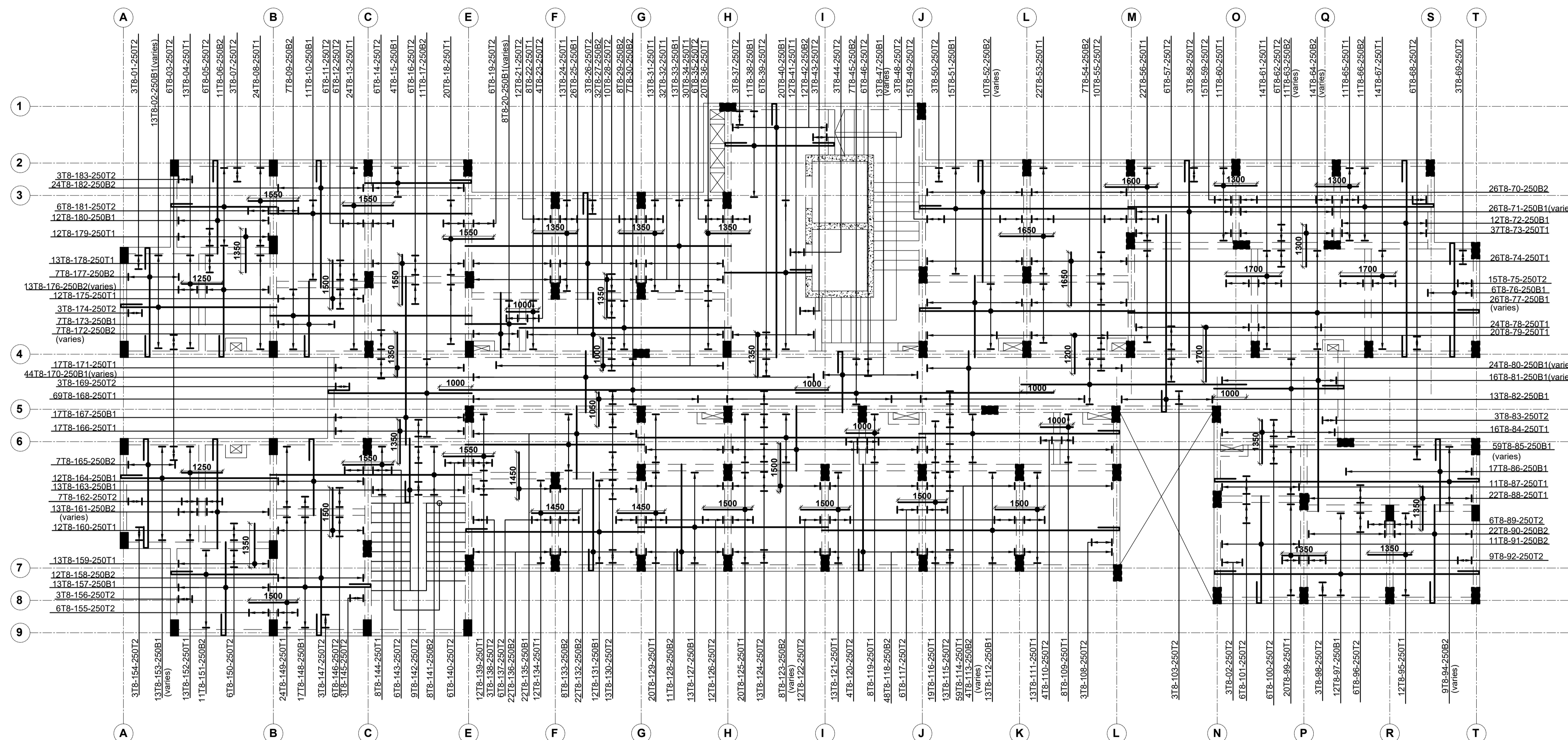
**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 09

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title** TYPICAL 3RD & 7TH  
 FLOOR SLAB DETAILS

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
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|           |             |      |
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TYPICAL 4TH & 8TH FLOOR SLAB DETAILS  
 130mm THICK SOLID SLAB UNLESS  
 SPECIFIED OTHERWISE  
 SCALE 1:75

**NOTE:**

- Foundations to be excavated to a minimum depth of 3.5m
- Introduce a 300x200 ground beam over all the foundation wallings
- All masonry units to be machine cut blocks

**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
- All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
- Only figured dimensions to be taken from this drawing.
- Any discrepancy in dimensions to be reported to the project consultants i.e. architect or engineer.

6. Symbols: T-TMT Rebars to BS 4461: T - Top face  
 B - Bottom face

- Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

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

STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

**STRUCTURAL ENGINEER:**

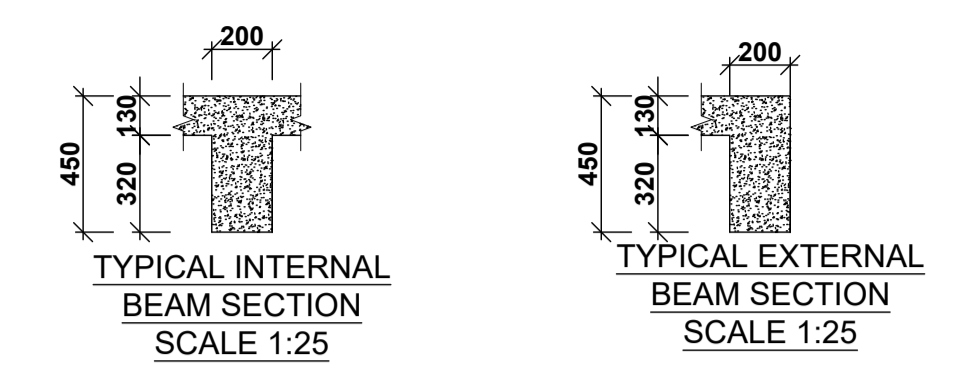
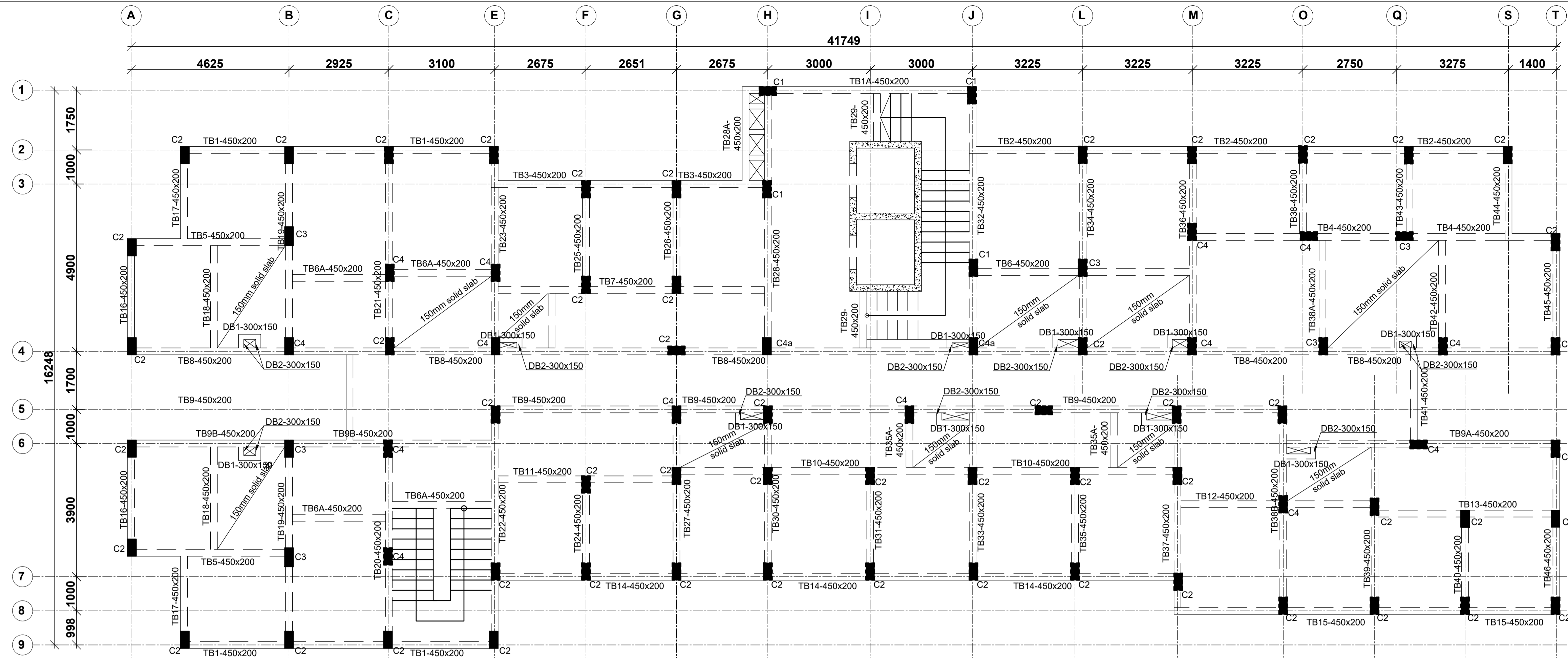
Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT

Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 10

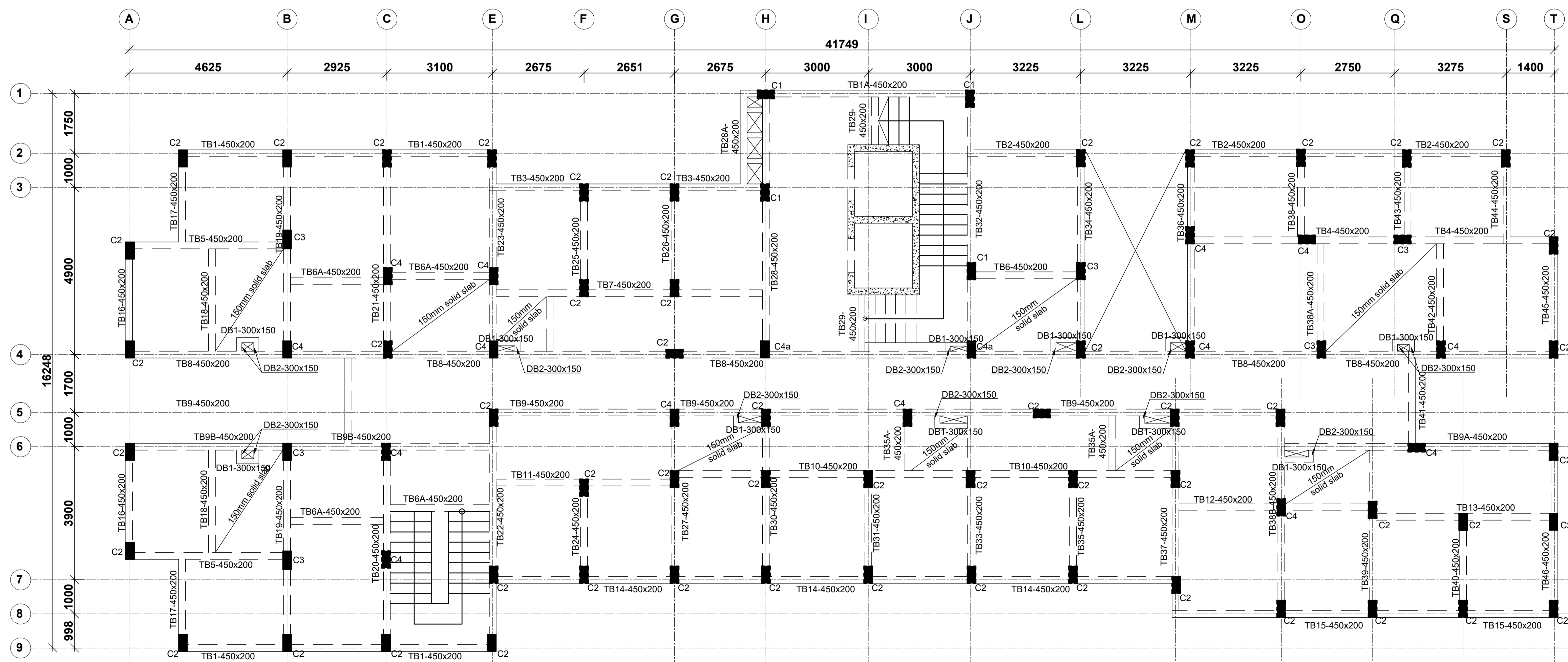
**Project**  
 PROPOSED AFFORDABLE HOUSING PROGRAM-G+9 GENERIC BLOCK A.

**Title**  
 TYPICAL 4TH & 8TH FLOOR SLAB DETAILS

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |



TYPICAL 5TH FLOOR LAYOUT  
130mm THICK SOLID SLAB UNLESS SPECIFIED OTHERWISE  
SCALE 1:75



TYPICAL 6TH FLOOR LAYOUT  
130mm THICK SOLID SLAB UNLESS SPECIFIED OTHERWISE  
SCALE 1:75

**NOTE:**  
1. Foundations to be excavated to a minimum depth of 3.5m  
2. Introduce a 300x200 ground beam over all the foundation wallings  
3. All masonry units to be machine cut blocks

**NOTES**  
1. All dimensions are in millimetres unless otherwise stated.  
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
4. Only figured dimensions to be taken from this drawing.  
5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

6. Symbols: T-TMT Rebars to BS 4461: T - Top face B - Bottom face  
7. Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm  
8. All structural steel be grade 43A.  
9. All welds are 6mm thick.  
10. All structural steel to be painted with anti-rust primer paint.

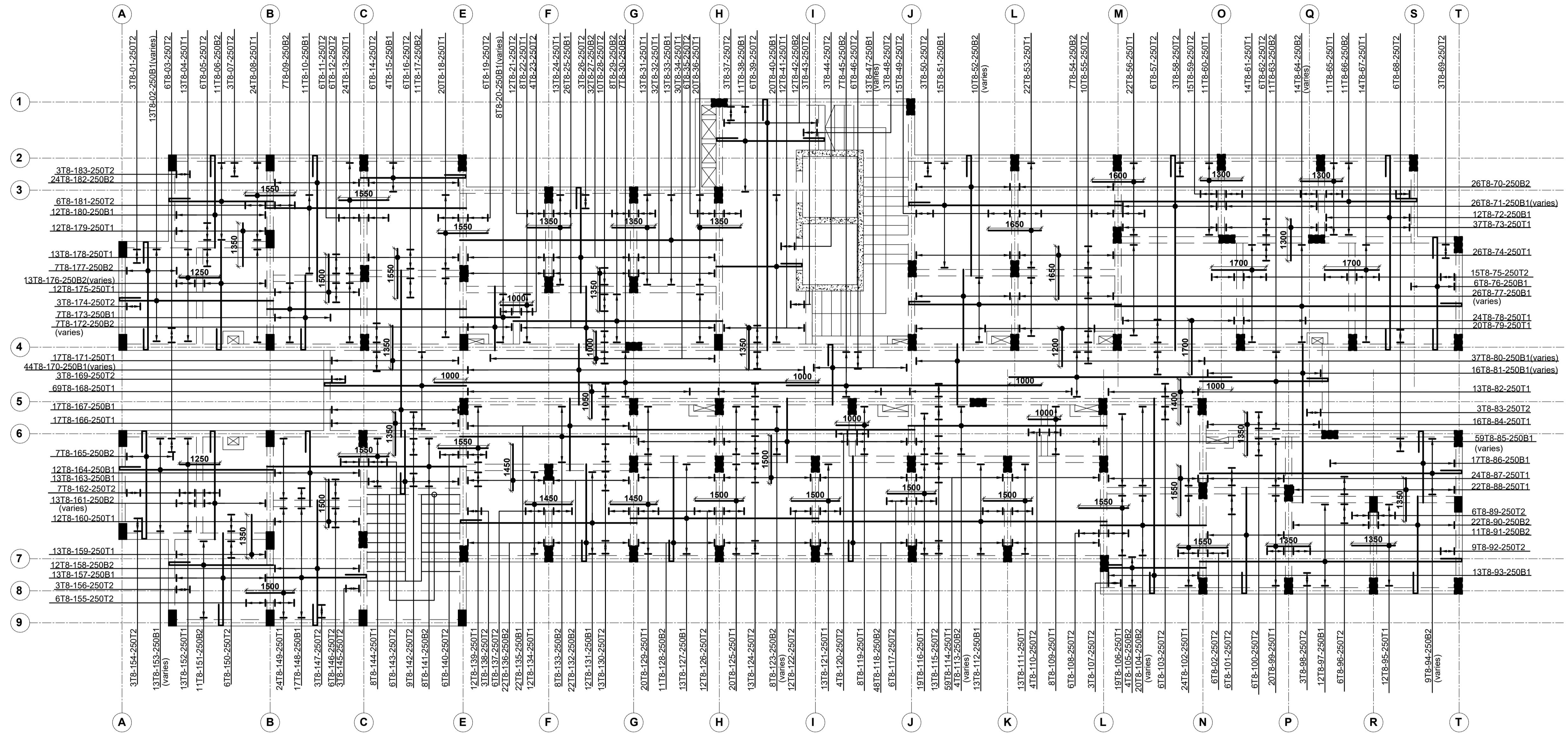
**Client**  
MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT  
STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H Checked by: R.M.O  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 17TH APRIL 2024 Scale: As shown  
Drawing Number: AHP-G+9-BLKA 11

**Project**  
PROPOSED AFFORDABLE HOUSING PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
TYPICAL FLOOR LAYOUTS

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



TYPICAL 5TH FLOOR SLAB DETAILS  
 130mm THICK SOLID SLAB UNLESS  
 SPECIFIED OTHERWISE  
 SCALE 1:75

**NOTE:**

- Foundations to be excavated to a minimum depth of 3.5m
- Introduce a 300x200 ground beam over all the foundation wallings
- All masonry units to be machine cut blocks

**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
- All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
- Only figured dimensions to be taken from this drawing.
- Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

6. Symbols: T-TMT Rebars to BS 4461: T - Top face  
 B - Bottom face

- Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

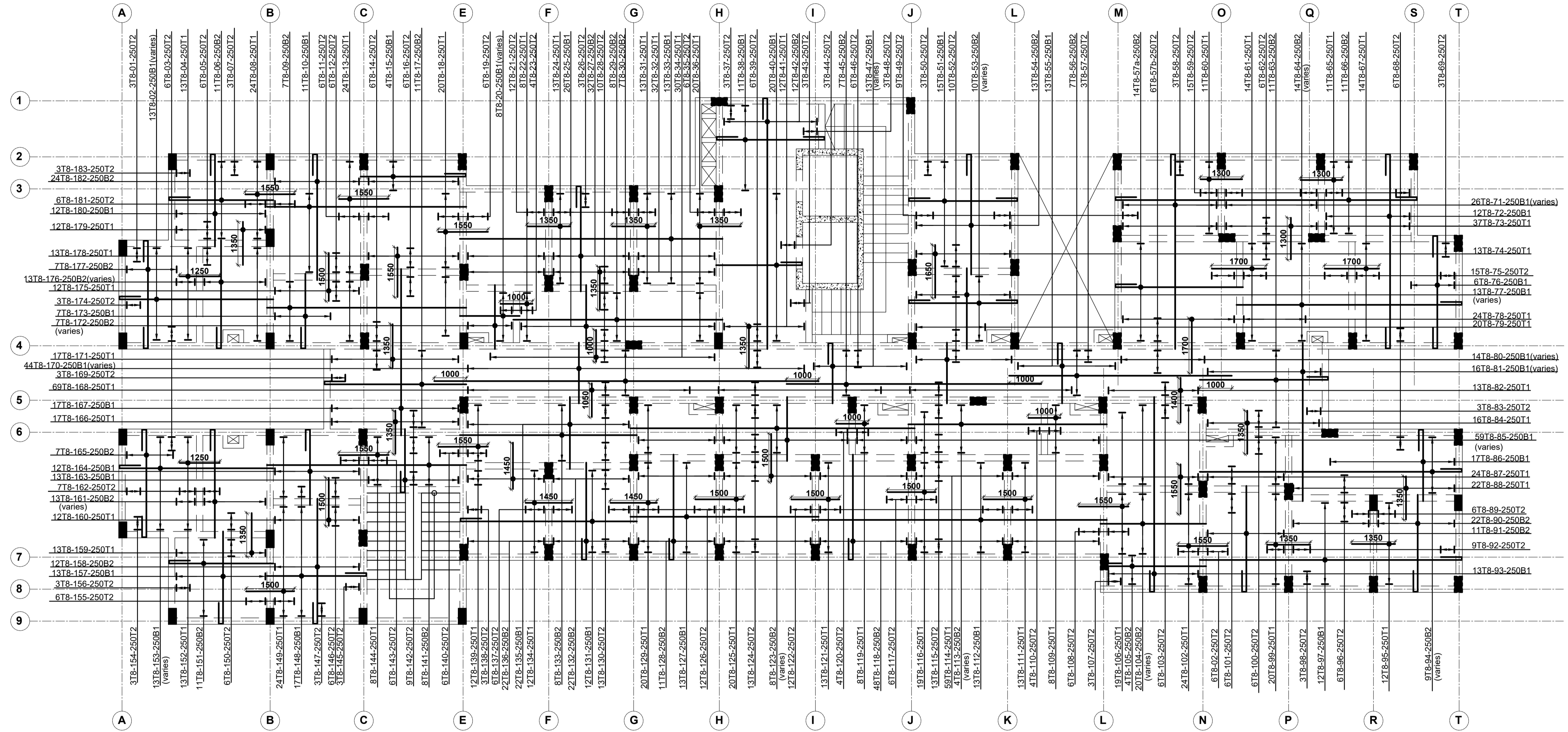
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 12

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
 TYPICAL 5TH FLOOR SLAB DETAILS

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



TYPICAL 6TH FLOOR SLAB DETAILS  
 130mm THICK SOLID SLAB UNLESS  
 SPECIFIED OTHERWISE  
 SCALE 1:75

**NOTE:**

1. Foundations to be excavated to a minimum depth of 3.5m
2. Introduce a 300x200 ground beam over all the foundation wallings
3. All masonry units to be machine cut blocks

**NOTES**

1. All dimensions are in millimetres unless otherwise stated.
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
4. Only figured dimensions to be taken from this drawing.
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 B - Bottom face

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8. All structural steel be grade 43A.
9. All welds are 6mm thick.
10. All structural steel to be painted with anti-rust primer paint.

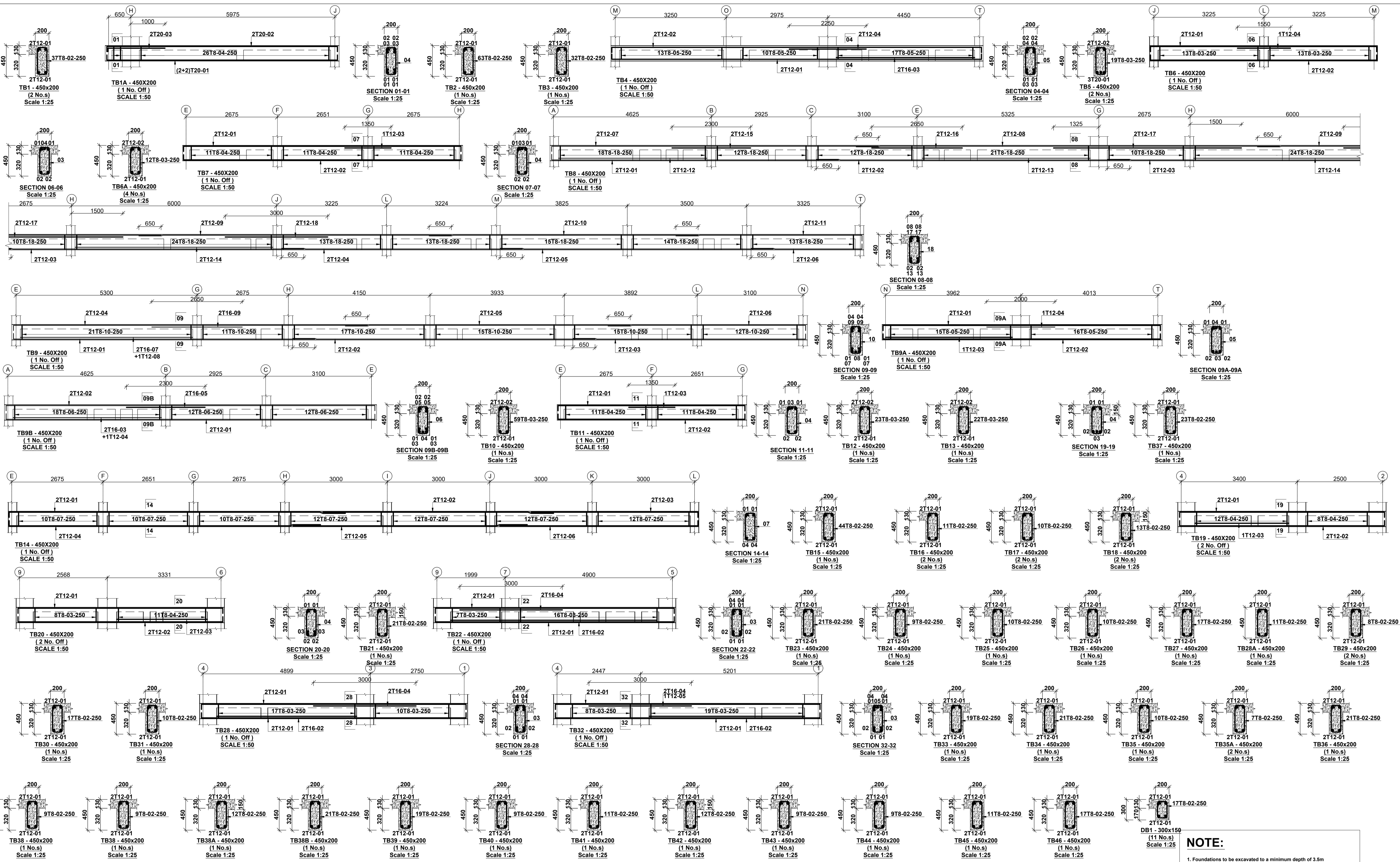
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 13

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
 TYPICAL 6TH FLOOR SLAB DETAILS

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |



**NOTE:**

1. Foundations to be excavated to a minimum depth of 3.5m
2. Introduce a 300x200 ground beam over all the foundation wallings
3. All masonry units to be machine cut blocks

**NOTES**

1. All dimensions are in millimetres unless otherwise stated.
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
4. Only figured dimensions to be taken from this drawing.
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8. All structural steel be grade 43A.
9. All welds are 6mm thick.
10. All structural steel to be painted with anti-rust primer paint.

**Client**  
**MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

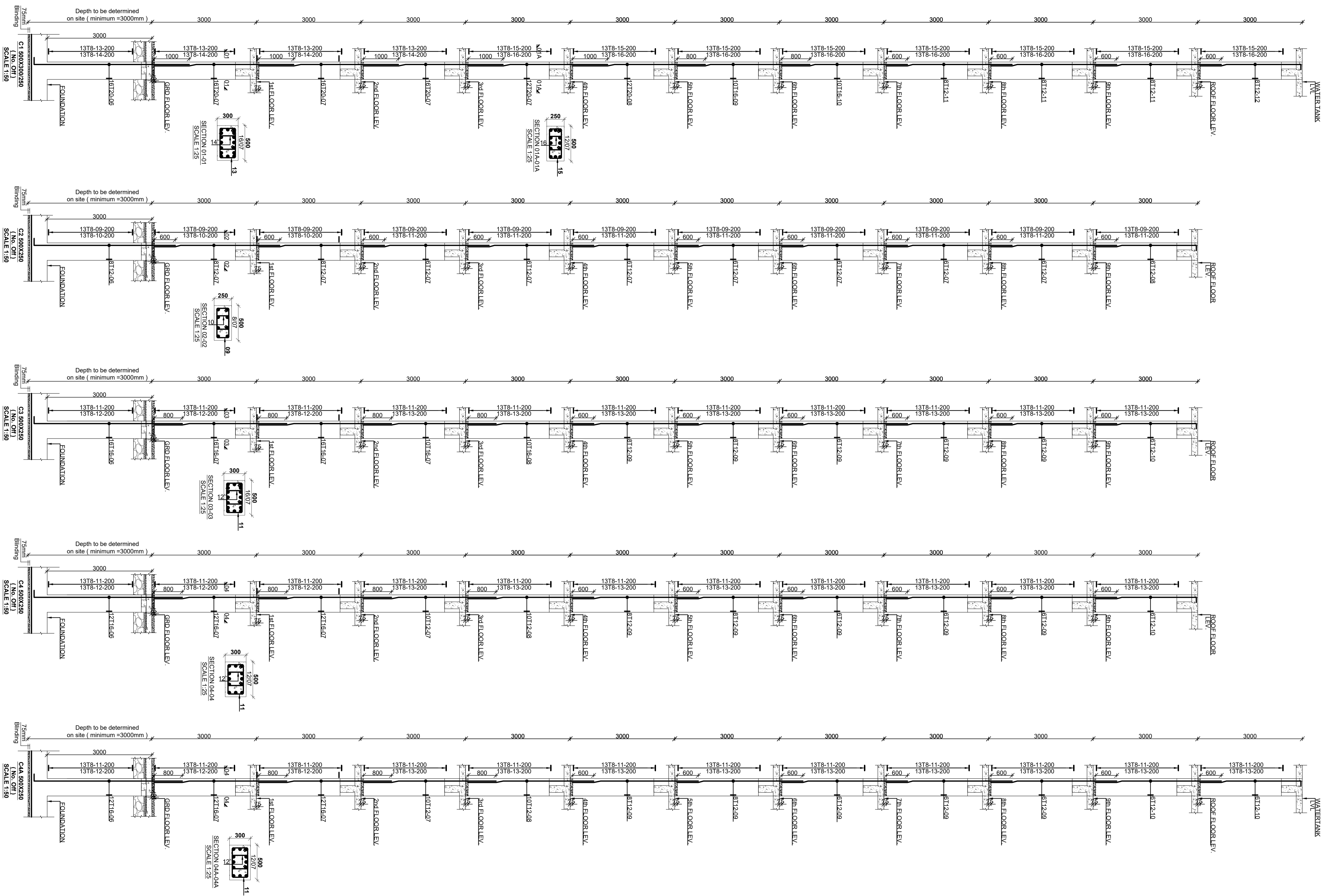
**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+14-BLKA 14

**Project**  
**PROPOSED AFFORDABLE HOUSING PROGRAM-G+9 GENERIC BLOCK A.**

**Title**  
**TYPICAL FLOOR BEAMS DETAILS.**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



**NOTE:**

1. Foundations to be excavated to a minimum depth of 3.5m
2. Introduce a 300x200 ground beam over all the foundation walls
3. All masonry units to be machine cut bricks

**NOTES**

1. All dimensions are in millimetres unless otherwise stated.
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4. Only figured dimensions to be taken from this drawing.
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8. All structural steel be grade 43A.
9. All welds are 6mm thick.
10. All structural steel to be painted with anti-rust primer paint.

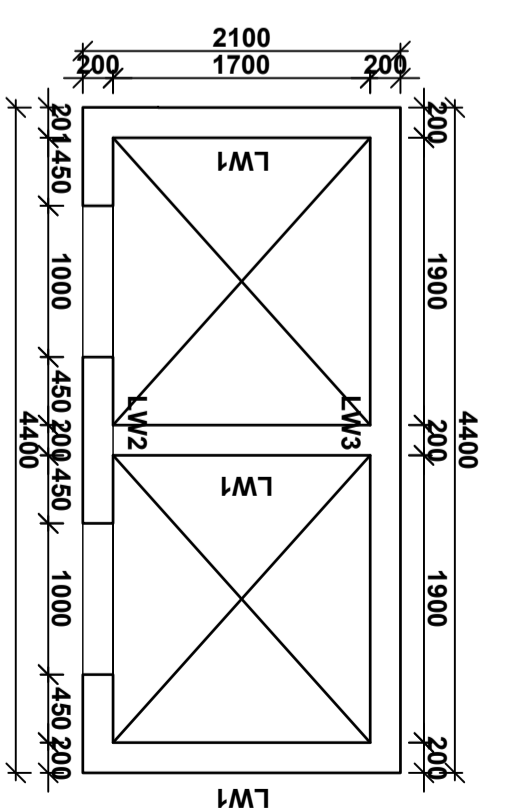
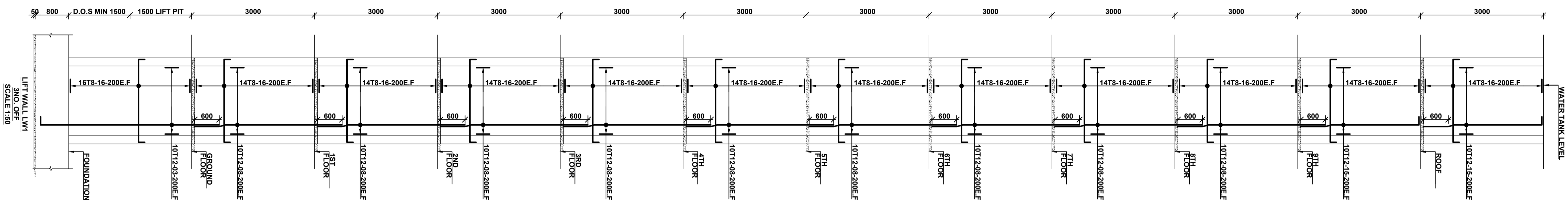
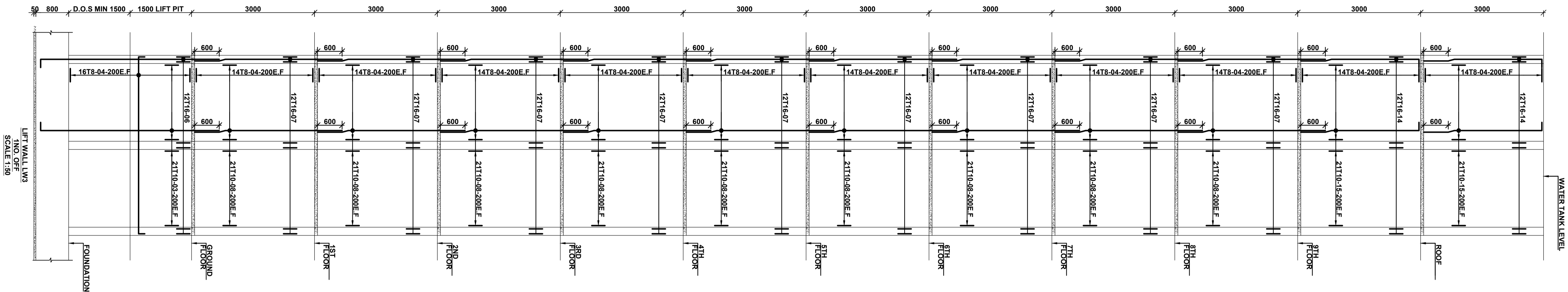
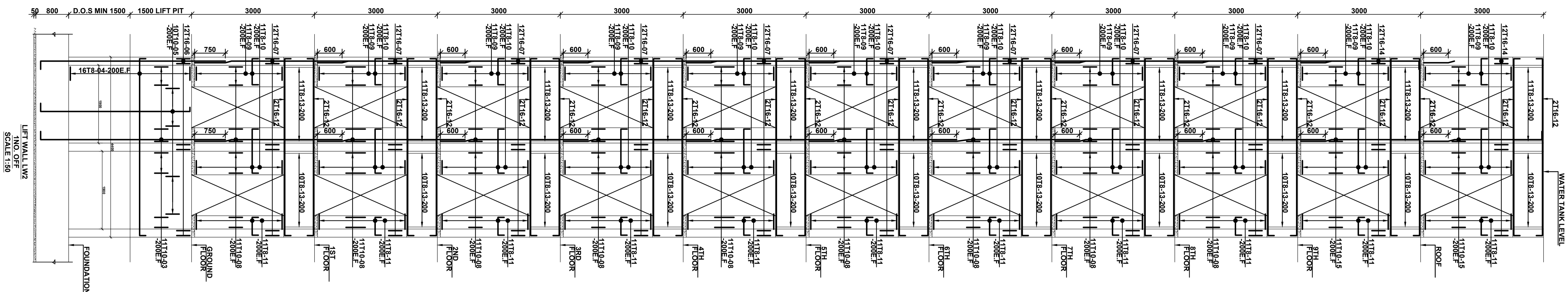
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 15

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
 COLUMN DETAILS

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
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- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

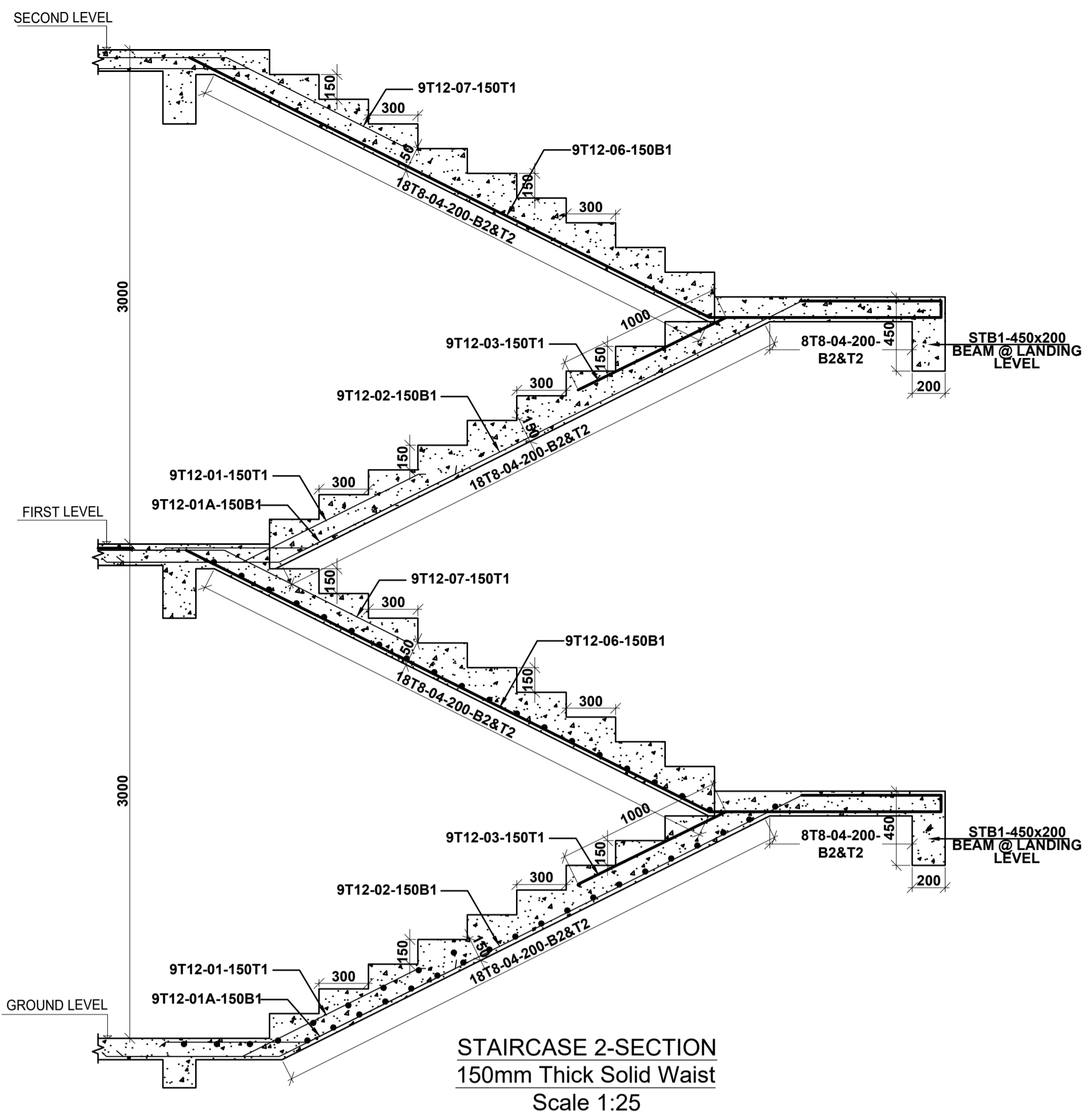
**Client**  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

**STRUCTURAL ENGINEER:**

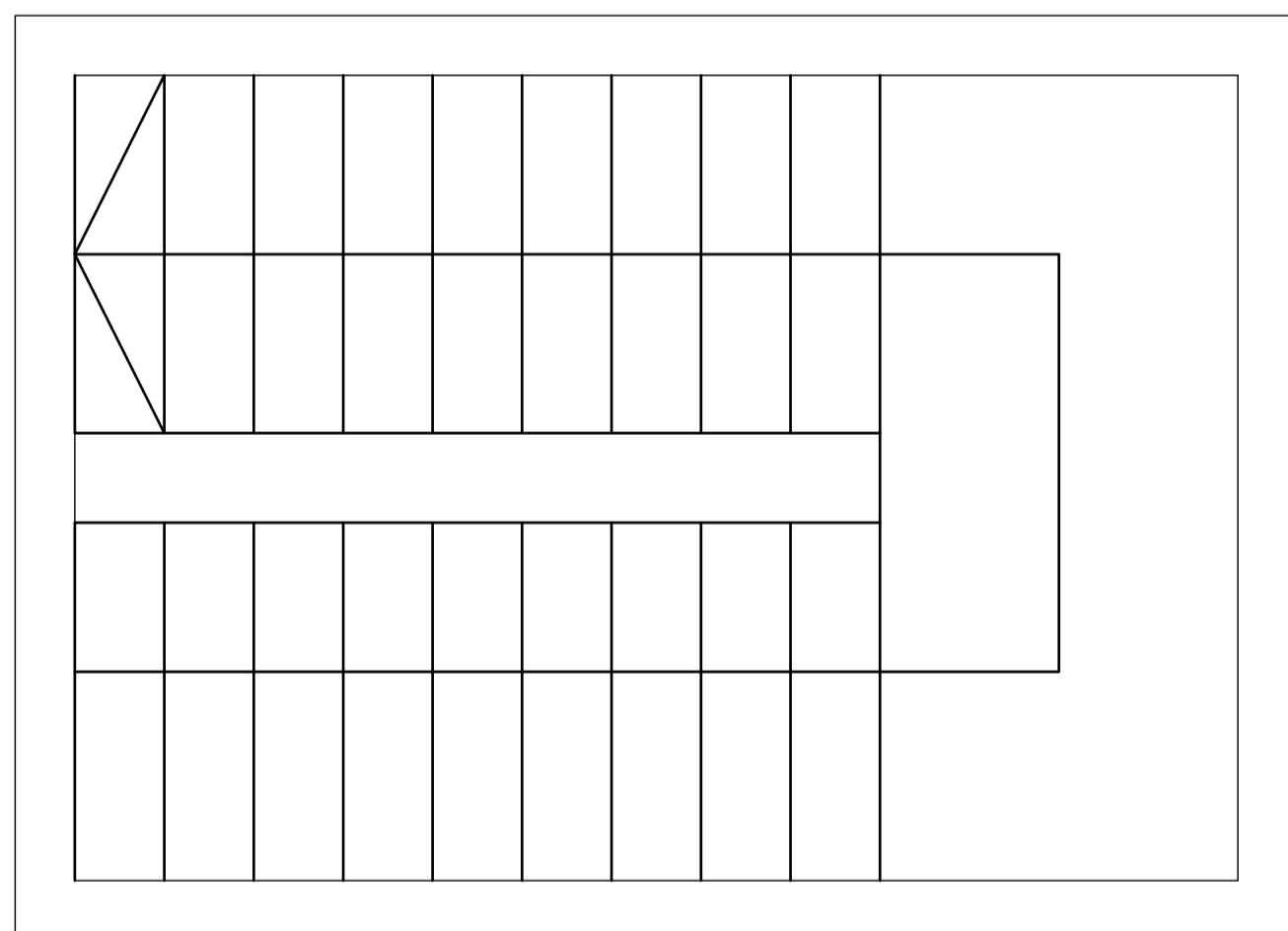
Designed by: H.I.H      Checked by: R.M.O  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 17TH APRIL 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKA 16

**Project**  
 PROPOSED AFFORDABLE HOUSING  
 PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
 LIFT WALL DETAILS

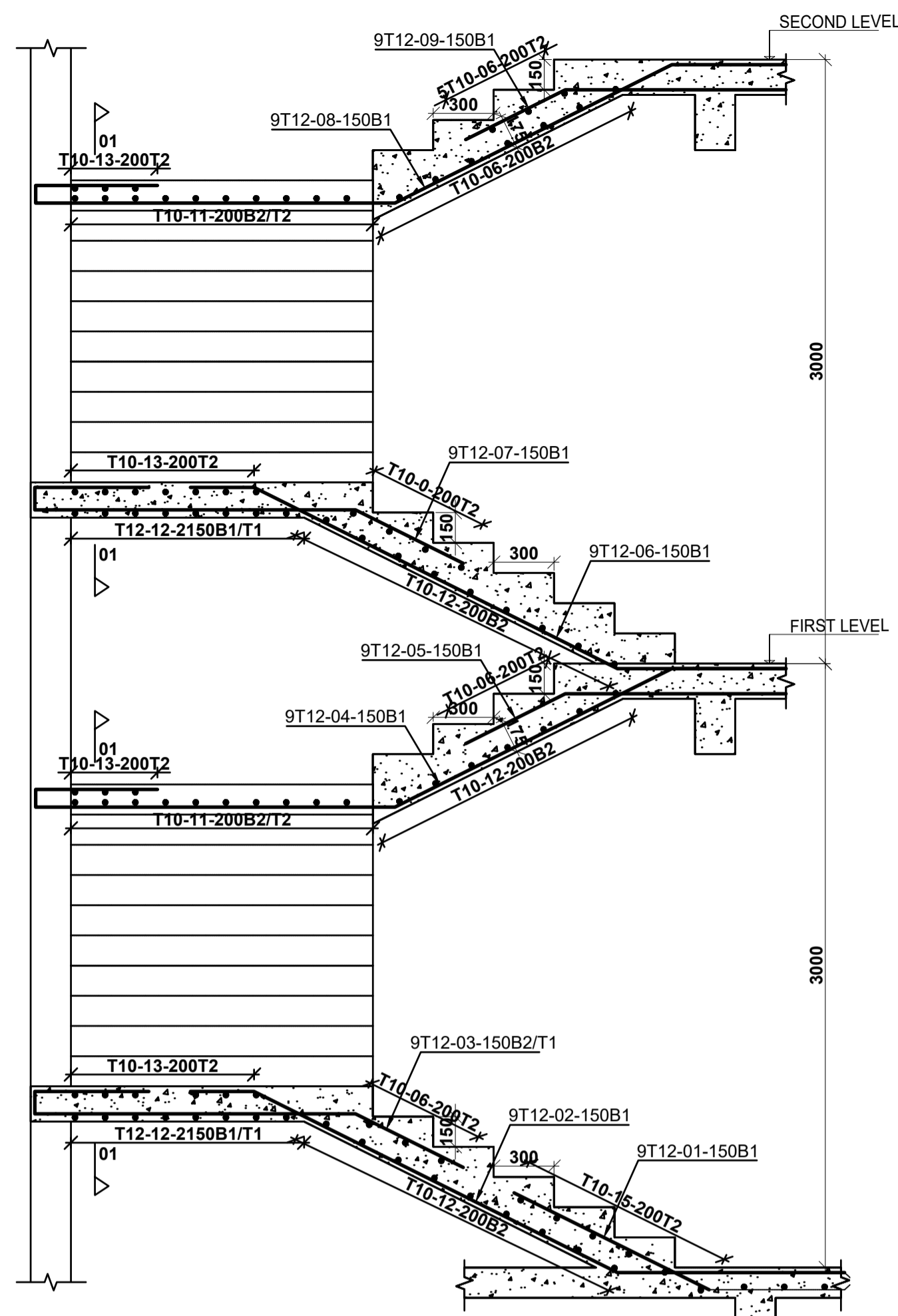
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| No.       | Description | Date |
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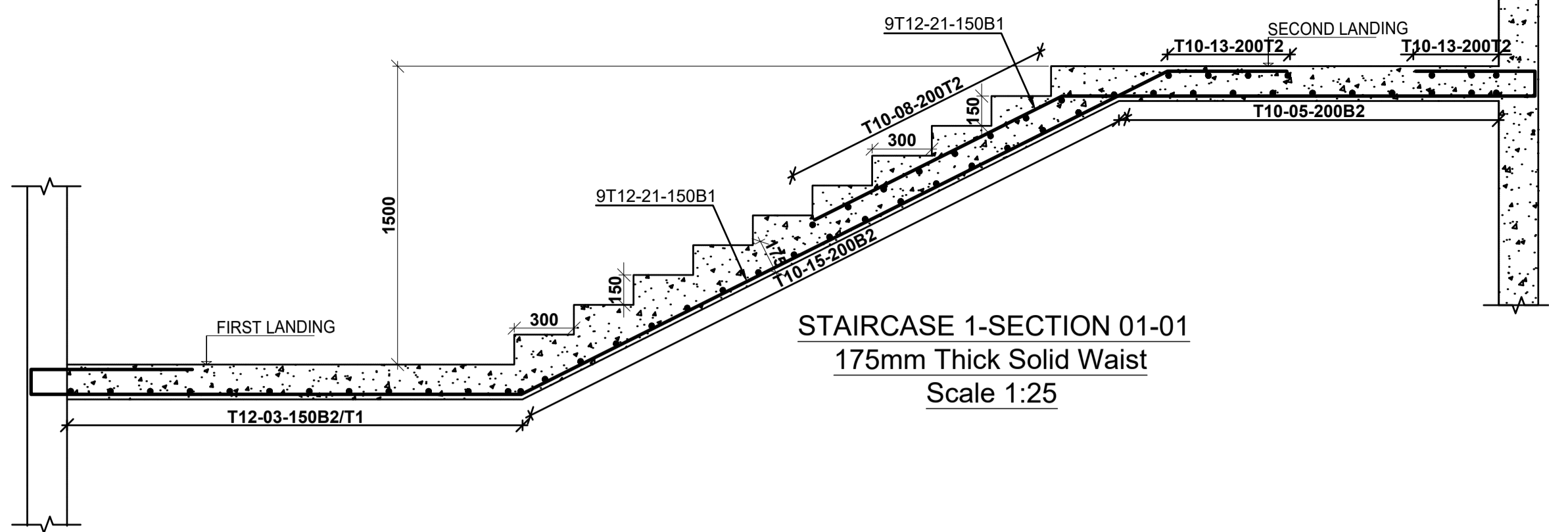
STAIRCASE 2-SECTION  
150mm Thick Solid Waist  
Scale 1:25



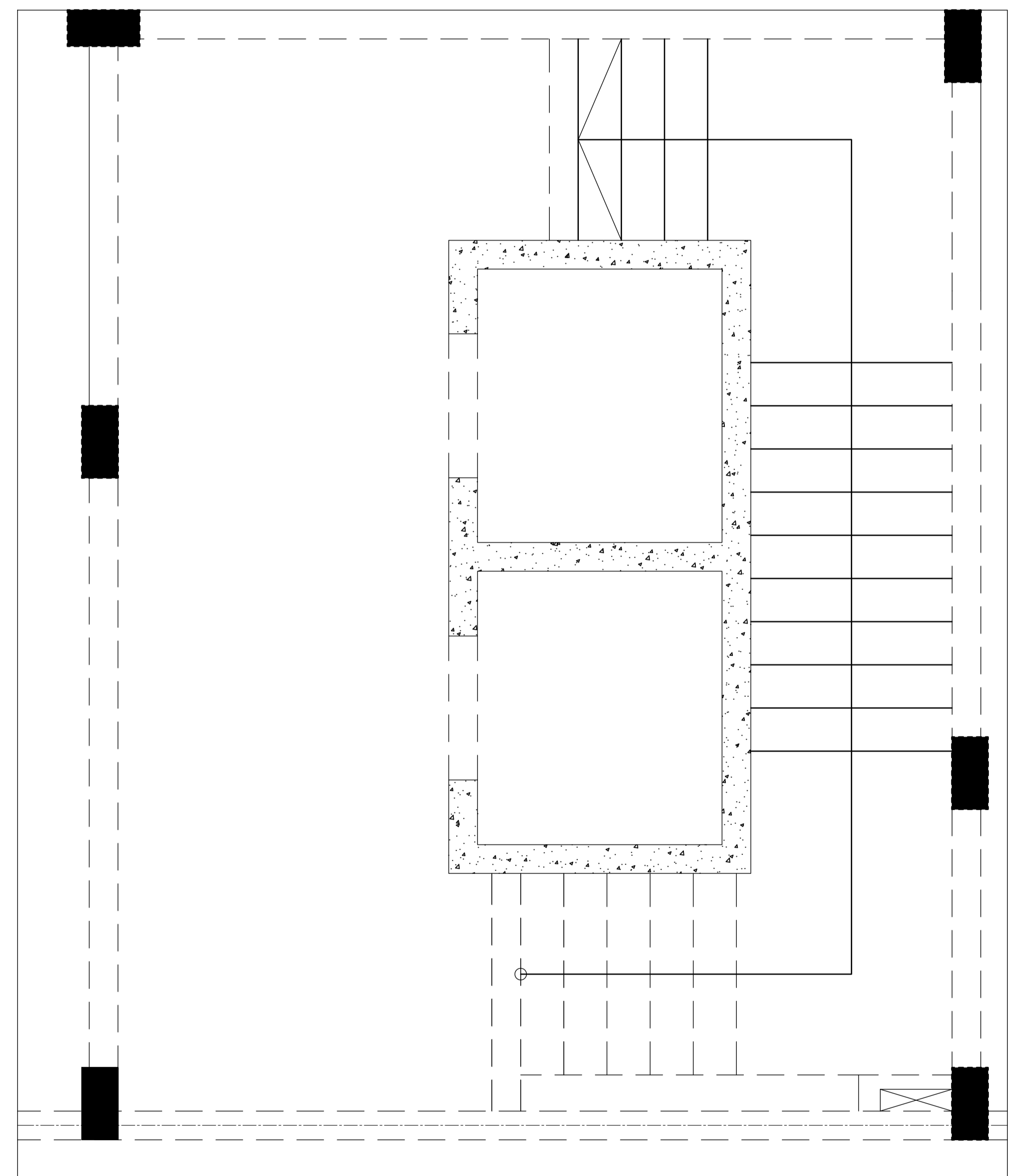
STAIRCASE 2-PLAN  
150mm Thick Solid Waist  
Scale 1:25



STAIRCASE 1-SECTION  
175mm Thick Solid Waist  
Scale 1:25



STAIRCASE 1-SECTION 01-01  
175mm Thick Solid Waist  
Scale 1:25



STAIRCASE 1-PLAN  
175mm Thick Solid Waist  
Scale 1:25

- NOTES**
- All dimensions are in millimetres unless otherwise stated.
  - All reinforcements must be checked and approved by project structural engineer prior to concreting.
  - All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
  - Only figured dimensions to be taken from this drawing.
  - Any discrepancy in dimensions to be reported to the project consultants i.e. architect or engineer.
6. Symbols: T-TMT Rebars to BS 4461: T - Top face  
B - Bottom face
- Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm
  - All structural steel be grade 43A.
  - All welds are 6mm thick.
  - All structural steel to be painted with anti-rust primer paint.

**Client**  
MINISTRY OF LANDS, PUBLIC WORKS,  
HOUSING AND URBAN DEVELOPMENT  
STATE DEPARTMENT FOR HOUSING AND URBAN  
DEVELOPMENT

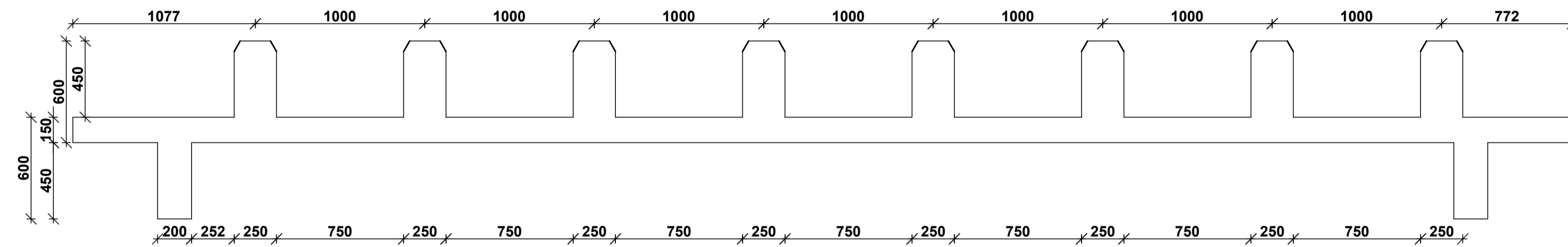
**STRUCTURAL ENGINEER:**

Designed by: H.I.H      Checked by: R.M.O  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 17TH APRIL 2024      Scale: As shown  
Drawing Number: AHP-G+9-BLKA 17

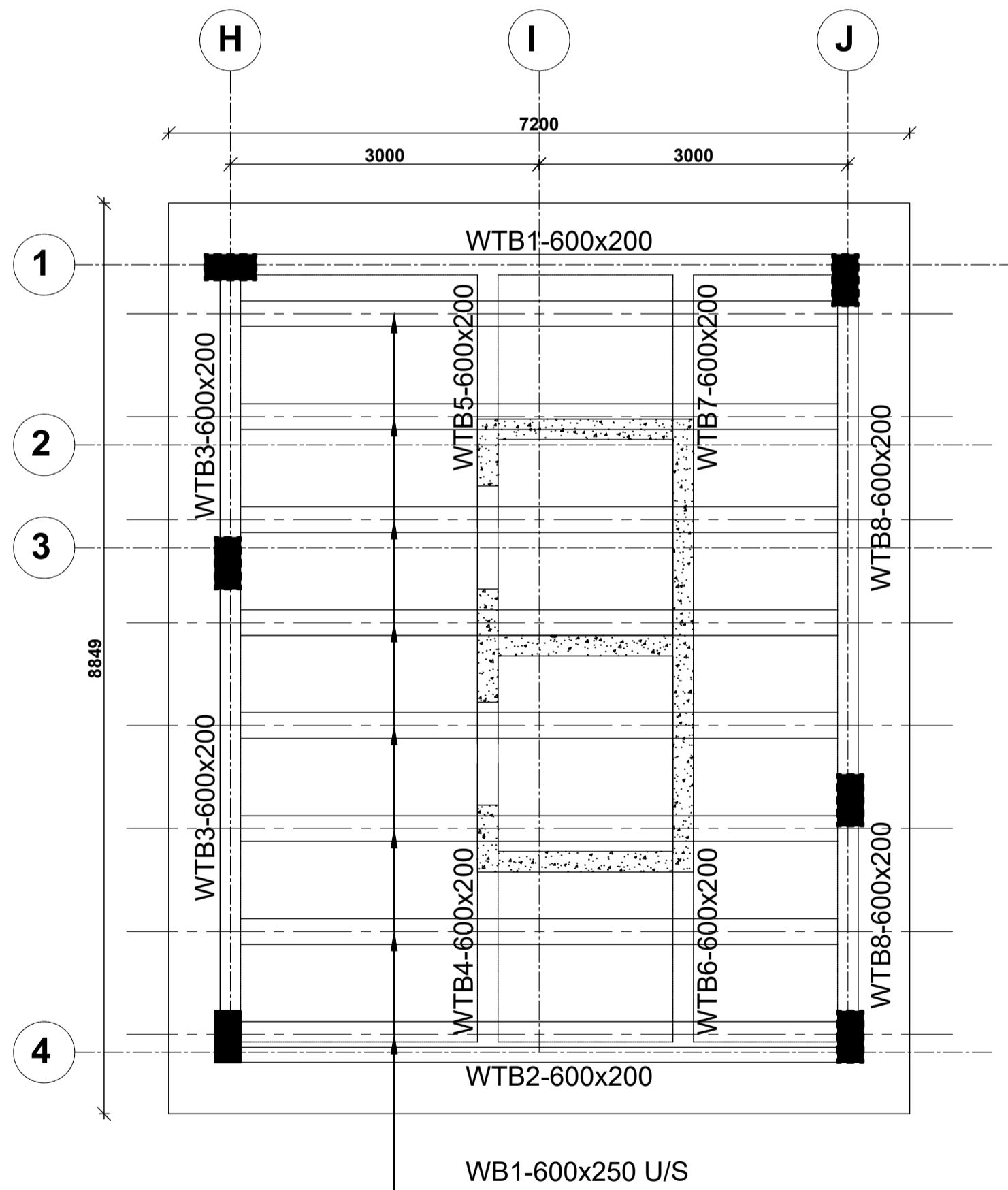
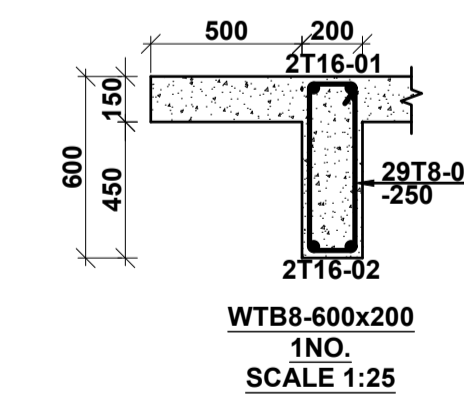
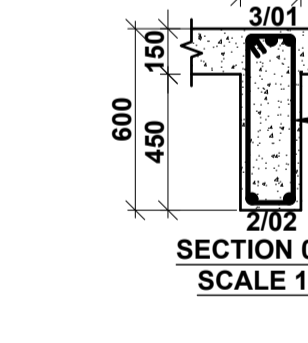
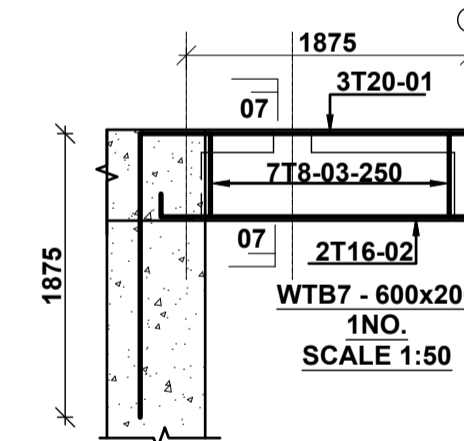
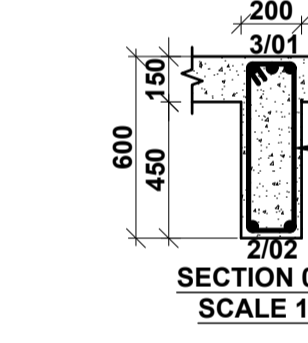
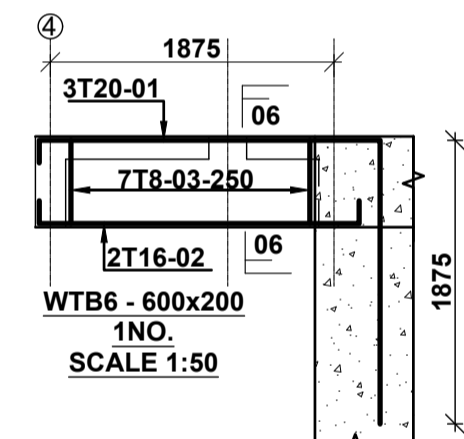
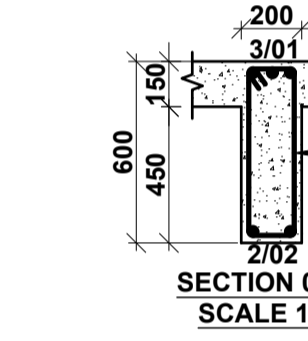
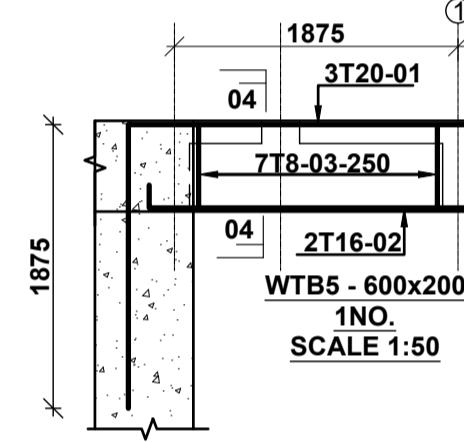
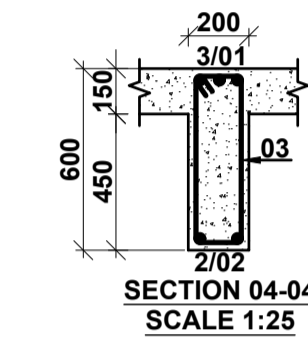
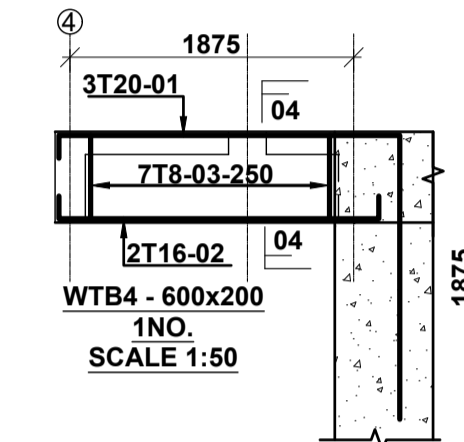
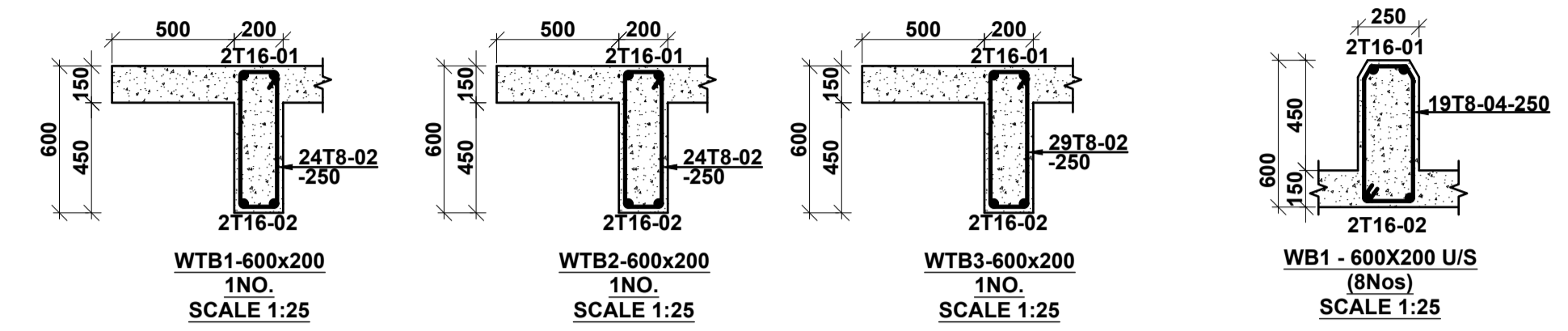
**Project**  
PROPOSED AFFORDABLE HOUSING  
PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
TYPICAL FLOOR LAYOUTS

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
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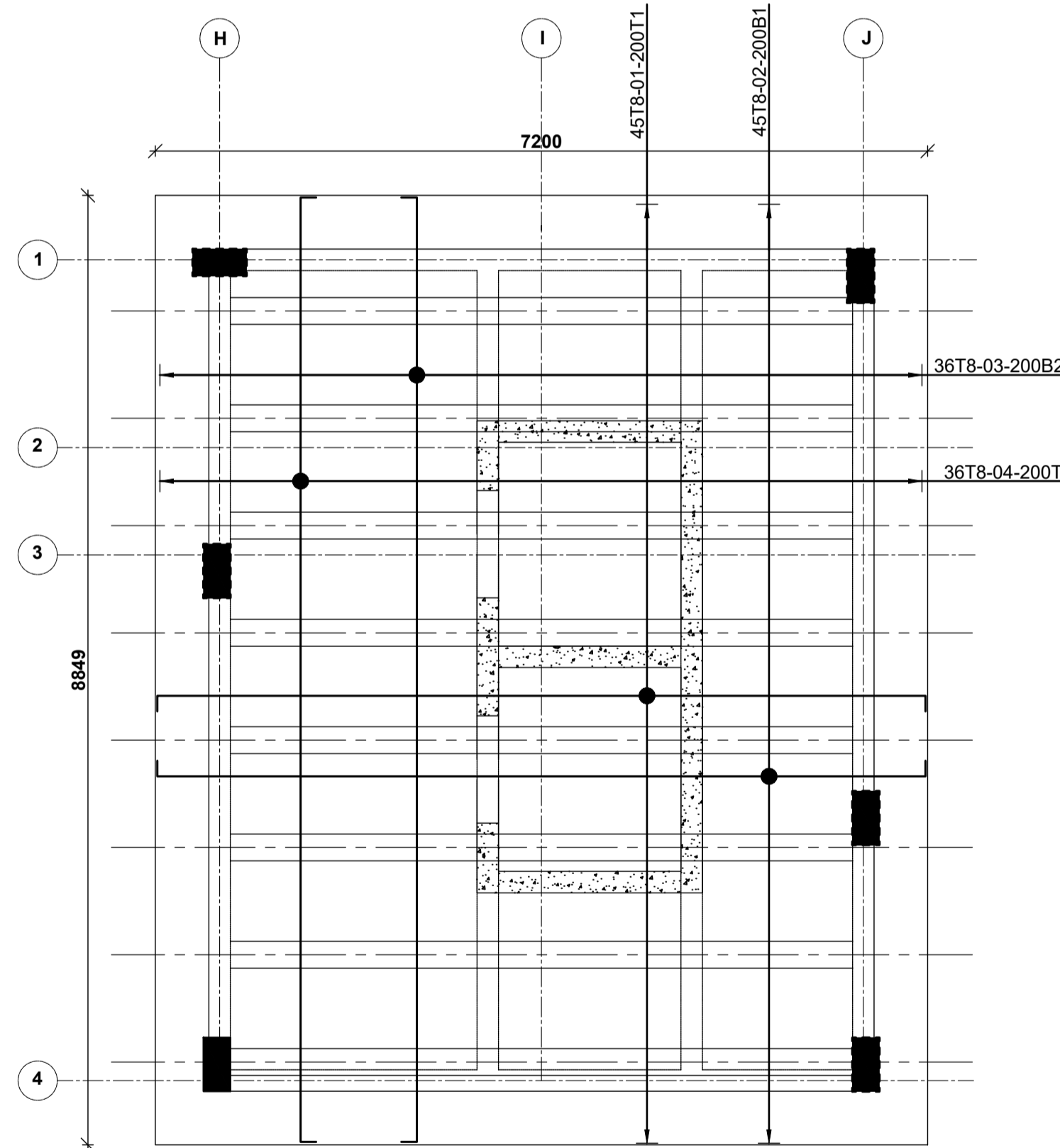




**WATER TANK BEARER BEAMS**  
SECTION 130mm SOLID SLAB  
SCALE 1:25



**WATER TANK LAYOUT**  
150mm THICK SOLID SLAB  
SCALE 1:50



**WATER TANK SLAB DETAILS**  
150mm THICK SOLID SLAB  
SCALE 1:50

**NOTE:**  
1. Foundations to be excavated to a minimum depth of 3.5m  
2. Introduce a 300x200 ground beam over all the foundation wallings  
3. All masonry units to be machine cut blocks

**NOTES**  
1. All dimensions are in millimetres unless otherwise stated.  
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
4. Only figured dimensions to be taken from this drawing.  
5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

6. Symbols: T-TMT Rebars to BS 4461: T - Top face  
B - Bottom face  
7. Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm  
8. All structural steel be grade 43A.  
9. All welds are 6mm thick.  
10. All structural steel to be painted with anti-rust primer paint.

**Client**  
MINISTRY OF LANDS, PUBLIC WORKS,  
HOUSING AND URBAN DEVELOPMENT  
STATE DEPARTMENT FOR HOUSING AND URBAN  
DEVELOPMENT

**STRUCTURAL ENGINEER:**

Designed by: H.I.H Checked by: R.M.O  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 18TH APRIL 2024 Scale: As shown  
Drawing Number: AHP-G+9-BLKA 18

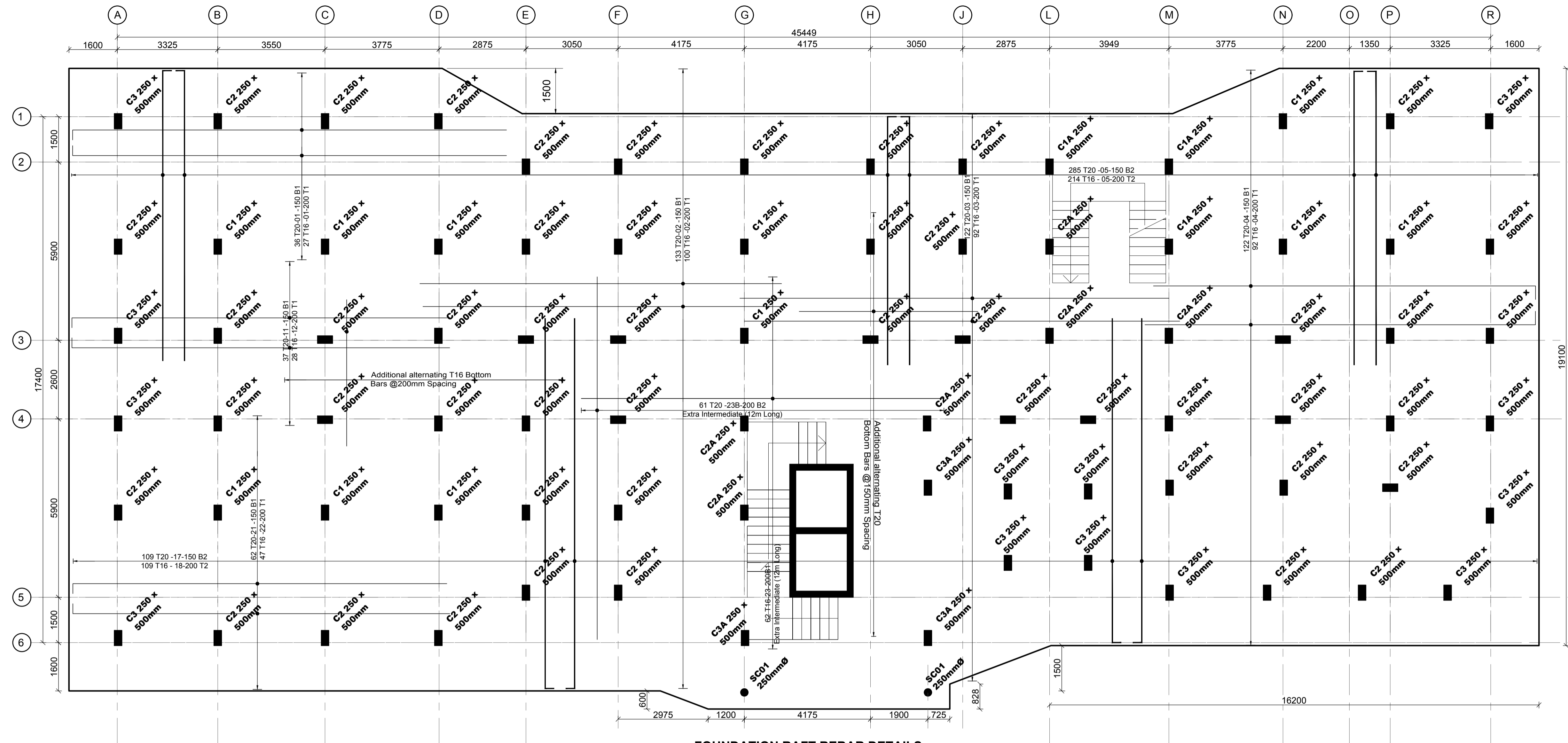
**Project**  
PROPOSED AFFORDABLE HOUSING  
PROGRAM-G+9 GENERIC BLOCK A.  
**Title**  
WATER TANK DETAILS.

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |

# BLOCK B

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AFFORDABLEHOUSING PROGRAMME



**FOUNDATION RAFT REBAR DETAILS**  
**750 MM THK RAFT SLAB**  
**SCALE 1:75**

**NOTE: RAFT FORMATION SURFACE TO BE COMPACTED PRIOR TO LAYING OF RAFT BLINDING**

| ELEMENT                | Kg/m3 |
|------------------------|-------|
| FOUNDATION             | 36    |
| COLUMNS                | 193   |
| SLAB                   | 66    |
| BEAMS                  | 62    |
| GROUND BEAMS           | 103   |
| STAIRCASE 1            | 166   |
| STAIRCASE 2            | 121   |
| LIFT                   | 88    |
| SLAB OVER STAIRCASE 1  | 112   |
| BEAM OVER STAIRCASE 1  | 95    |
| SLAB OVER STAIRCASE 2  | 122   |
| BEAMS OVER STAIRCASE 2 | 108   |

**NOTES**

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- Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

- Symbols; T-TMT Rebars to B S 4 461 : T - Top face  
B - Bottom face
- Cover to reinforcement; Slabs - 20mm,  
Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

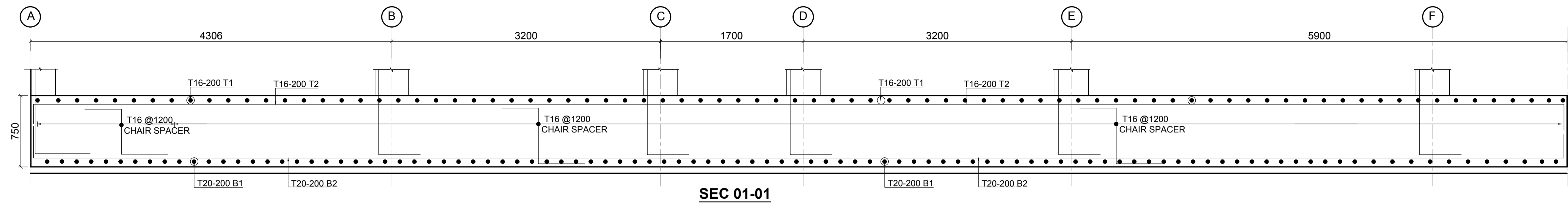
Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
HOUSING AND URBAN DEVELOPMENT**  
STATE DEPARTMENT FOR HOUSING AND URBAN  
DEVELOPMENT

STRUCTURAL ENGINEER:

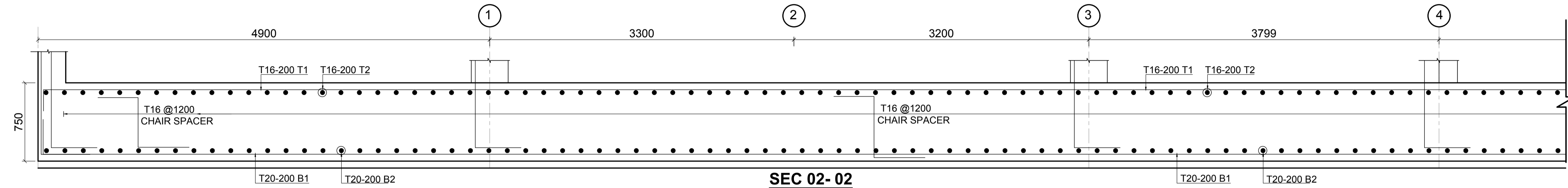
Designed by: *JMN* Checked by: *JMN*  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 13th March 2024 Scale: As shown  
Drawing Number: AHP-G+9-BLKB 1.0B

Project **PROPOSED AFFORDABLE  
HOUSING DEVELOPMENT  
(BLOCK TYPE B MARKET UNITS)**  
Title **FOUNDATION RAFT RC DETAILS**

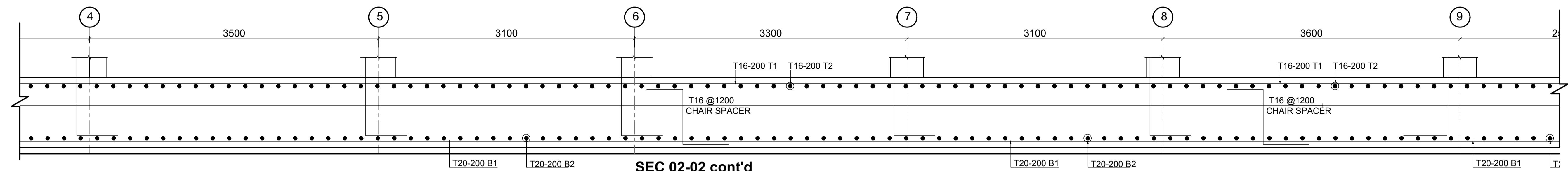
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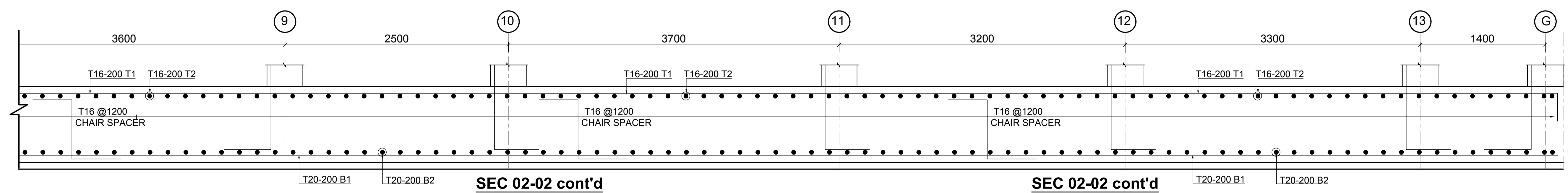
**SEC 01-01**



**SEC 02-02**



**SEC 02-02 cont'd**



**SEC 02-02 cont'd**

**SEC 02-02 cont'd**

**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
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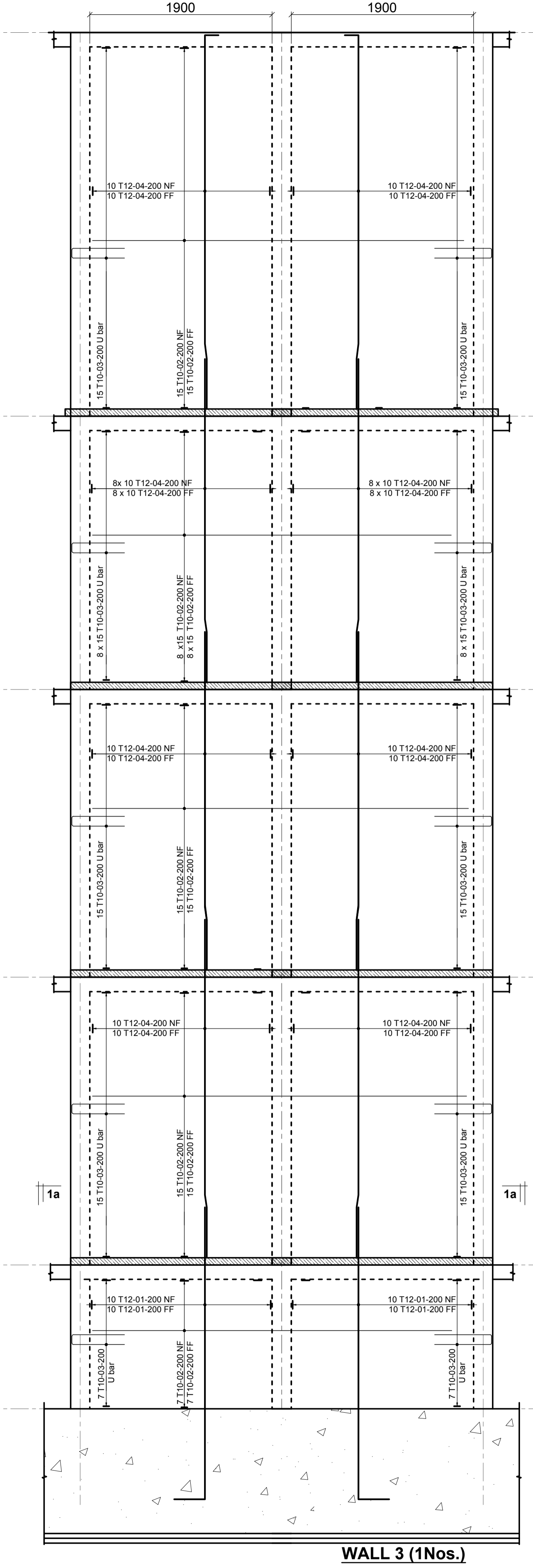
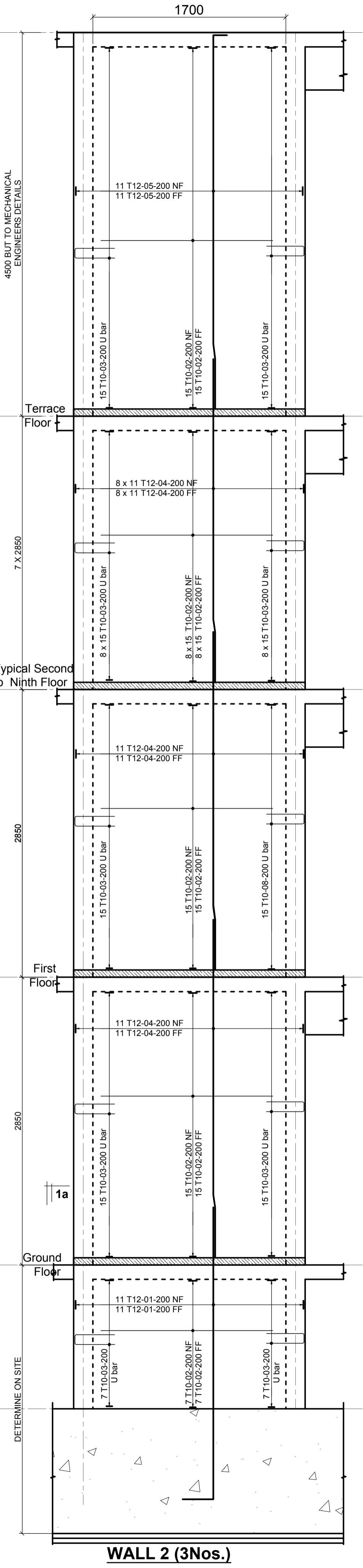
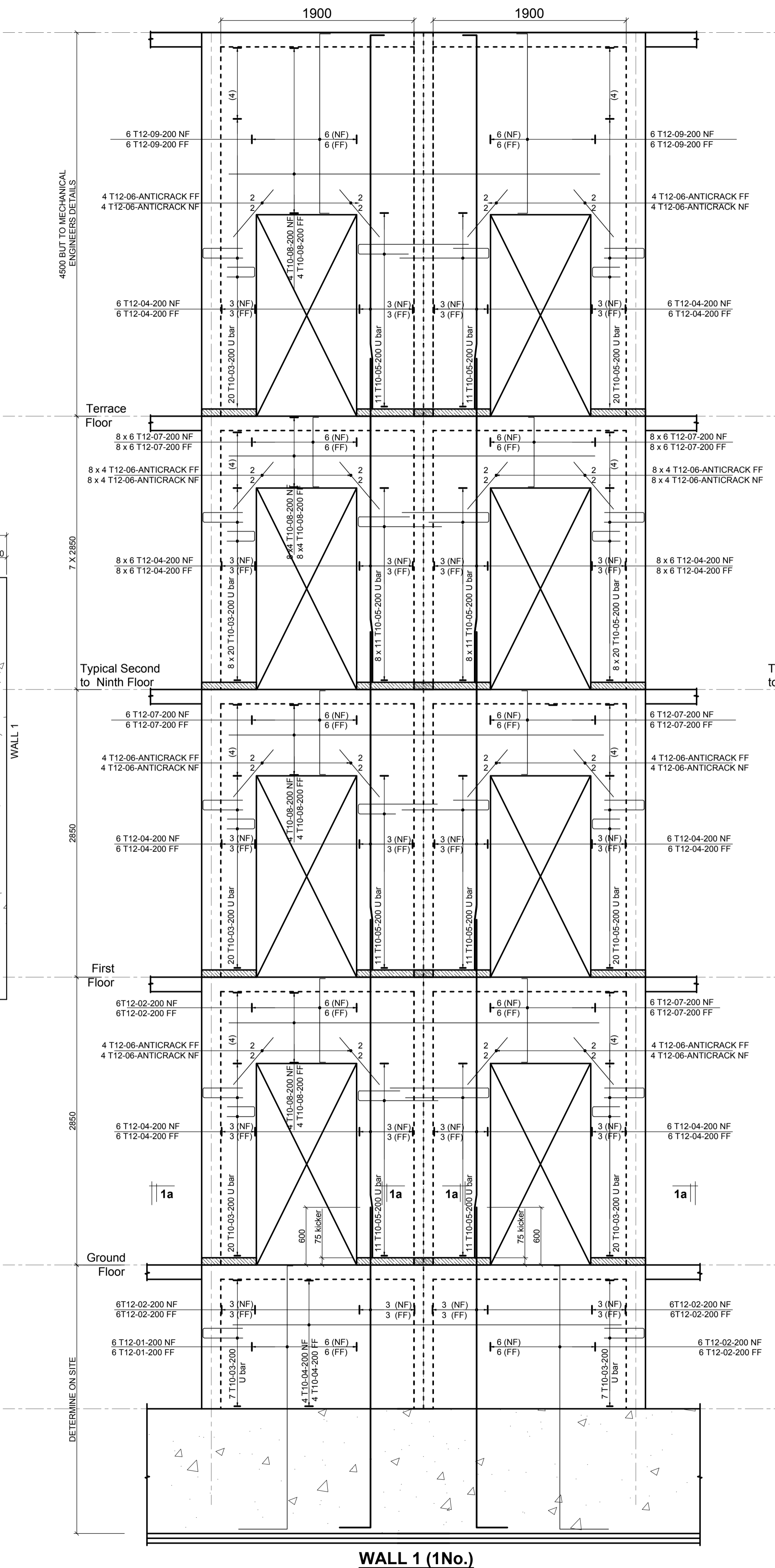
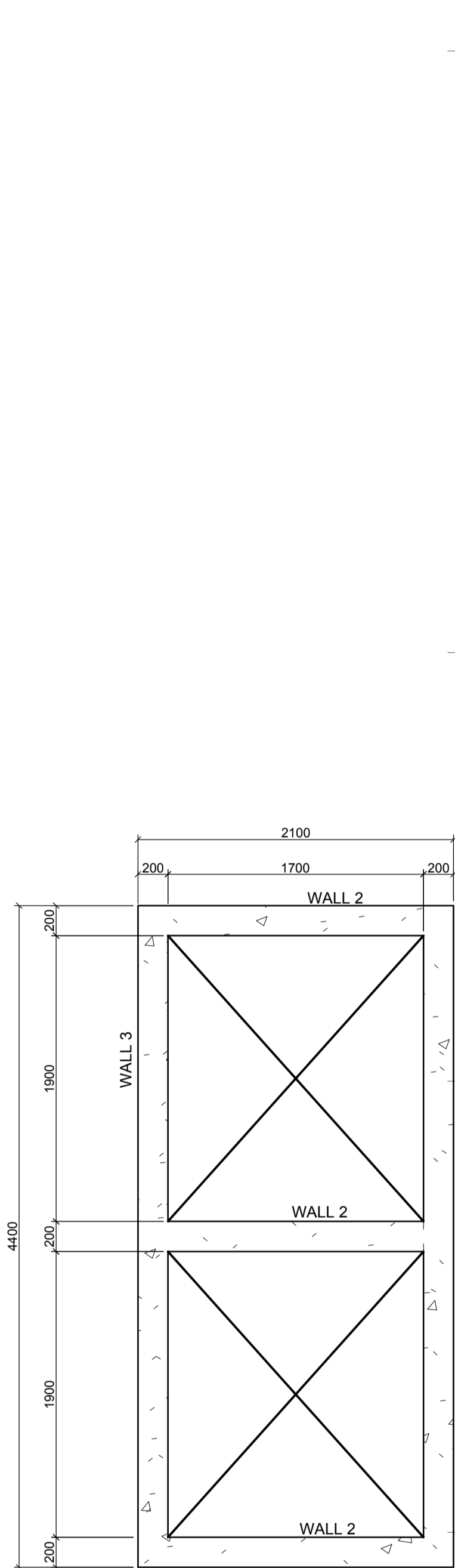
Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN      Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 1.1B

Project **PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)**  
 Title **RAFT SECTION RC DETAILS**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



4500 BUT TO MECHANICAL ENGINEERS DETAILS

4500 BUT TO MECHANICAL ENGINEERS DETAILS

Terrace

Terrace

Floor

Floor

Typical Second to Ninth Floor

Typical Second to Ninth Floor

First Floor

First Floor

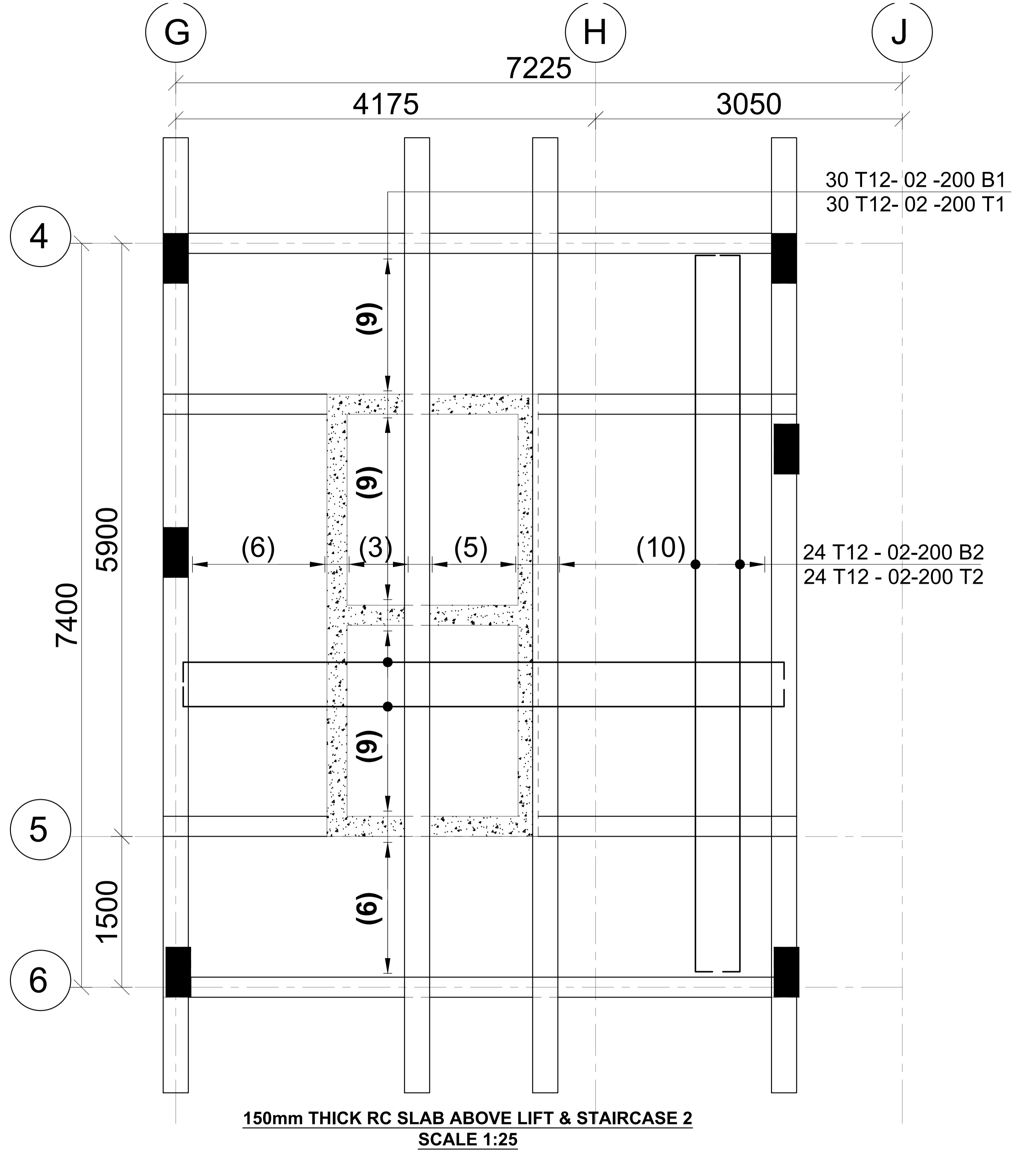
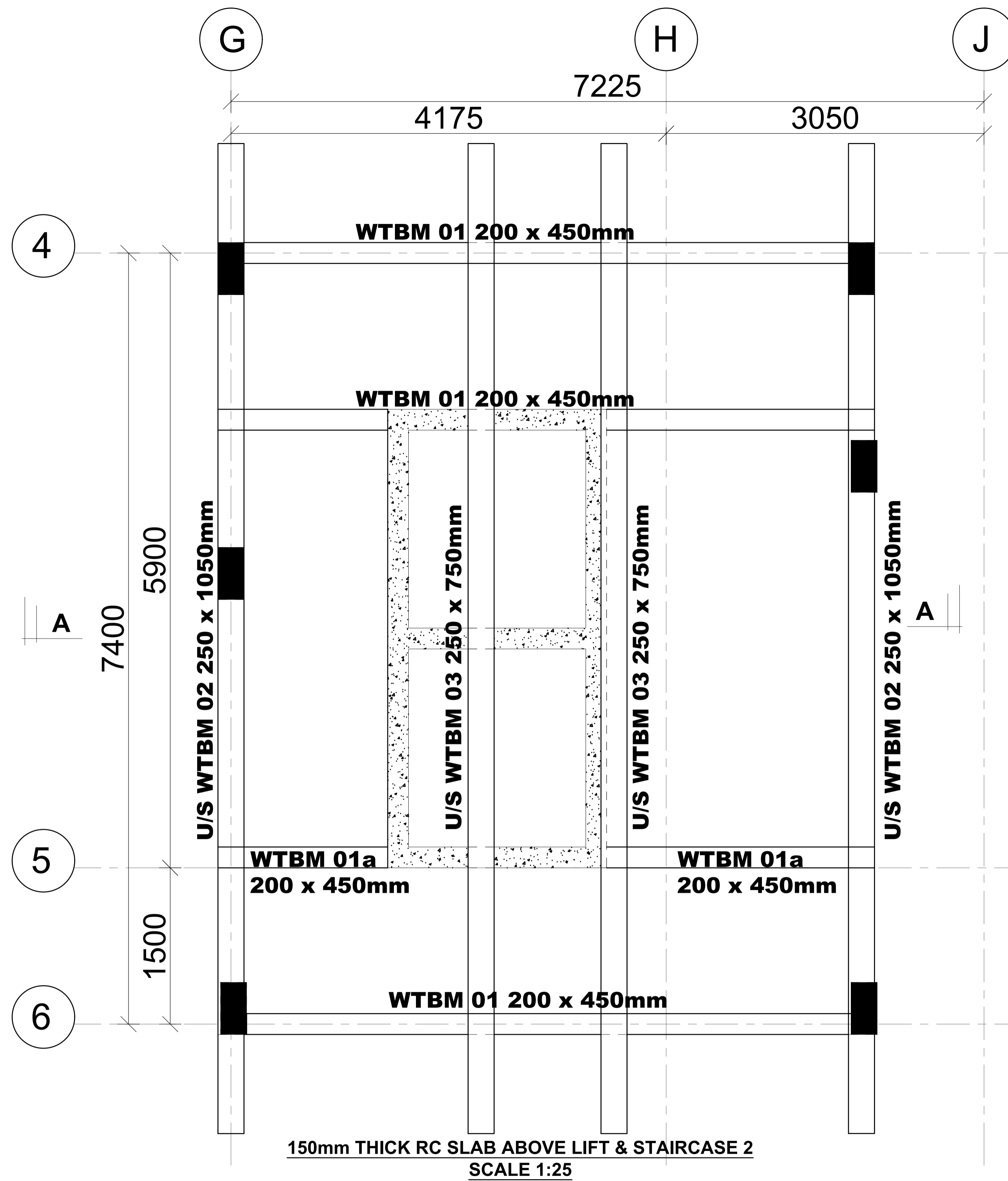
Ground Floor

Ground Floor

DETERMINE ON SITE

DETERMINE ON SITE

|  |                 |  |             |
|--|-----------------|--|-------------|
| Project  |                 | Revisions                                  |             |
| PROPOSED AFFORDABLE HOUSING DEVELOPMENT (BLOCK TYPE B MARKET UNITS)                                    |                 | No.  | Description |
| Title  |                 | Date                                       |             |
| LIFT SHAFT RC DETAILS  |                 |  |             |
| Designed by: JMN   | Checked by: JMN | Approved by: SECRETARY, HOUSING DEPARTMENT |             |
| Date: 13th March 2024  | Scale: As shown | Drawing Number: AMP-C-9-B/LAB 2.0B         |             |
| Client   |                 |  |             |
| MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT   |                 |  |             |
| STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT   |                 |  |             |
| Notes:   |                 |  |             |
| 1. All dimensions are in millimetres unless otherwise stated.  |                 |  |             |
| 2. All reinforcements must be checked and approved by project structural engineer prior to concreting. |                 |  |             |
| 3. All reinforcement to be Class 25, mix and blending concrete to be Class 15 mix.                     |                 |  |             |
| 4. Only figured dimensions to be taken from this drawing.  |                 |  |             |
| 5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.  |                 |  |             |
| 6. Symbols: T-TMT Rebars to B S 4 461 T - Top face, B - Bottom face                                    |                 |  |             |
| 7. Cover to reinforcement: Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm              |                 |  |             |
| 8. All structural steel to be grade 43A.   |                 |  |             |
| 9. All structural steel to be painted with anti-rust primer paint.                                     |                 |  |             |



**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
 4. Only figured dimensions to be taken from this drawing.  
 5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

6. Symbols; T-TMT Rebars to B S 4 461 : T - Top face  
 B - Bottom face  
 7. Cover to reinforcement; Slabs - 20mm,  
 Beams - 25mm, Columns - 40mm, Foundations - 50mm  
 8. All structural steel be grade 43A.  
 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

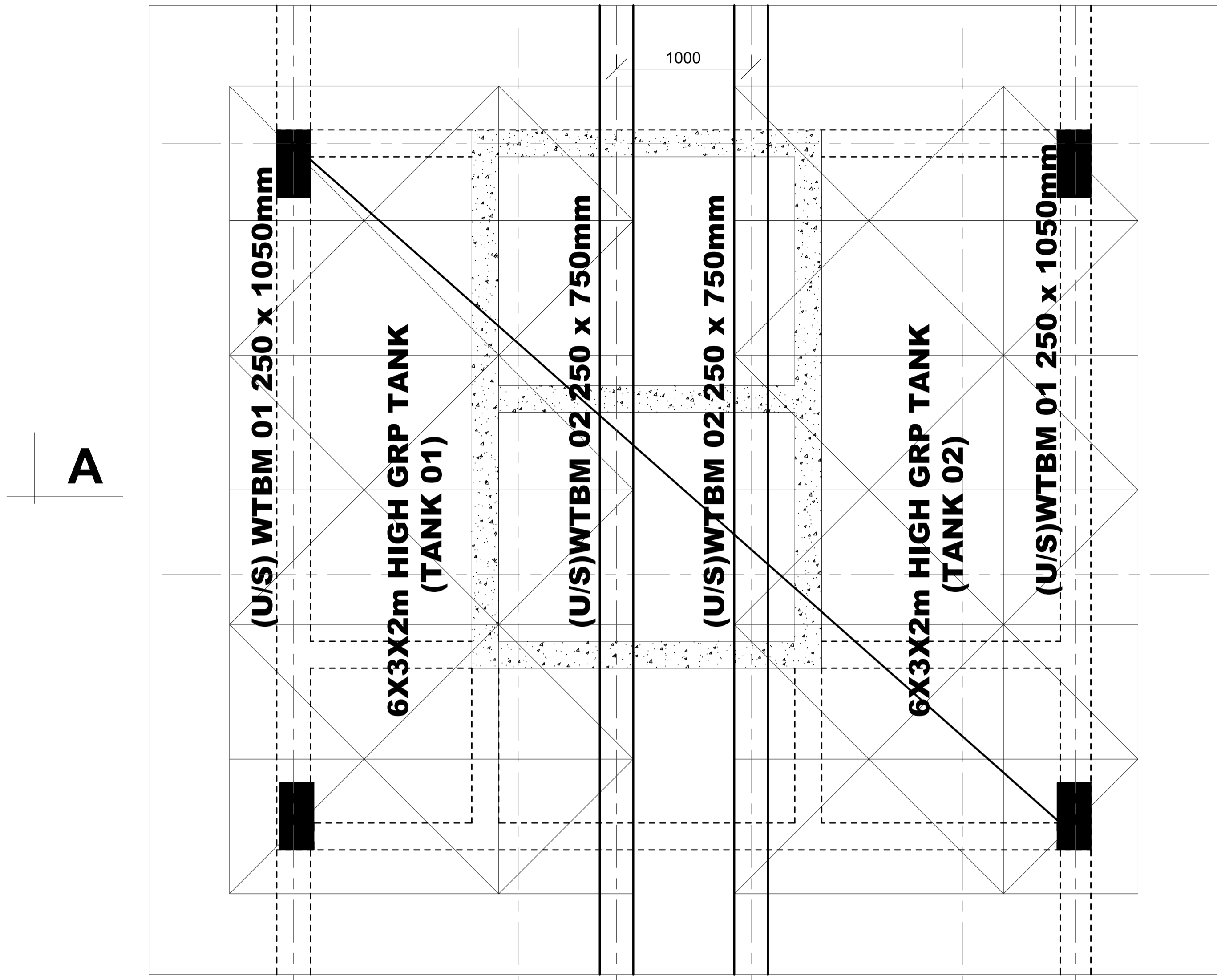
Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

STRUCTURAL ENGINEER:

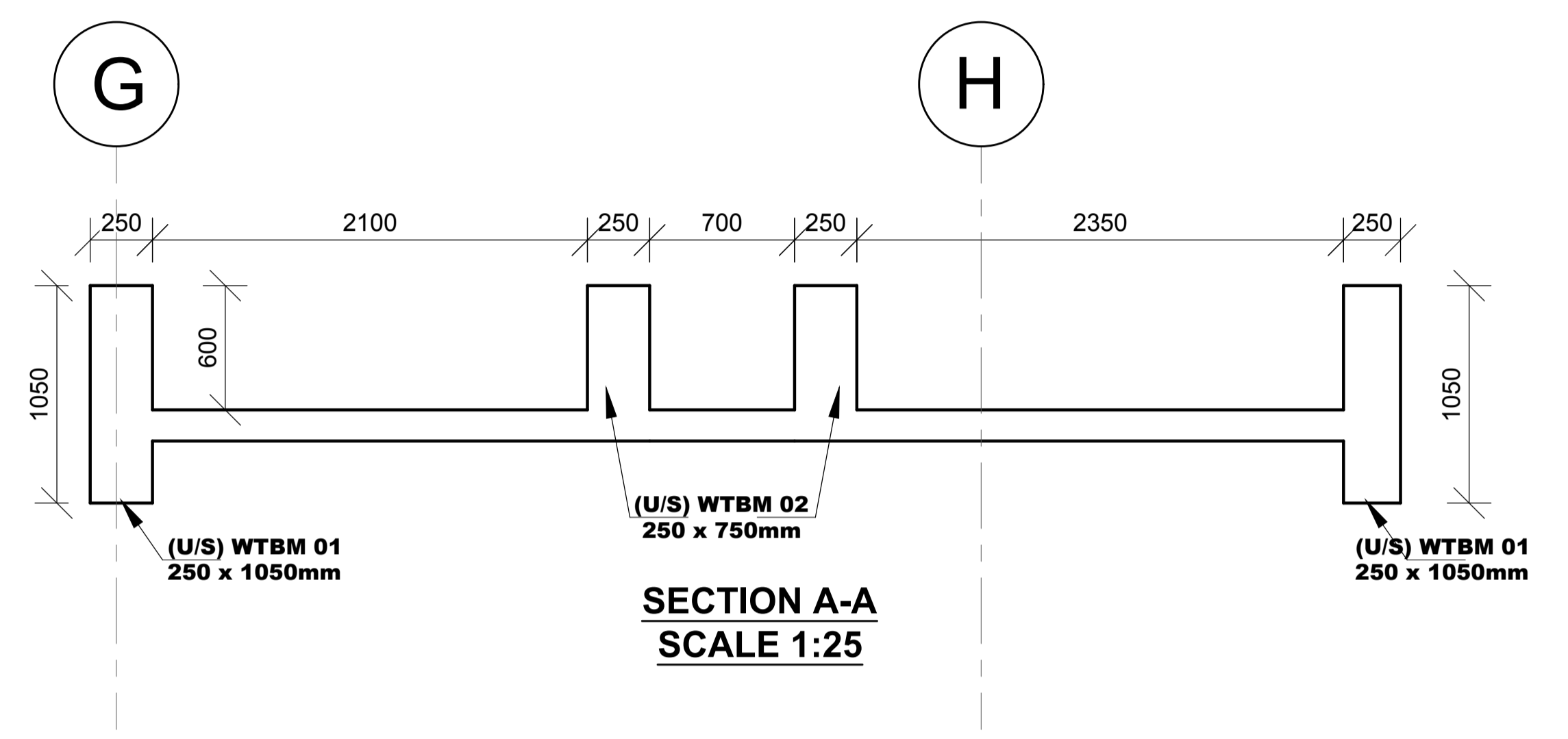
Designed by: *JMN* Checked by: *JMN*  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024 Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 2.1B

Project **PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)**  
 Title **SLAB OVER LIFT SHAFT RC DETAILS**

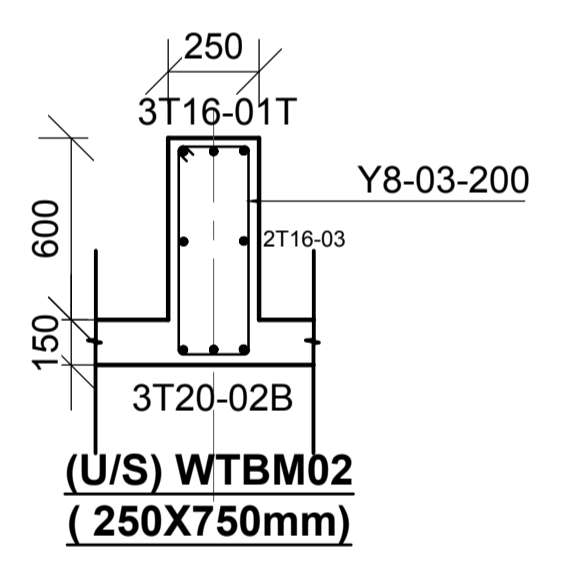
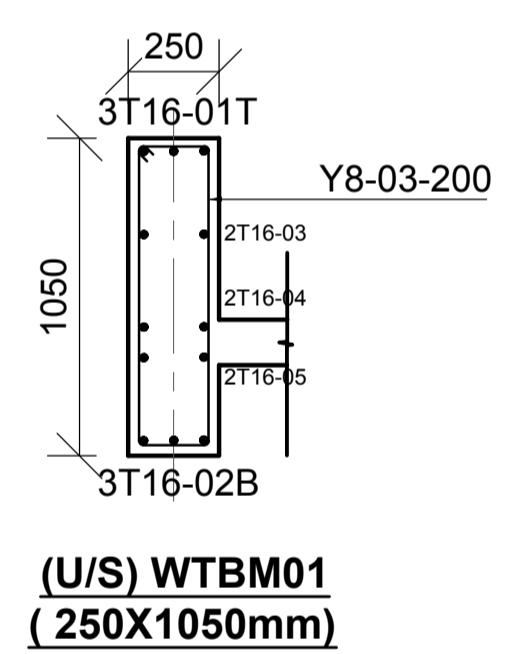
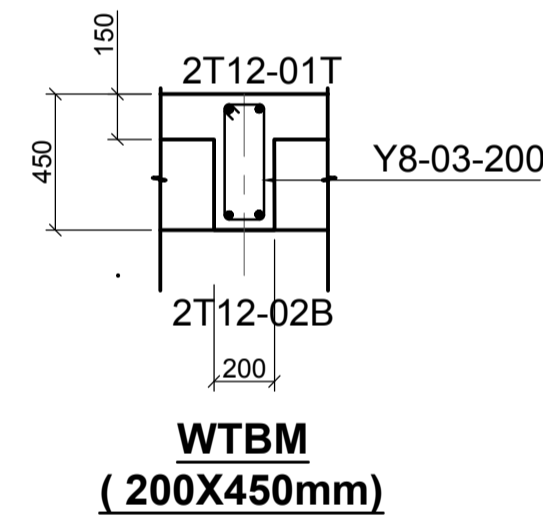
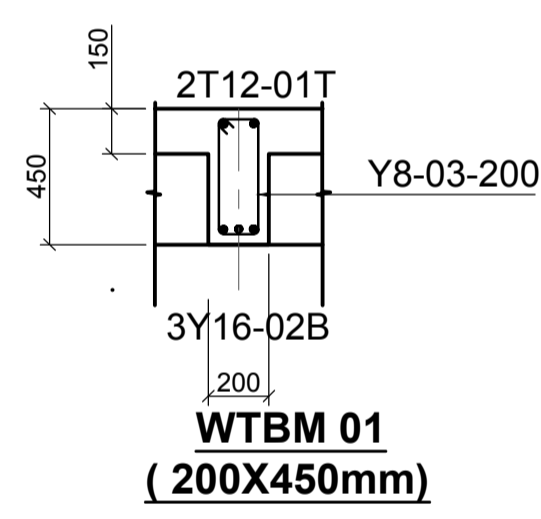
| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



**SLAB LAYOUT ABOVE LIFT & GRP RC BEARER BEAMS**  
SCALE 1:25



**SECTION A-A**  
SCALE 1:25



**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
 4. Only figured dimensions to be taken from this drawing.  
 5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

6. Symbols; T-TMT Rebars to B S 4 461 : T - Top face  
 B - Bottom face  
 7. Cover to reinforcement; Slabs - 20mm,  
 Beams - 25mm, Columns - 40mm, Foundations - 50mm  
 8. All structural steel be grade 43A.  
 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

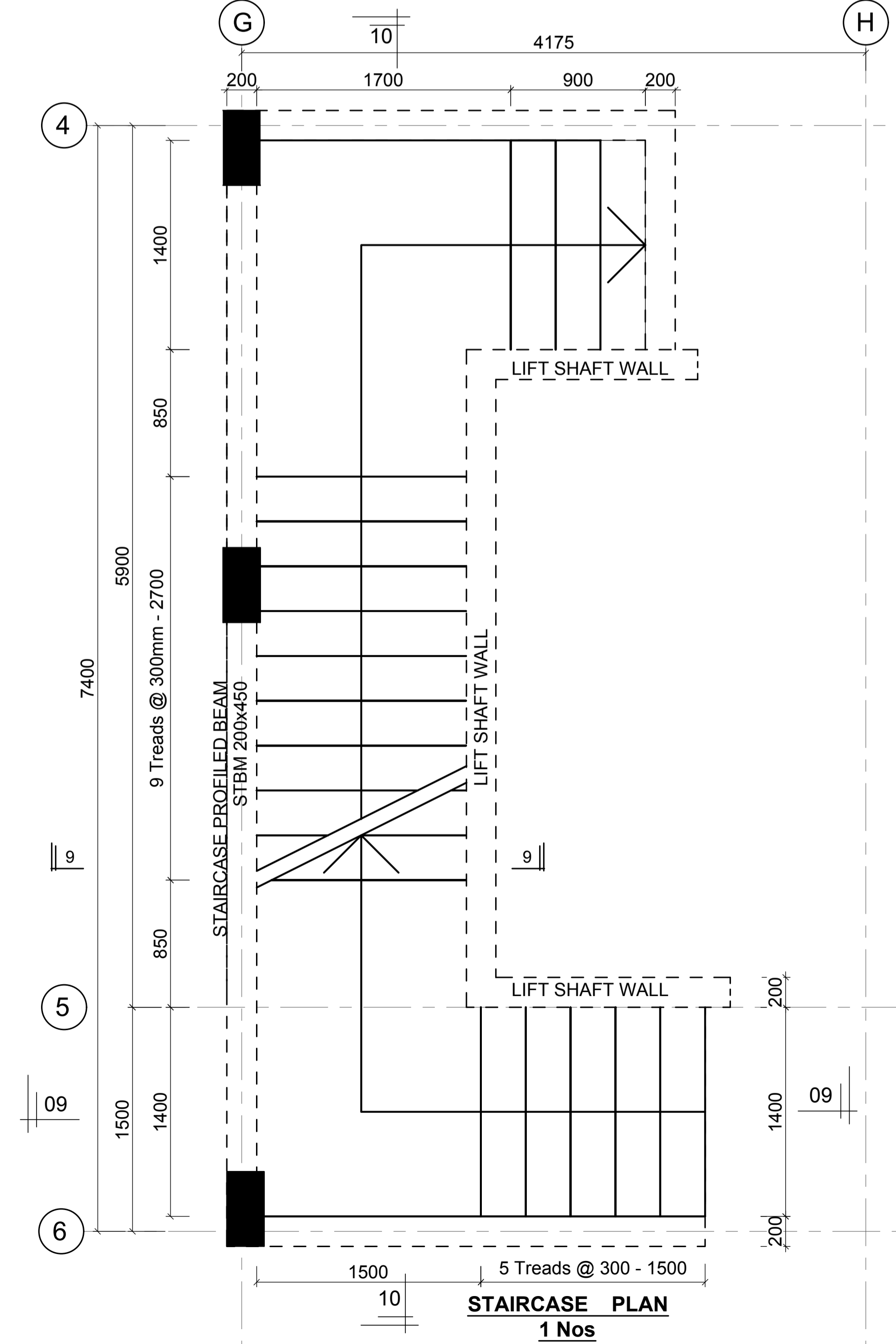
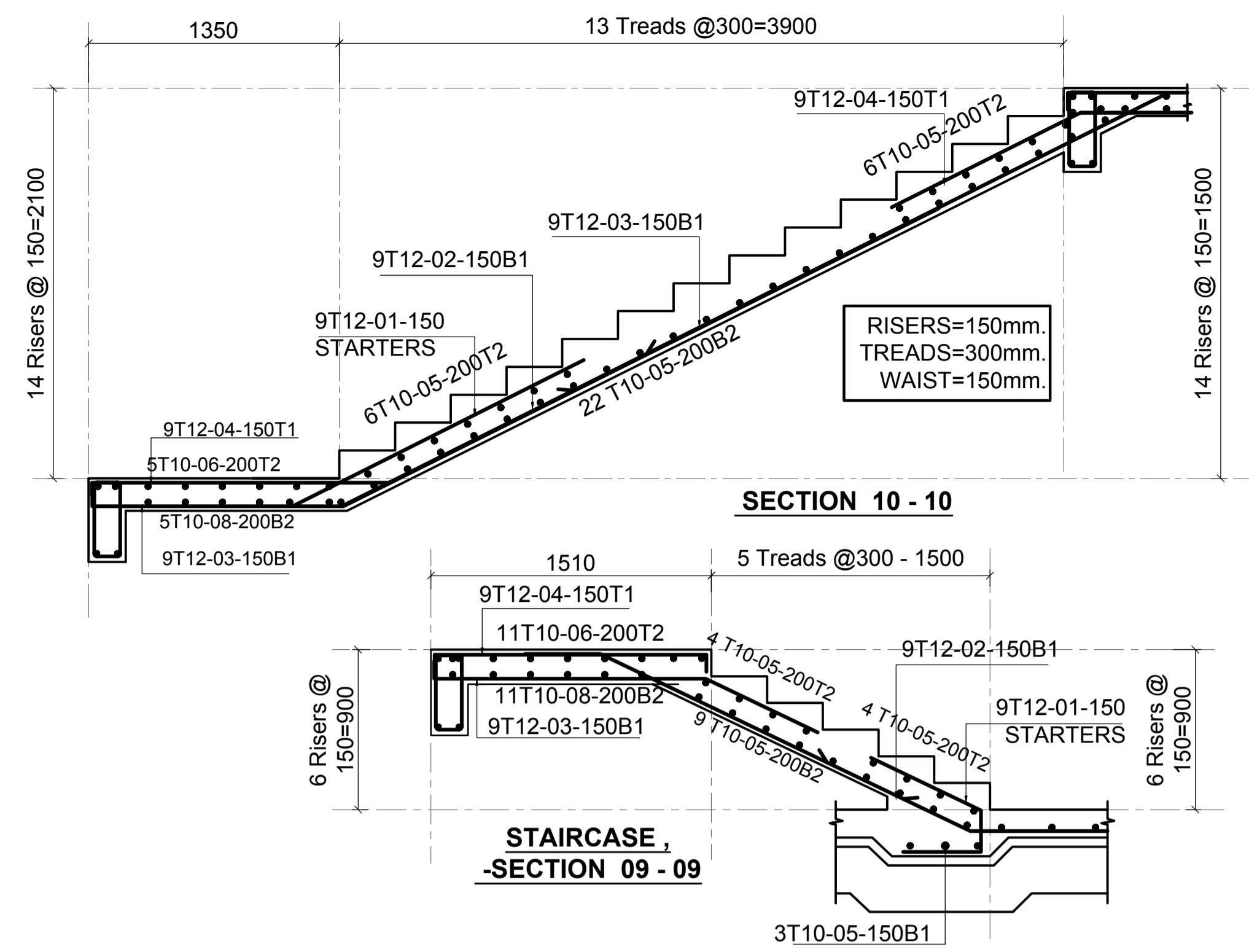
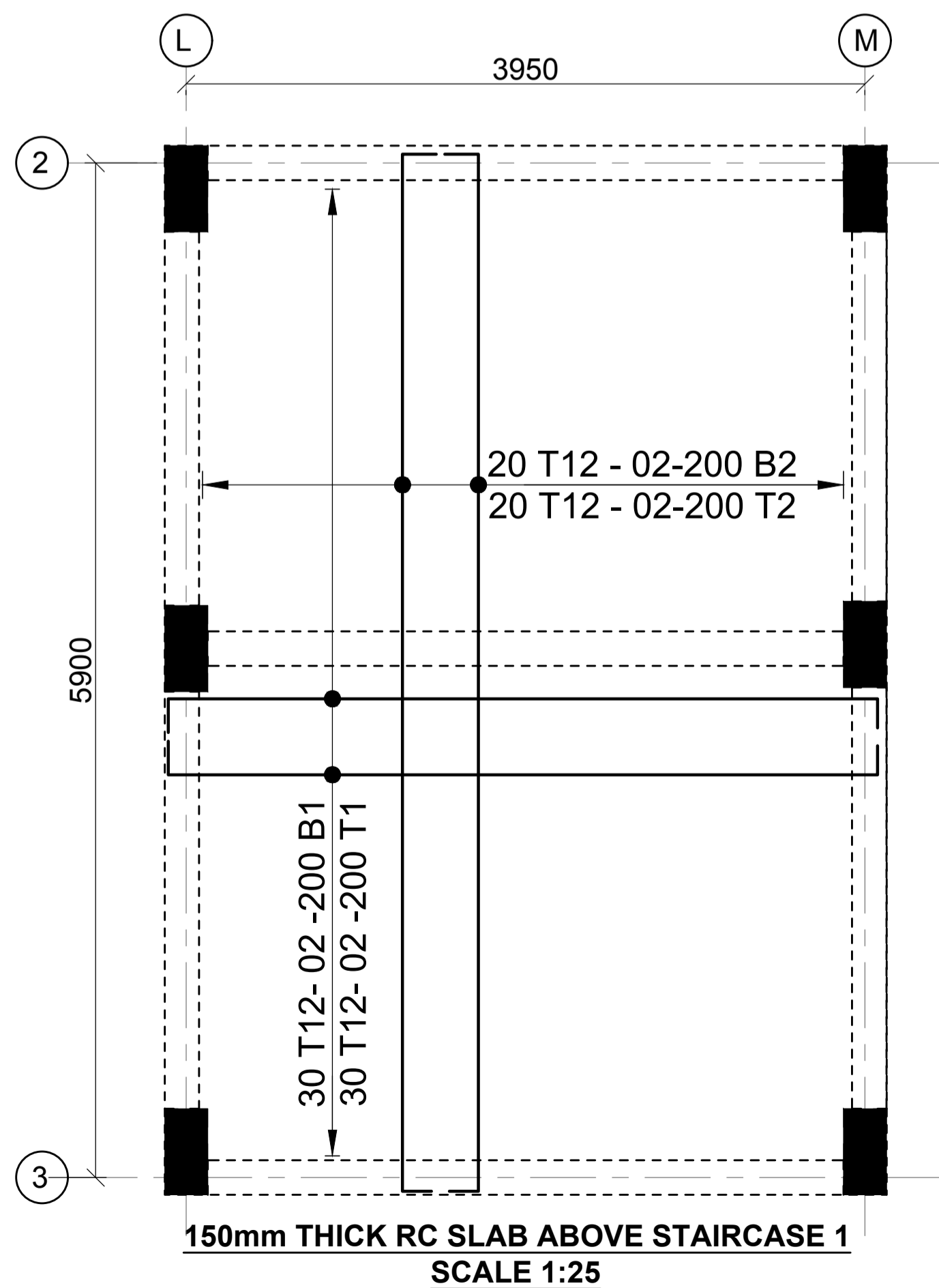
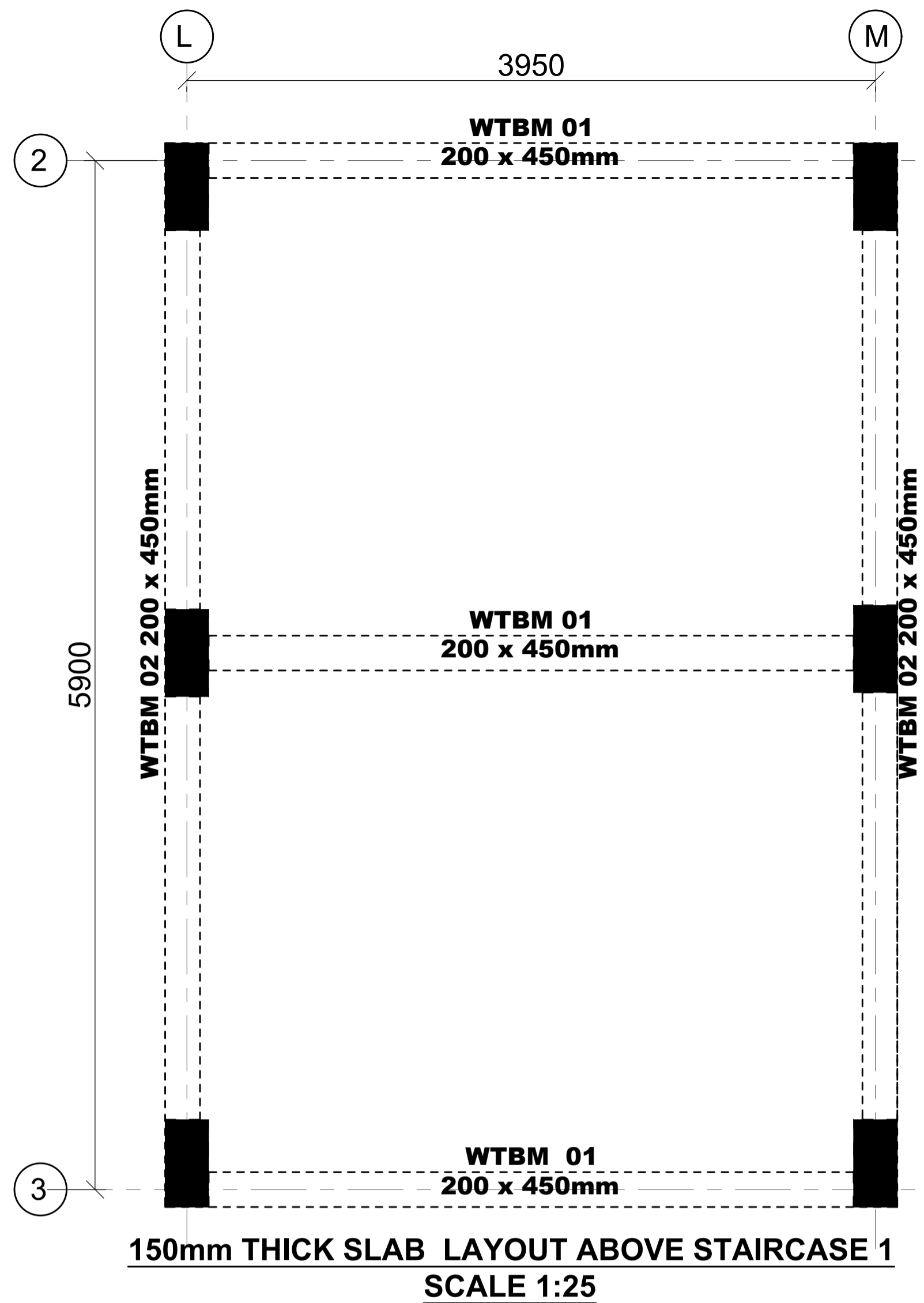
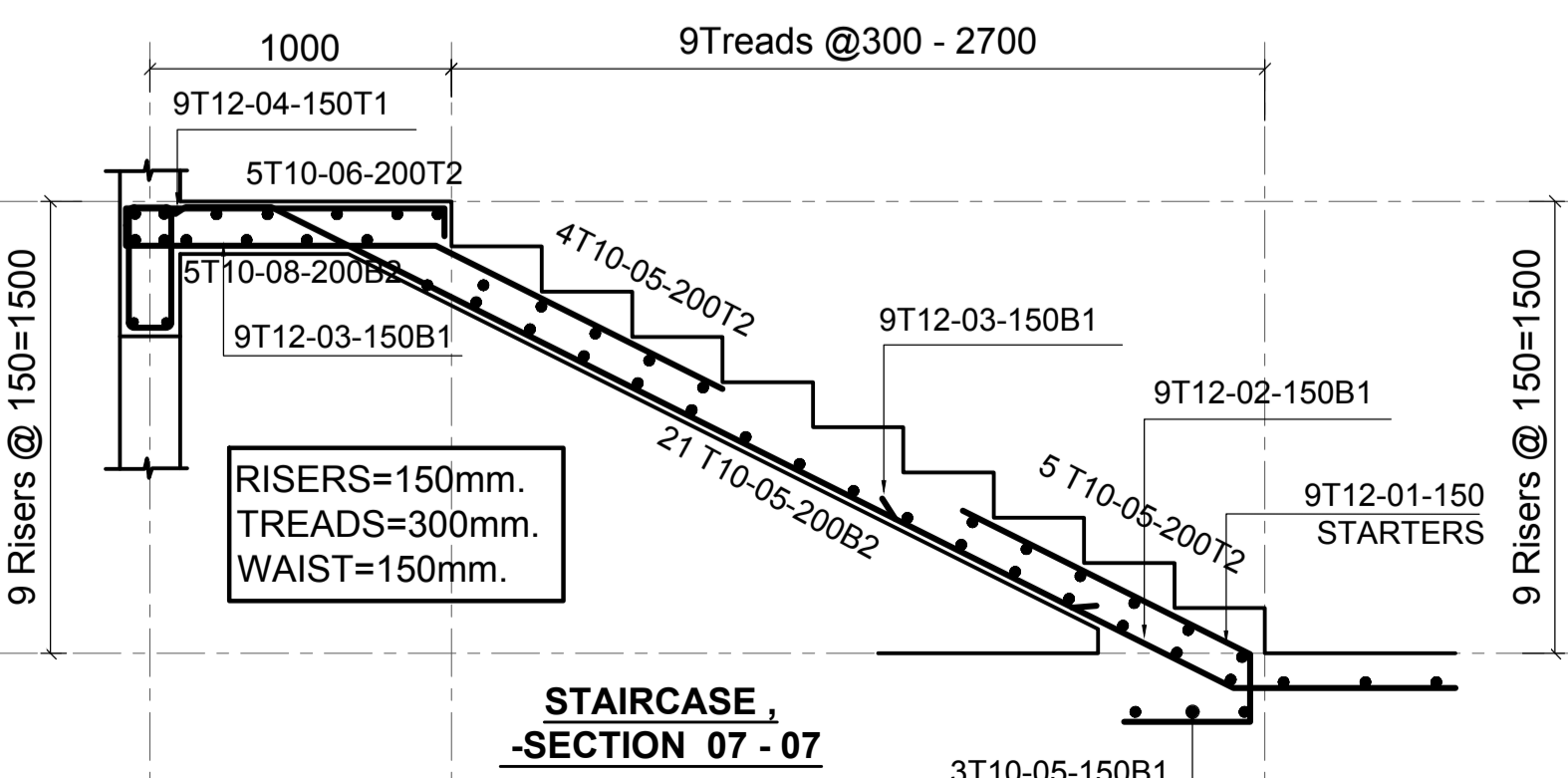
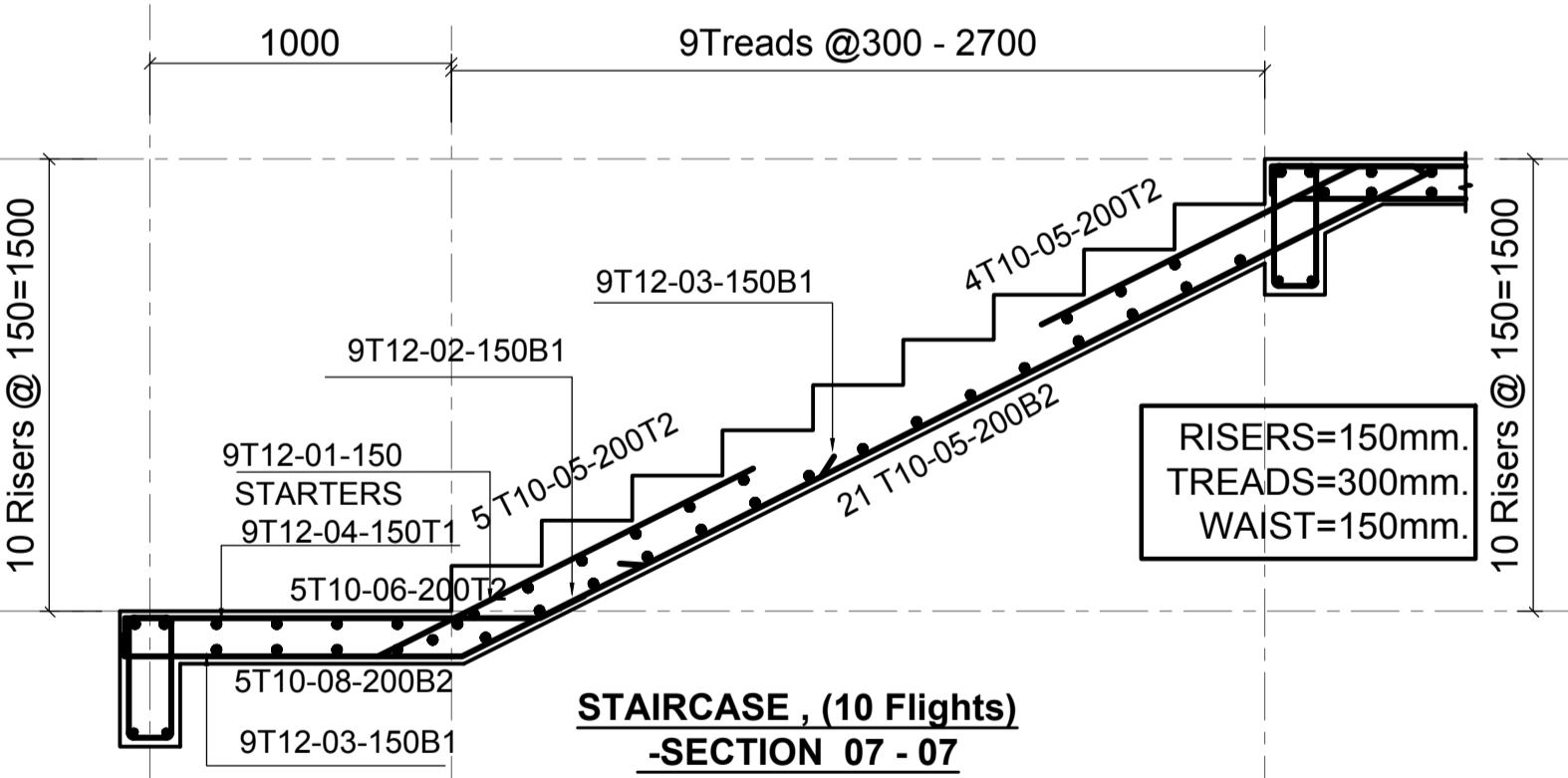
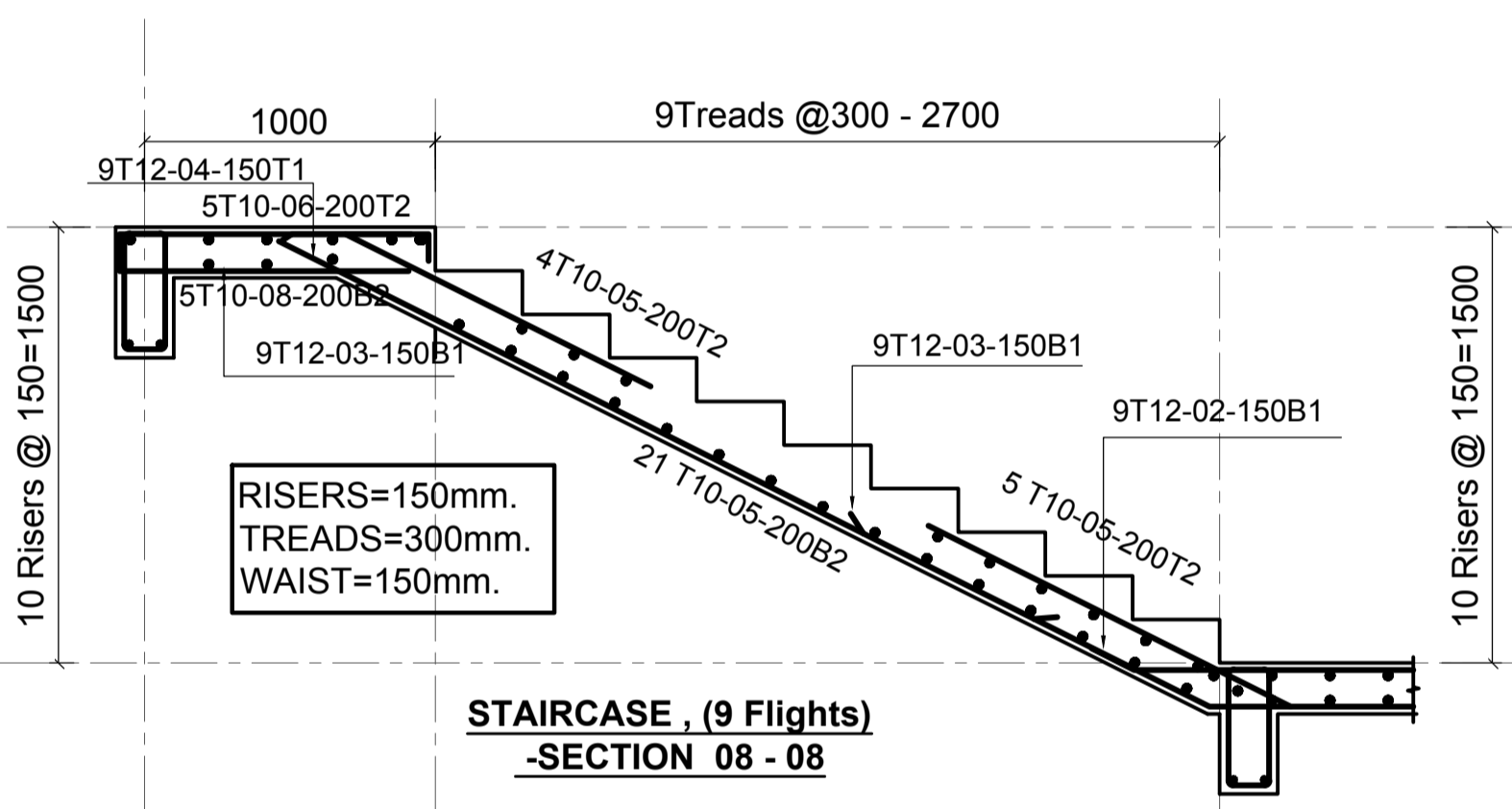
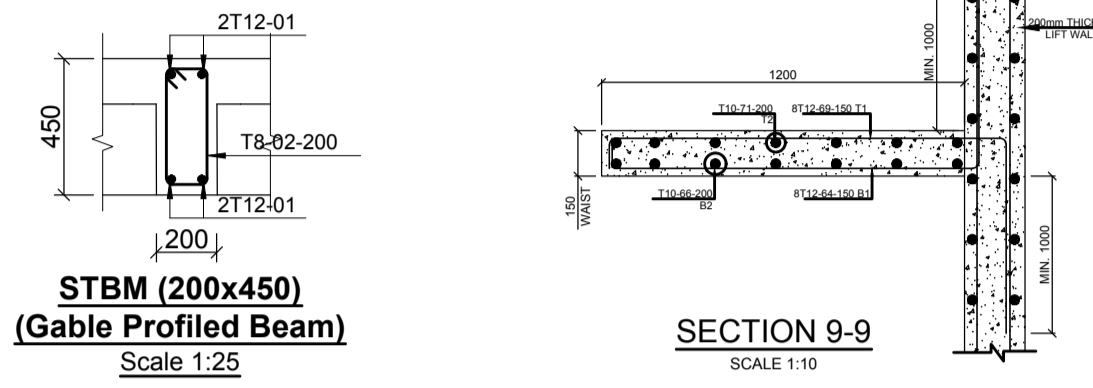
Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024 Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 2.2B

Project **PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)**  
 Title **SLAB OVER LIFT SHAFT RC DETAILS**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



| Revisions |             | Project |                      |
|-----------|-------------|---------|----------------------|
| No.       | Description | No.     | Title                |
|           |             |         | STAIRCASE RC DETAILS |

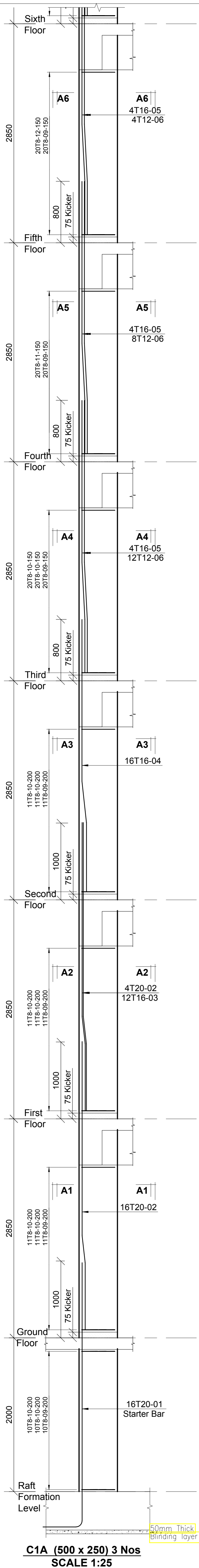
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 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024    Scale: As shown  
 Drawing Number: AMP-C-9-B/LAB 3.0B

Client: MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

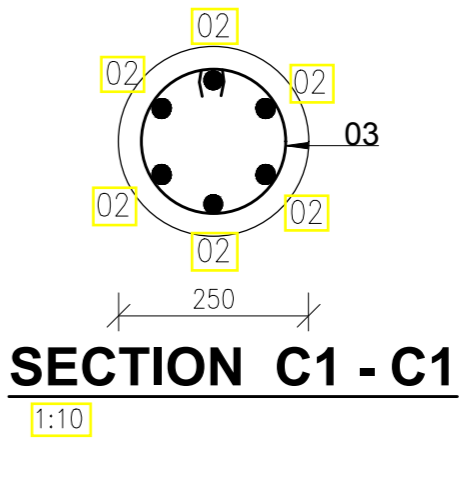
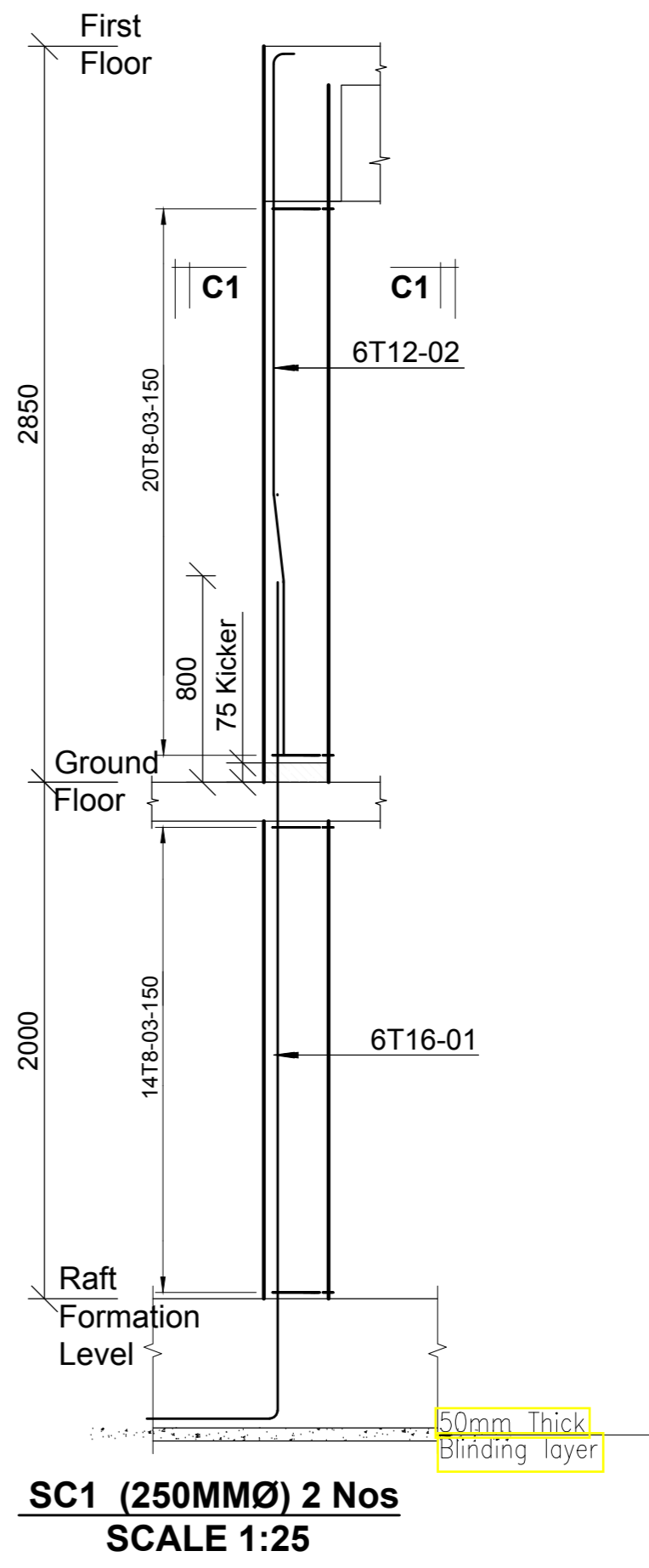
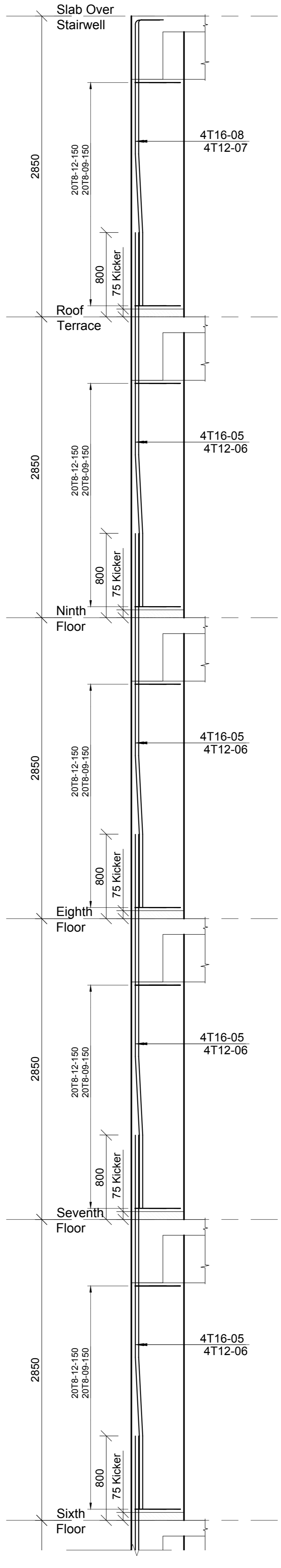
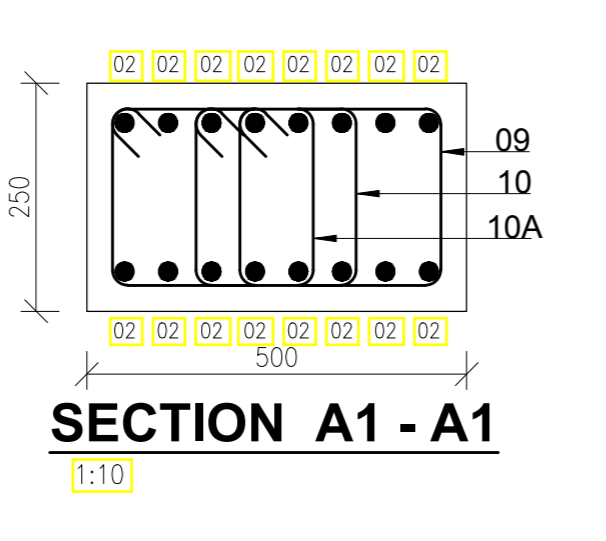
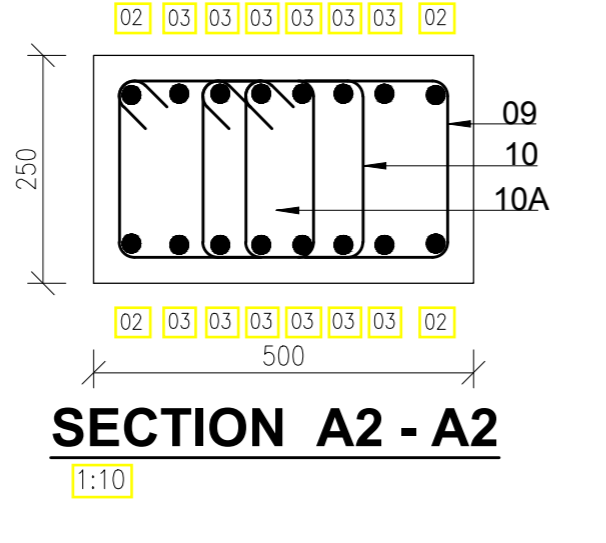
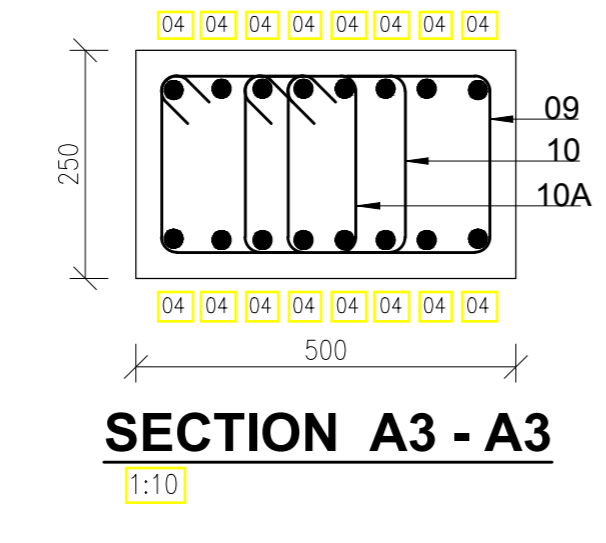
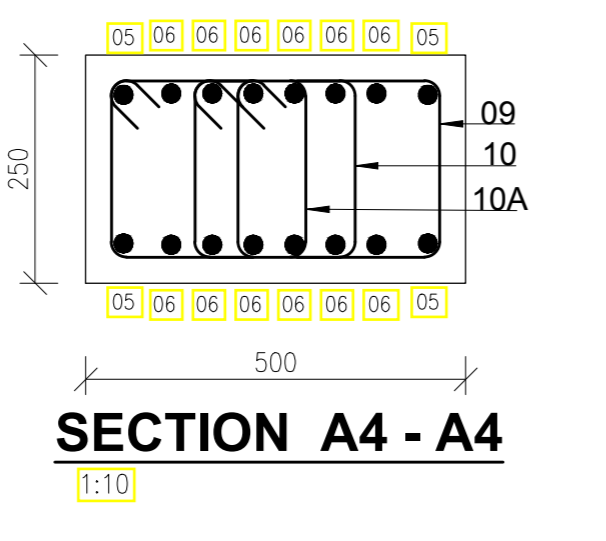
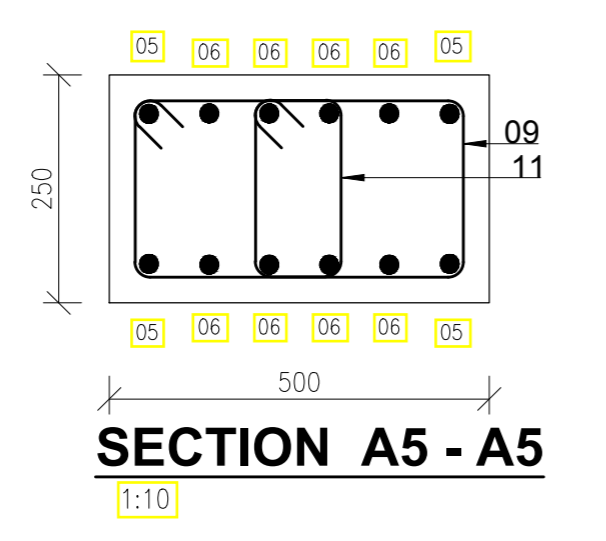
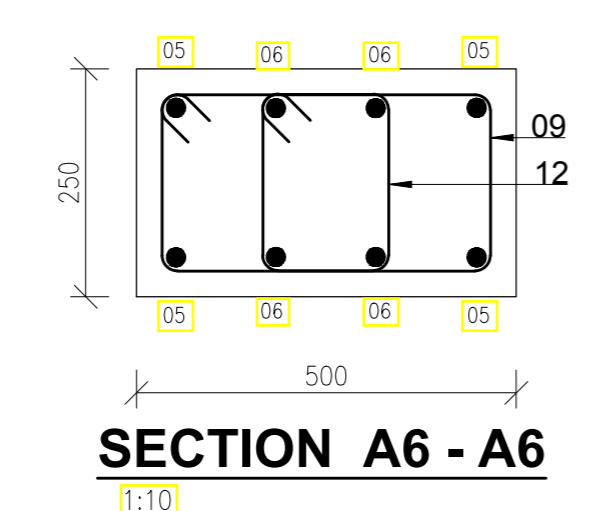
STRUCTURAL ENGINEER:

NOTES:  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. Concrete to be Class 25 mix and bedding concrete to be Class 15 mix.  
 4. Only figured dimensions to be taken from this drawing.  
 5. Any discrepancy in dimensions to be reported to the project consultants i.e. architect or engineer.





**C1A (500 x 250) 3 Nos**  
SCALE 1:25



| Revisions |      |
|-----------|------|
| No.       | Date |
|           |      |
|           |      |

**Project:** PROPOSED AFFORDABLE HOUSING DEVELOPMENT (BLOCK TYPE B MARKET UNITS)  
**Title:** COLUMN C1A RC DETAILS

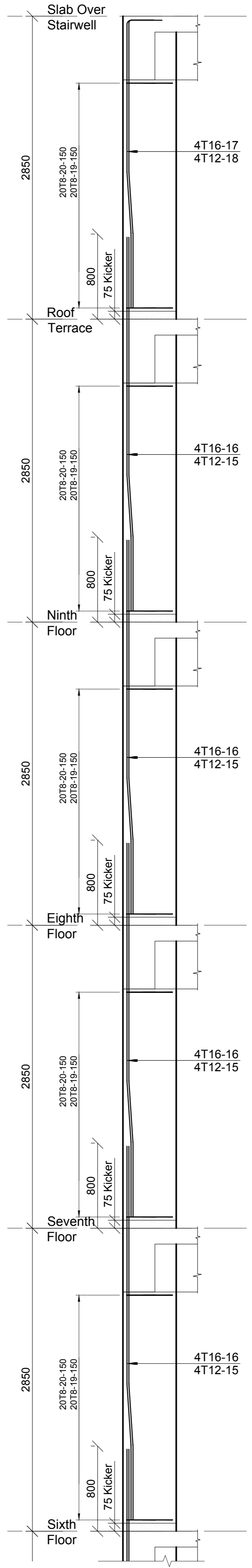
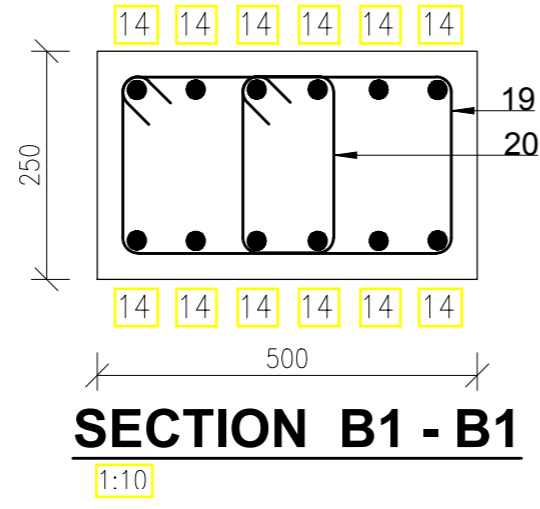
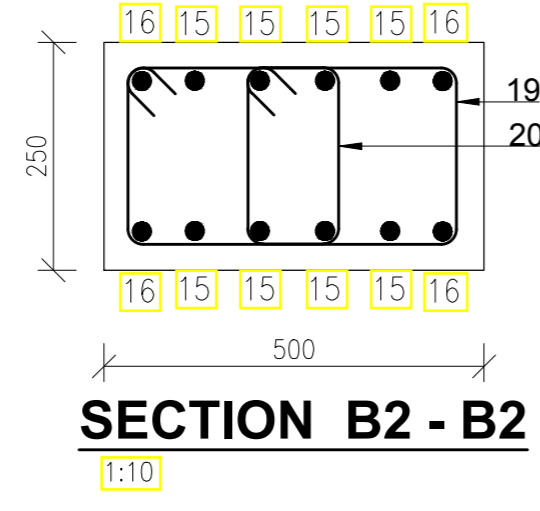
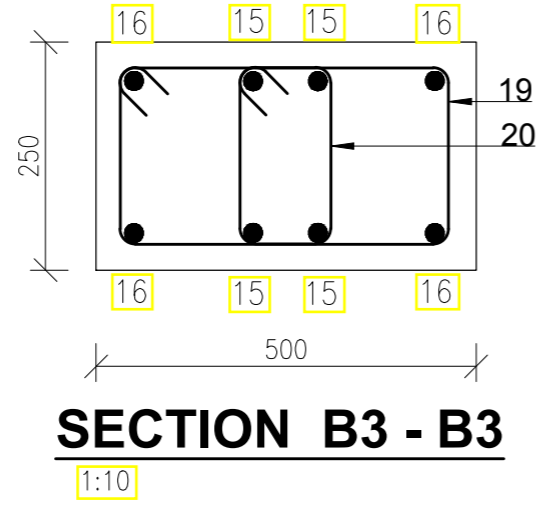
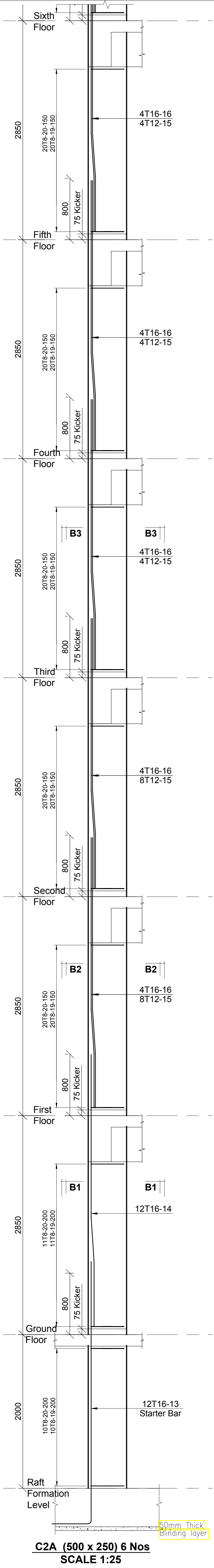
**Designed by:** JMN  
**Checked by:** JMN  
**Approved by:** SECRETARY, HOUSING DEPARTMENT  
**Date:** 13th March 2024  
**Scale:** As shown  
**Drawing Number:** AHP-G-9-BLKB-4.0B

**STRUCTURAL ENGINEER:**

**Client:** MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT  
**STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT**

- NOTES:**
- All dimensions are in millimetres unless otherwise stated.
  - All reinforcements must be checked and approved by project structural engineer prior to concreting.
  - All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
  - Only figured dimensions to be taken from this drawing.
  - Any discrepancy / dimensions to be reported to the project consultants i.e architect or engineer.

- Symbols: T-TMT Rebars to B S 4 461 ; T - Top face ; B - Bottom face
- Cover to reinforcement: Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel to be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.



| Revisions |             |
|-----------|-------------|
| No.       | Description |
|           |             |
|           |             |
|           |             |

Project: PROPOSED AFFORDABLE HOUSING DEVELOPMENT (BLOCK TYPE B MARKET UNITS)  
 Title: COLUMN C2A RC DETAILS

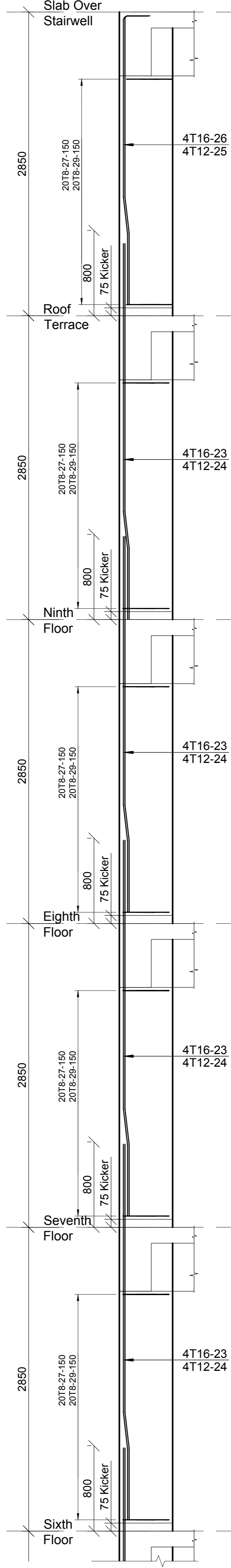
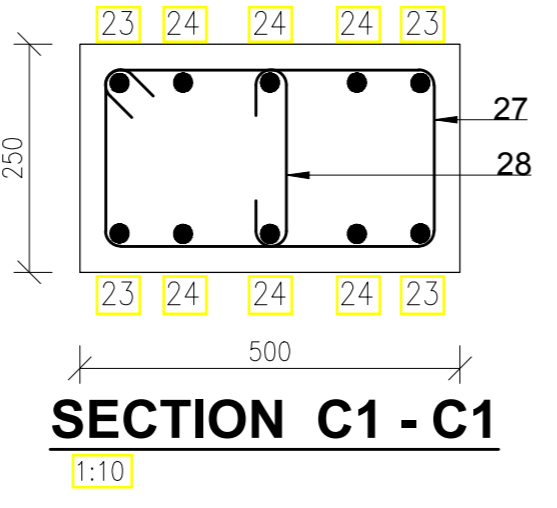
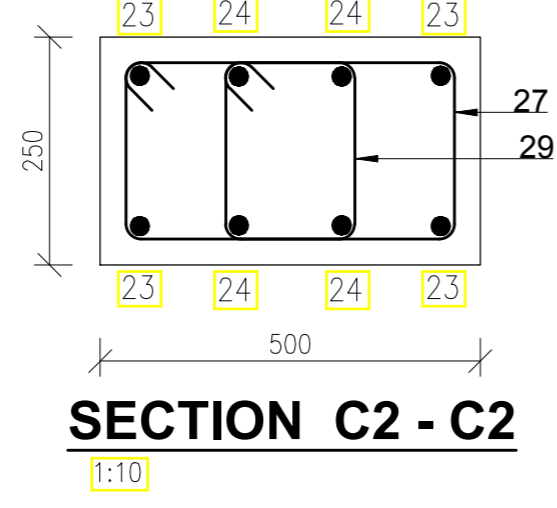
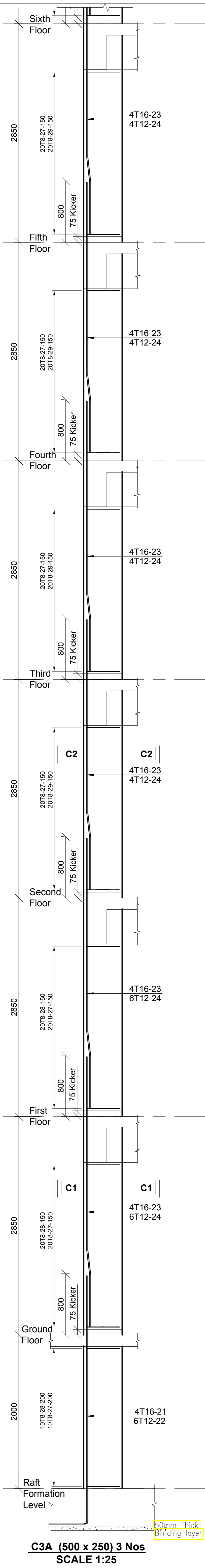
Designed by: JMN  
 Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024  
 Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 4-1B

STRUCTURAL ENGINEER:

Client: MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

6. Symbols: T-TMT Rebars to B S 4 461 : T - Top face  
 B - Bottom face  
 7. Cover to reinforcement, Slabs - 20mm,  
 Beams - 25mm, Columns - 40mm, Foundations - 50mm  
 8. All structural steel be grade 43A.  
 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

- NOTES  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
 4. Only figured dimensions to be taken from this drawing.  
 5. Any discrepancy/indimensions to be reported to the project consultants i.e architect or engineer.



**C3A (500 x 250) 3 Nos**  
SCALE 1:25

**NOTES**  
1. All dimensions are in millimetres unless otherwise stated.  
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
4. Only figured dimensions to be taken from this drawing.  
5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

6. Symbols: T-TMT Rebars to B S 4 461 ; T - Top face  
7. Cover to reinforcement: Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm  
8. All structural steel be grade 43A.  
9. All welds are 6mm thick.  
10. All structural steel to be painted with anti-rust primer paint.

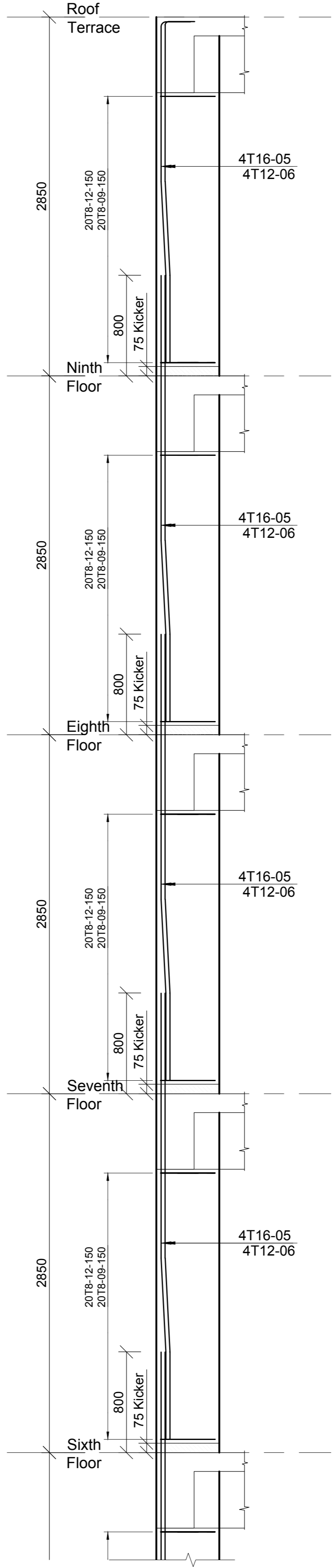
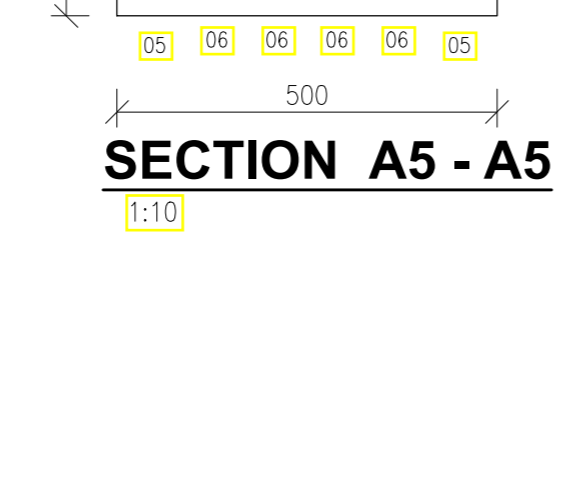
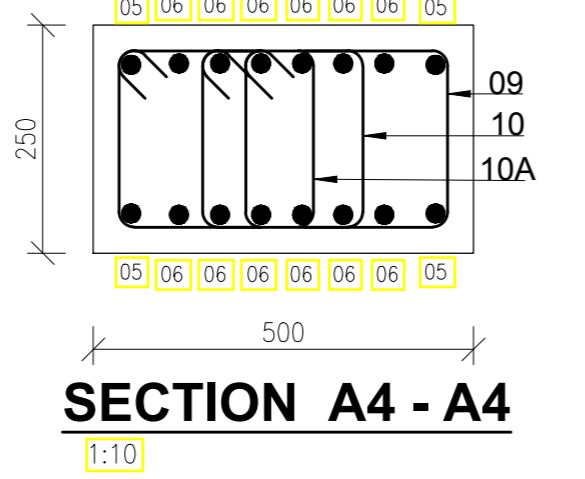
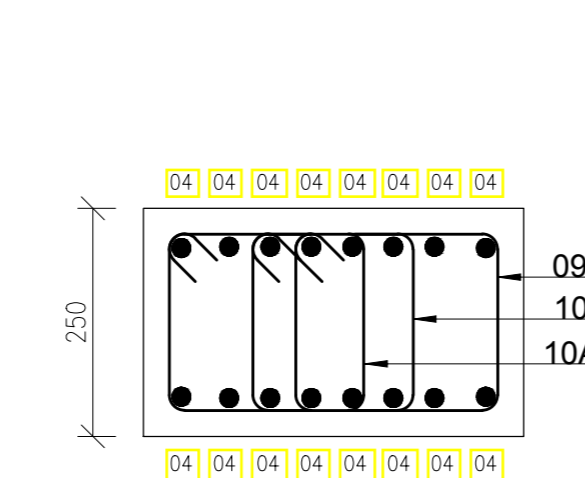
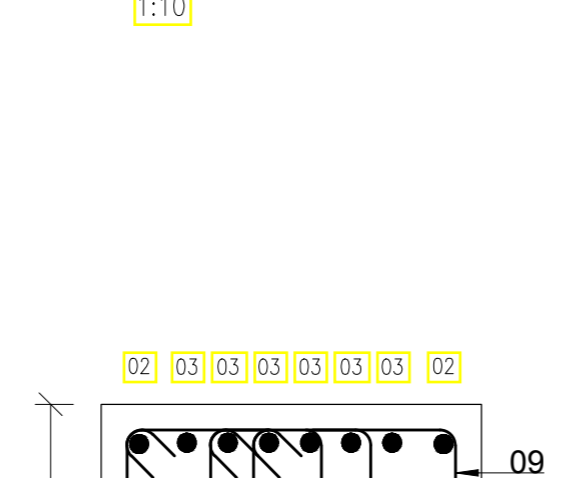
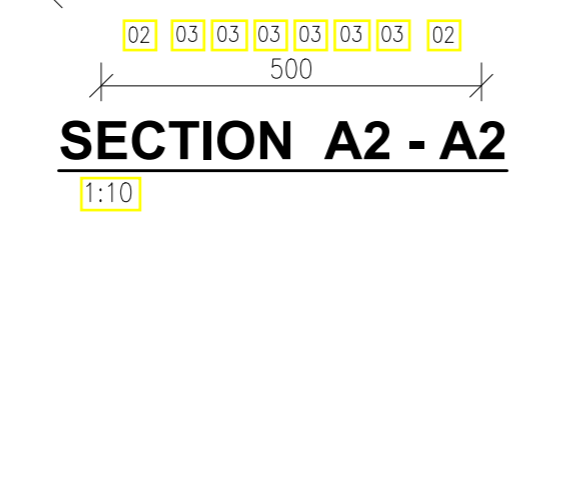
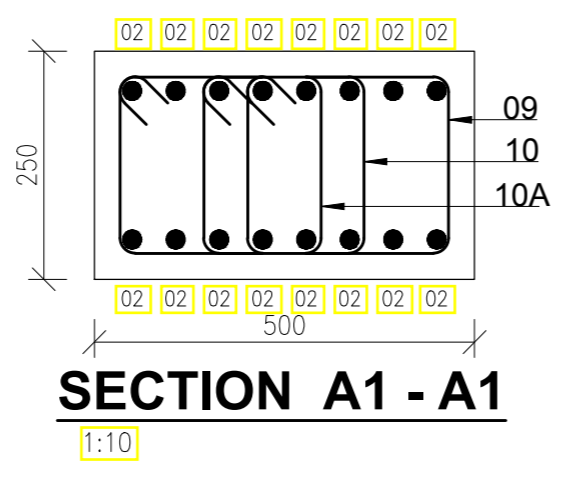
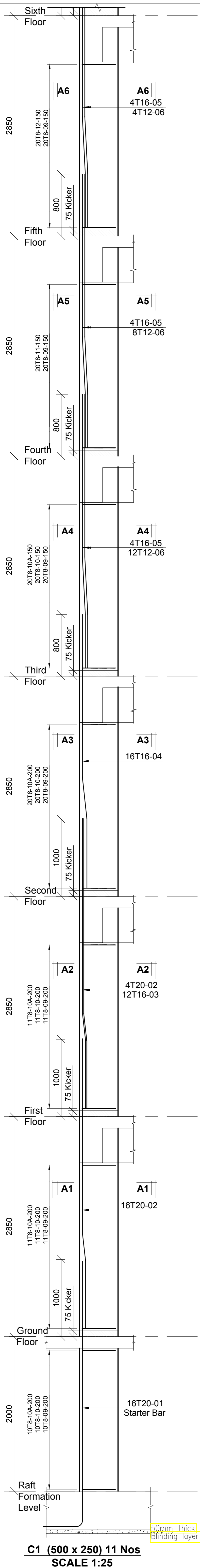
Client  
**MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT**  
STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN  
Checked by: JMN  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 13th March 2024  
Scale: As shown  
Drawing Number: AHP-G-9-BLKB 4.2B

Project  
**PROPOSED AFFORDABLE HOUSING DEVELOPMENT (BLOCK TYPE B MARKET UNITS)**  
Title  
**COLUMN C3A RC DETAILS**

| Revisions |             | Date |
|-----------|-------------|------|
| No.       | Description |      |
|           |             |      |
|           |             |      |



| Revisions |             |
|-----------|-------------|
| No.       | Description |
|           |             |
|           |             |
|           |             |

Project: **PROPOSED AFFORDABLE HOUSING DEVELOPMENT (BLOCK TYPE B MARKET UNITS)**  
Title: **COLUMN C1 RC DETAILS**

Designed by: JMN  
Checked by: JMN  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 13th March 2024  
Scale: As shown  
Drawing Number: AHP-G+9-BLKB 4.3B

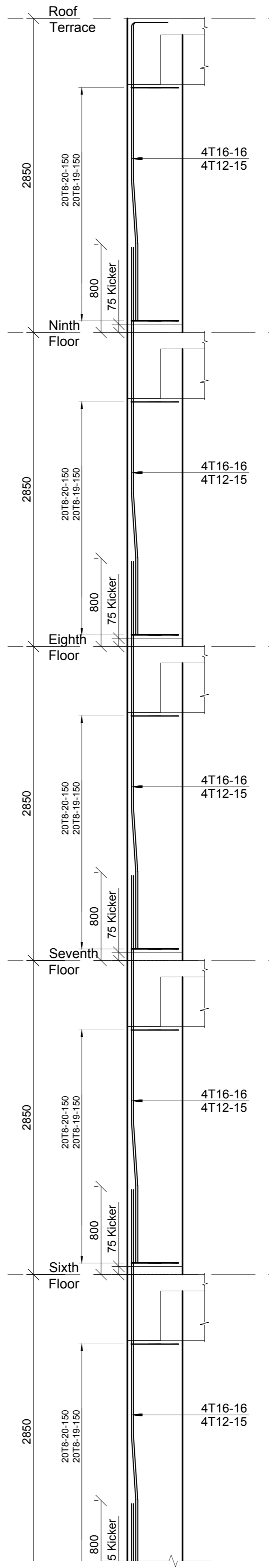
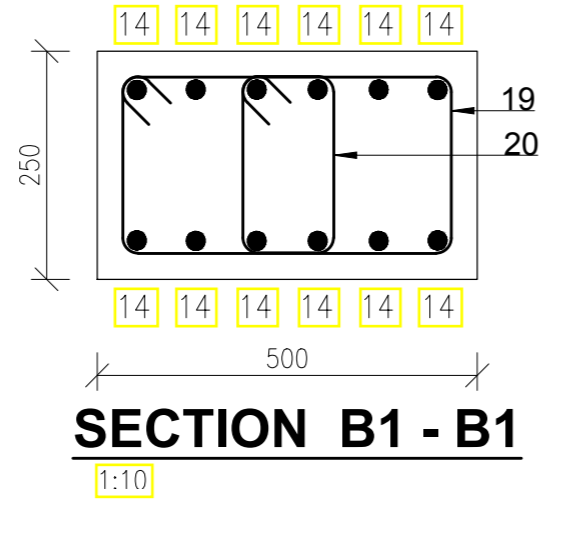
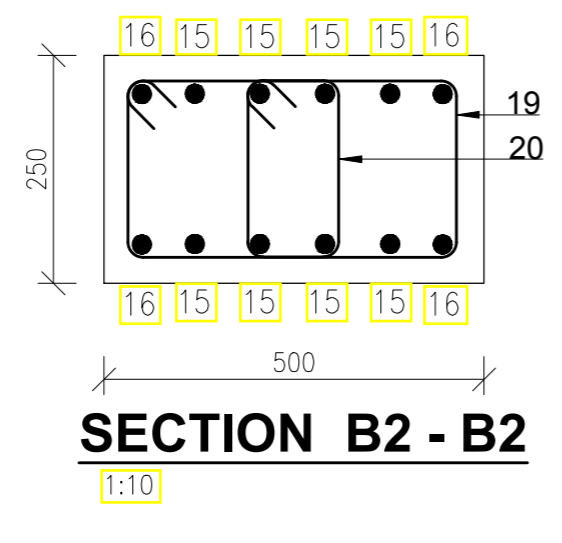
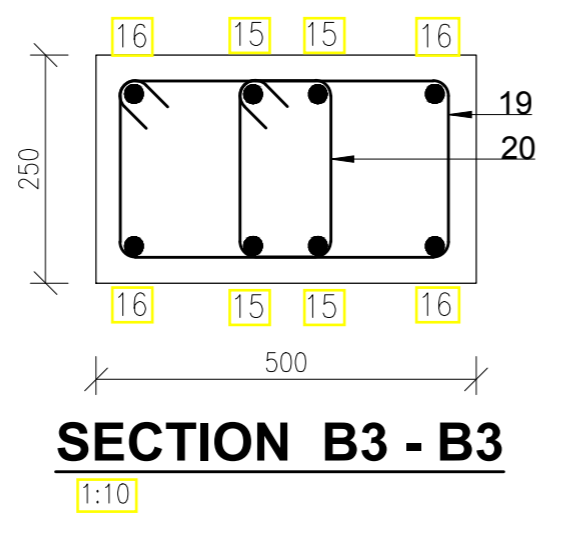
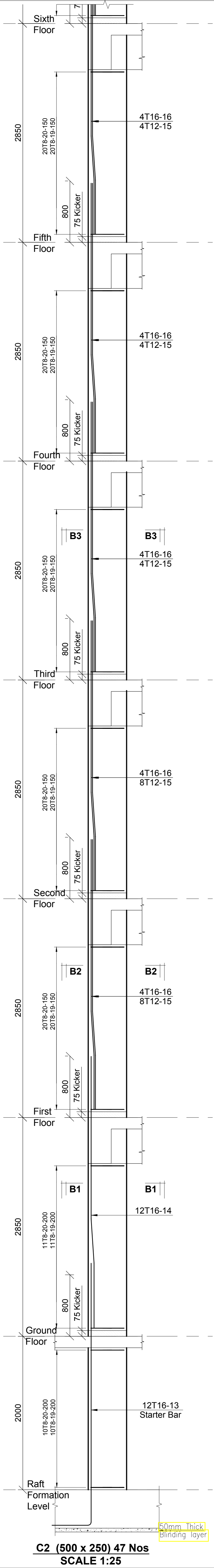
STRUCTURAL ENGINEER:

Client: **MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT**  
STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

6. Symbols: T-TMT Rebars to B S 4 461 : T - Top face  
B - Bottom face  
7. Cover to reinforcement: Slabs - 20mm,  
Beams - 25mm, Columns - 40mm, Foundations - 50mm  
8. All structural steel be grade 43A.  
9. All welds are 6mm thick  
10. All structural steel to be painted with anti-rust primer paint.

- NOTES  
1. All dimensions are in millimetres unless otherwise stated.  
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
4. Only figured dimensions to be taken from this drawing.  
5. Any discrepancy /indimensions to be reported to the project consultants i.e architect or engineer.

**C1 (500 x 250) 11 Nos**  
**SCALE 1:25**



**C2 (500 x 250) 47 Nos**  
**SCALE 1:25**

| Revisions |             |
|-----------|-------------|
| No.       | Description |
|           |             |
|           |             |
|           |             |

**Project**  
**PROPOSED AFFORDABLE HOUSING DEVELOPMENT (BLOCK TYPE B MARKET UNITS)**

**Title**  
**COLUMN C2 RC DETAILS**

**Designed by:** JMN  
**Checked by:** JMN  
**Approved by:** SECRETARY, HOUSING DEPARTMENT  
**Date:** 13th March 2024  
**Scale:** As shown  
**Drawing Number:** AHP-G+9-BLKB 4-4B

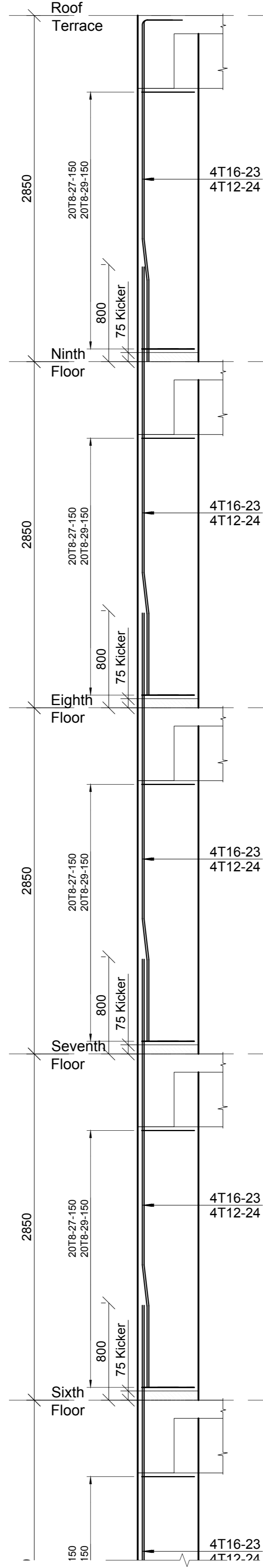
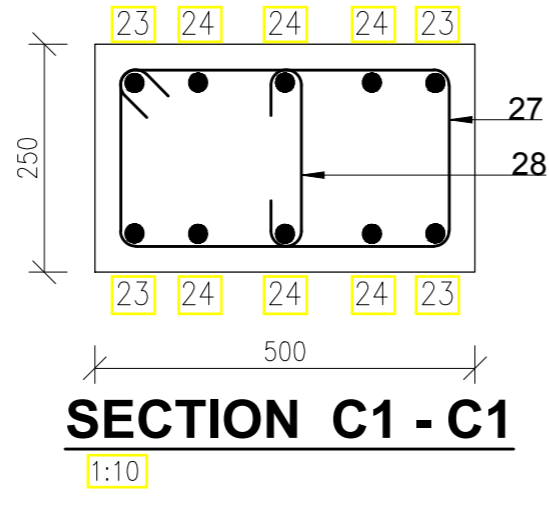
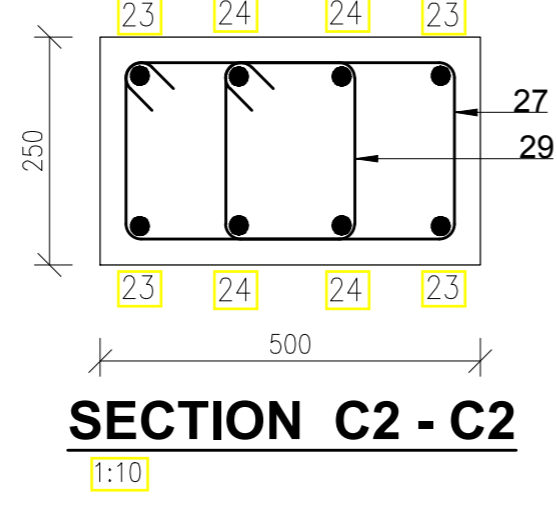
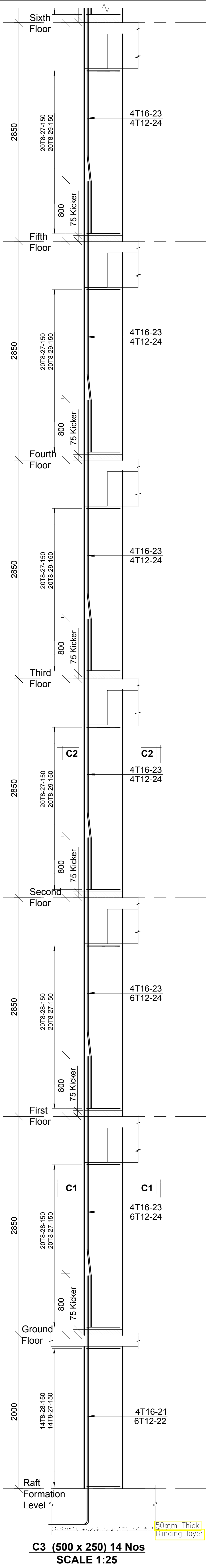
**STRUCTURAL ENGINEER:**

**Client**  
**MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT**  
**STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT**

- 6. Symbols:** T - TMT Rebars to B S 4 461 ; T - Top face  
 B - Bottom face
7. Cover to reinforcement, Slabs - 20mm.
  8. Beams - 25mm, Columns - 40mm, Foundations - 50mm
  9. All structural steel be grade 43A.
  10. All welds are 6mm thick.
  11. All structural steel to be painted with anti-rust primer paint.

**NOTES**

1. All dimensions are in millimetres unless otherwise stated.
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
4. Only figured dimensions to be taken from this drawing.
5. Any discrepancy / dimensions to be reported to the project consultants i.e architect or engineer.



**C3 (500 x 250) 14 Nos**  
SCALE 1:25

**NOTES**  
1. All dimensions are in millimetres unless otherwise stated.  
2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
4. Only figured dimensions to be taken from this drawing.  
5. Any discrepancy / dimensions to be reported to the project consultants i.e architect or engineer.

6. Symbols: T-TMT Rebars to B S 4 461 ; T - Top face  
7. Cover to reinforcement: Slabs - 20mm,  
Beams - 25mm, Columns - 40mm, Foundations - 50mm  
8. All structural steel be grade 43A.  
9. All welds are 6mm thick.  
10. All structural steel to be painted with anti-rust primer paint.

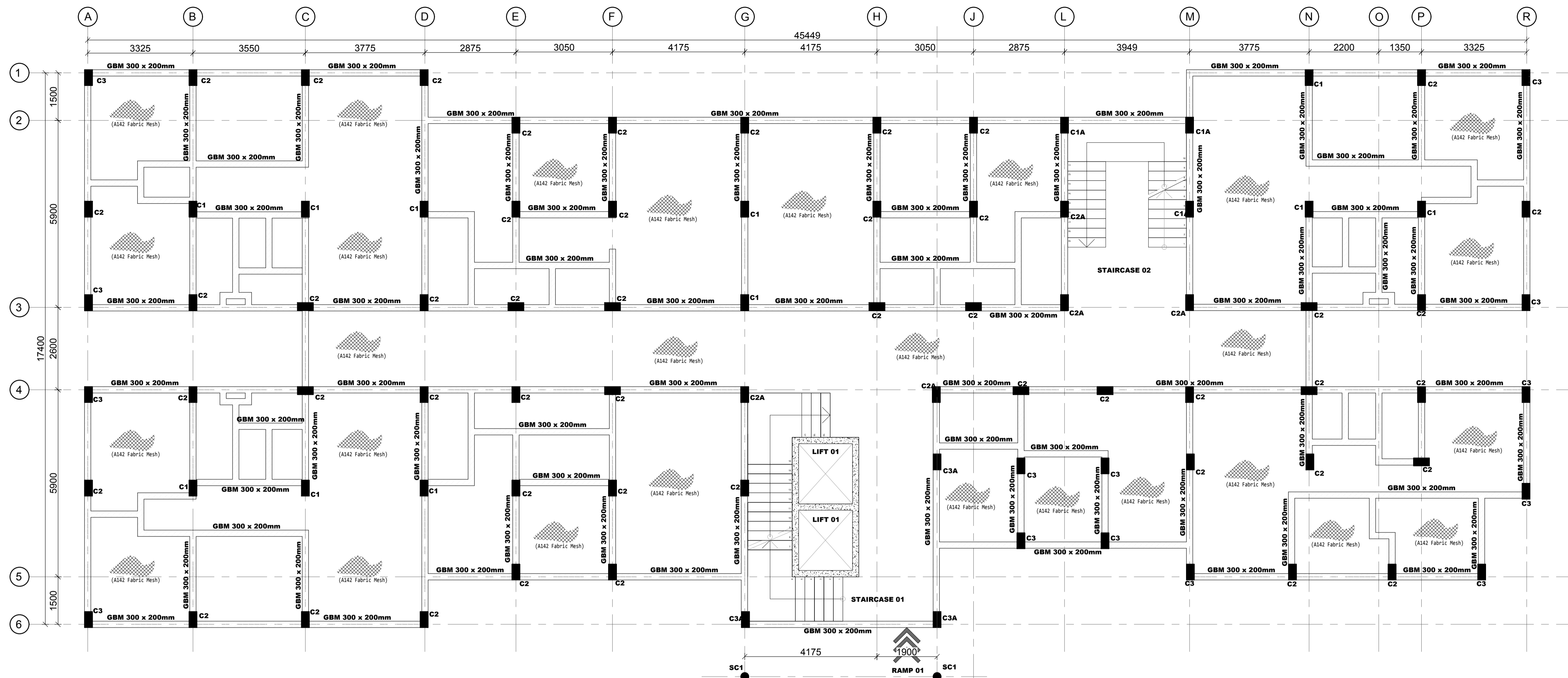
Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
HOUSING AND URBAN DEVELOPMENT**  
STATE DEPARTMENT FOR HOUSING AND URBAN  
DEVELOPMENT

STRUCTURAL ENGINEER:

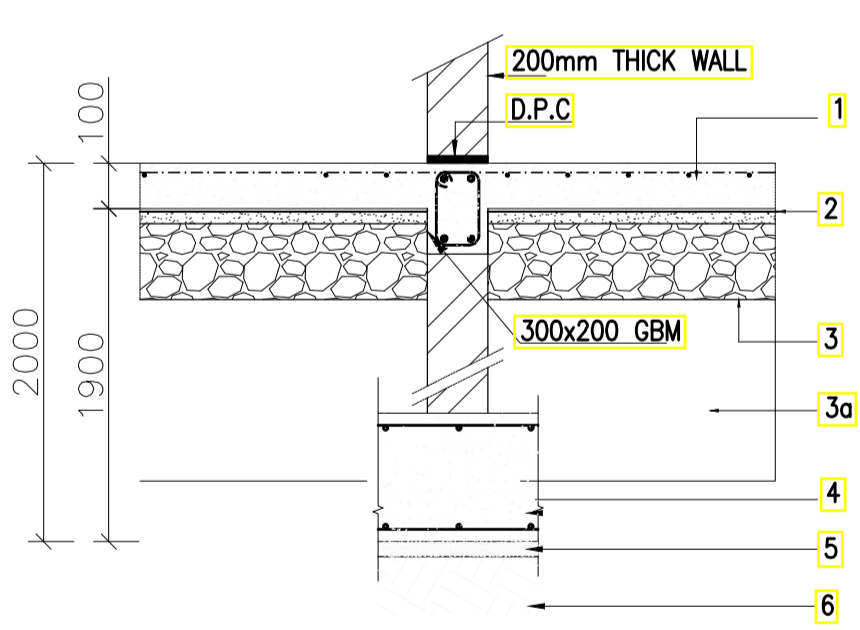
Designed by: JMN | Checked by: JMN  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 13th March 2024 | Scale: As shown  
Drawing Number: AHP-G-9-BLKB-4.5B

Project  
**PROPOSED AFFORDABLE  
HOUSING DEVELOPMENT  
(BLOCK TYPE B MARKET UNITS**  
Title  
**COLUMN C3 RC DETAILS**

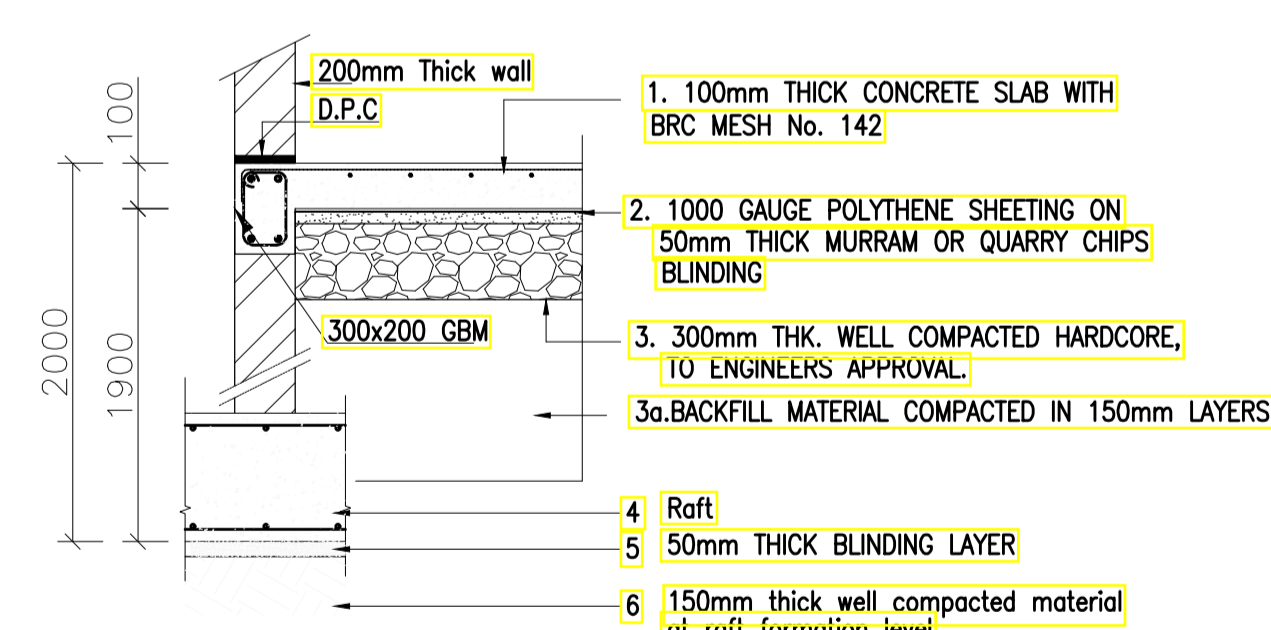
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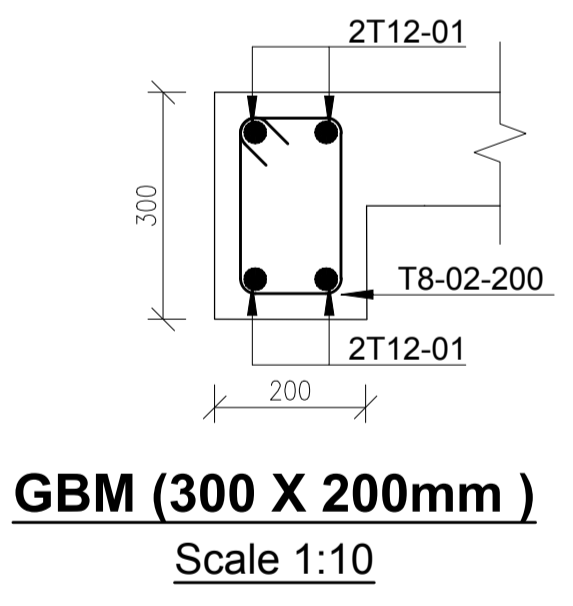
**GROUND FLOOR LAYOUT**  
 (100mm Thick Solid Slab With BRC Mesh A142 on top )  
 SCALE 1:75



**TYPICAL INTERNAL FOUNDATION WALLING SECTION**  
 1:25



**TYPICAL INTERNAL FOUNDATION WALLING SECTION**  
 1:25



**GBM (300 X 200mm)**  
 Scale 1:10

**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
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 5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

- 6. Symbols: T-TMT Rebars to B S 4 461 : T - Top face B - Bottom face
- 7. Cover to reinforcement; Slabs - 20mm, Beams - 25mm, Columns - 40mm, Foundations - 50mm
- 8. All structural steel be grade 43A.
- 9. All welds are 6mm thick.
- 10. All structural steel to be painted with anti-rust primer paint.

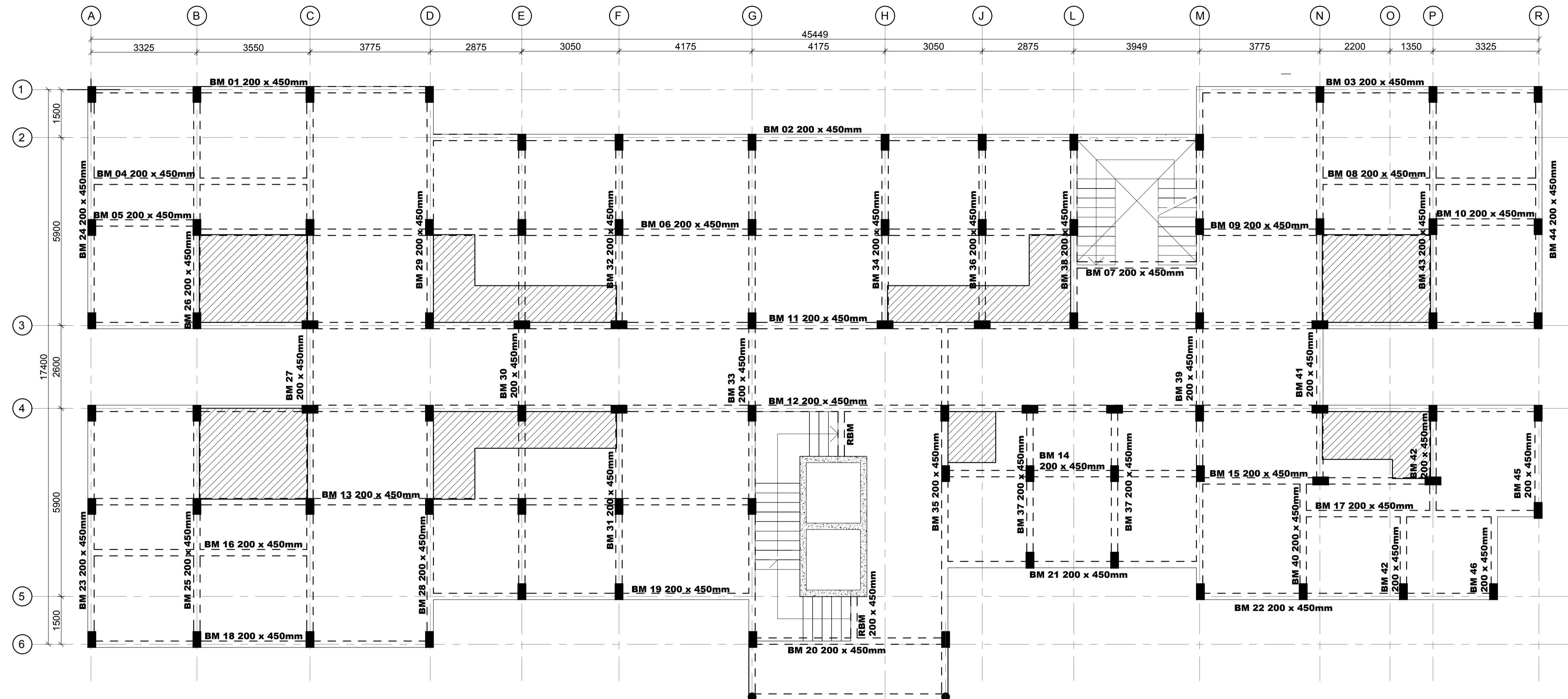
Client  
**MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024 Scale: As shown  
 Drawing Number: AHP-G-9-BLKB 5.0B

Project  
**PROPOSED AFFORDABLE HOUSING DEVELOPMENT (BLOCK TYPE B MARKET UNITS)**  
 Title  
**GROUND FLOOR LAYOUT DETAILS**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
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FIRST FLOOR SLAB LAYOUT  
 130 MM THICK SOLID SLAB AND 150 MM THICK SLAB IN WET AREAS(HATCHED)  
 SCALE 1:75

**NOTE:**  
 -First floor slab balcony to be waterproofed with physical barrier waterproofing membrane such as APP or equivalent.  
 -APP membrane to be protected using screed and concrete interlocking tiles

**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
- All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
- Only figured dimensions to be taken from this drawing.
- Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

- Symbols; T-TMT Rebars to B S 4 461 : T - Top face  
B - Bottom face
- Cover to reinforcement; Slabs - 20mm,  
Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

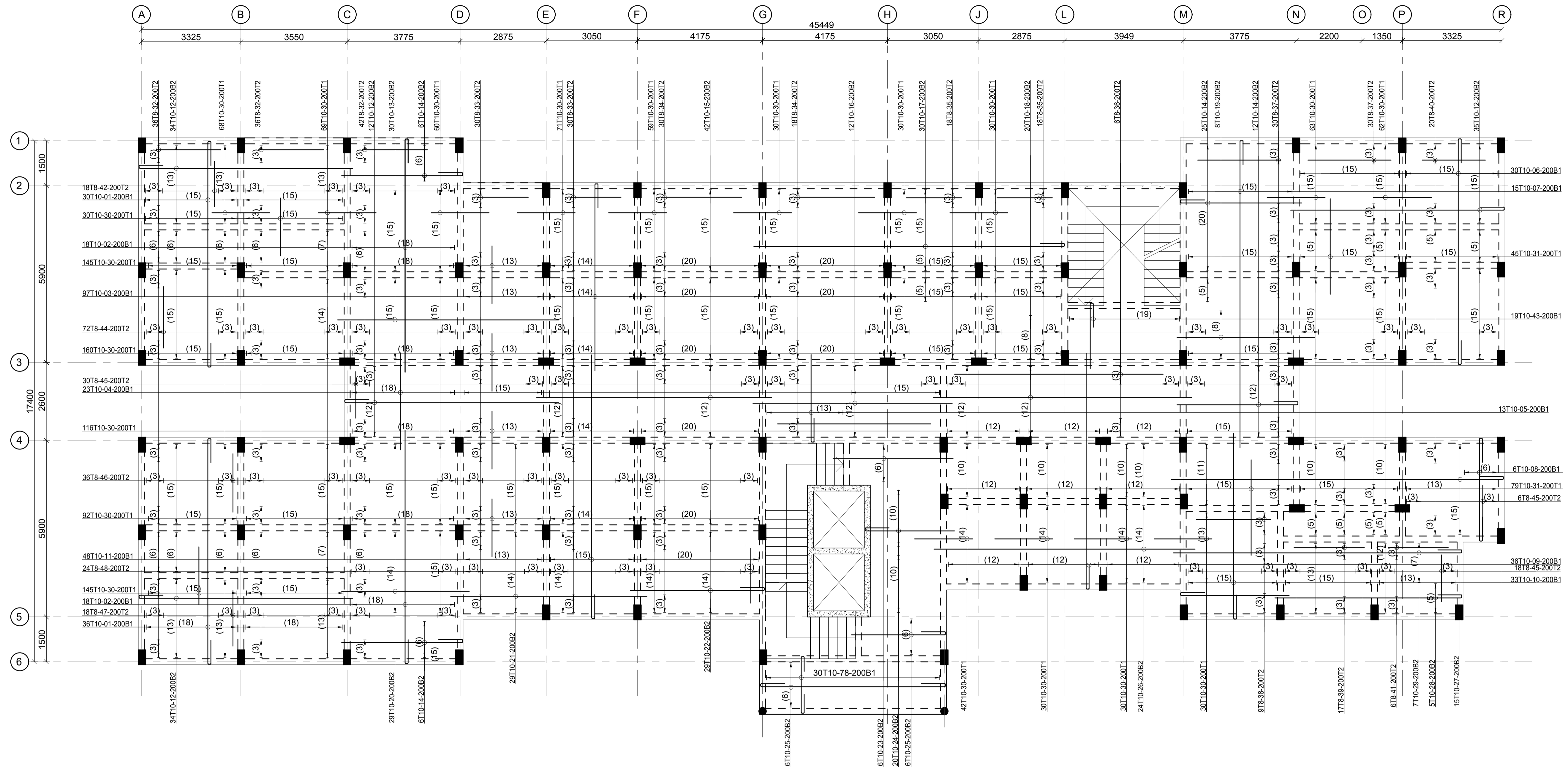
STRUCTURAL ENGINEER:

Designed by: JMN      Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 5.1B

Project  
**PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)**  
 Title  
**FIRST FLOOR LAYOUT DETAILS**

| Revisions |             |      |
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| No.       | Description | Date |
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|           |             |      |
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**FIRST FLOOR SLAB LAYOUT**  
**130 MM THICK SOLID SLAB AND 150 MM THICK SLAB IN WET AREAS**  
**SCALE 1:75**

**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
 4. Only figured dimensions to be taken from this drawing.  
 5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

6. Symbols; T-TMT Rebars to B S 4 461 : T - Top face  
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 Beams - 25mm, Columns - 40mm, Foundations - 50mm  
 8. All structural steel be grade 43A.  
 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

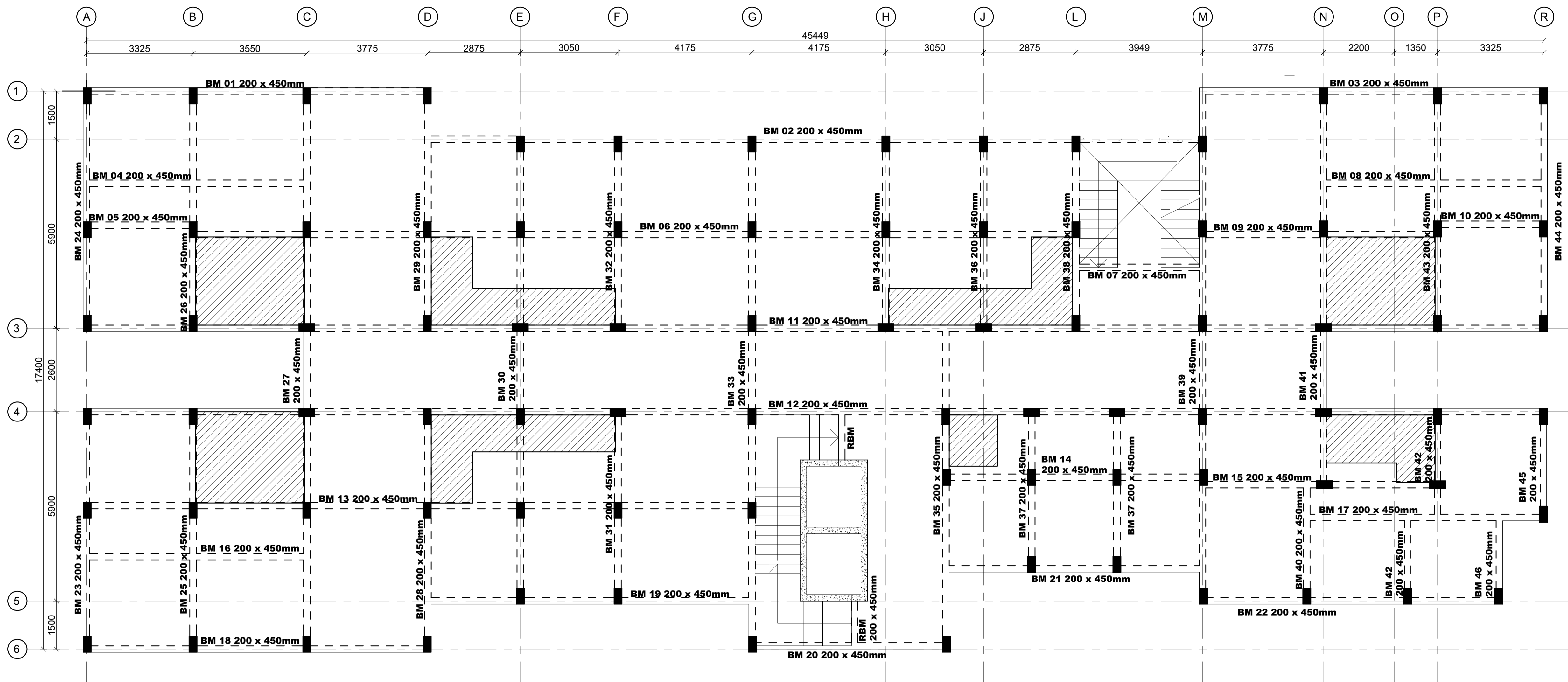
Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN      Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 5.2B

Project  
**PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)**  
 Title  
**FIRST FLOOR RC SLAB DETAILS**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
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|           |             |      |
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TYPICAL FLOOR SLAB LAYOUT  
 130 MM THICK SOLID SLAB AND 150 MM THICK SLAB IN WET AREAS(HATCHED)  
 SCALE 1:75

NOTES

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
- All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
- Only figured dimensions to be taken from this drawing.
- Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

- Symbols; T-TMT Rebars to B S 4 461 : T - Top face  
B - Bottom face
- Cover to reinforcement; Slabs - 20mm,  
Beams - 25mm, Columns - 40mm, Foundations - 50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

Client  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN      Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 6.0B

Project  
 PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)  
 Title  
 TYPICAL FLOOR SLAB LAYOUT DETAILS

| Revisions |             |      |
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| No.       | Description | Date |
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|           |             |      |
|           |             |      |



TYPICAL FLOOR SLAB LAYOUT  
 130 MM THICK SOLID SLAB AND 150 MM THICK SLAB IN WET AREAS  
 SCALE 1:75

NOTES  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
 4. Only figured dimensions to be taken from this drawing.  
 5. Any discrepancy in dimensions to be reported to the project consultants i.e architect or engineer.

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 8. All structural steel be grade 43A.  
 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

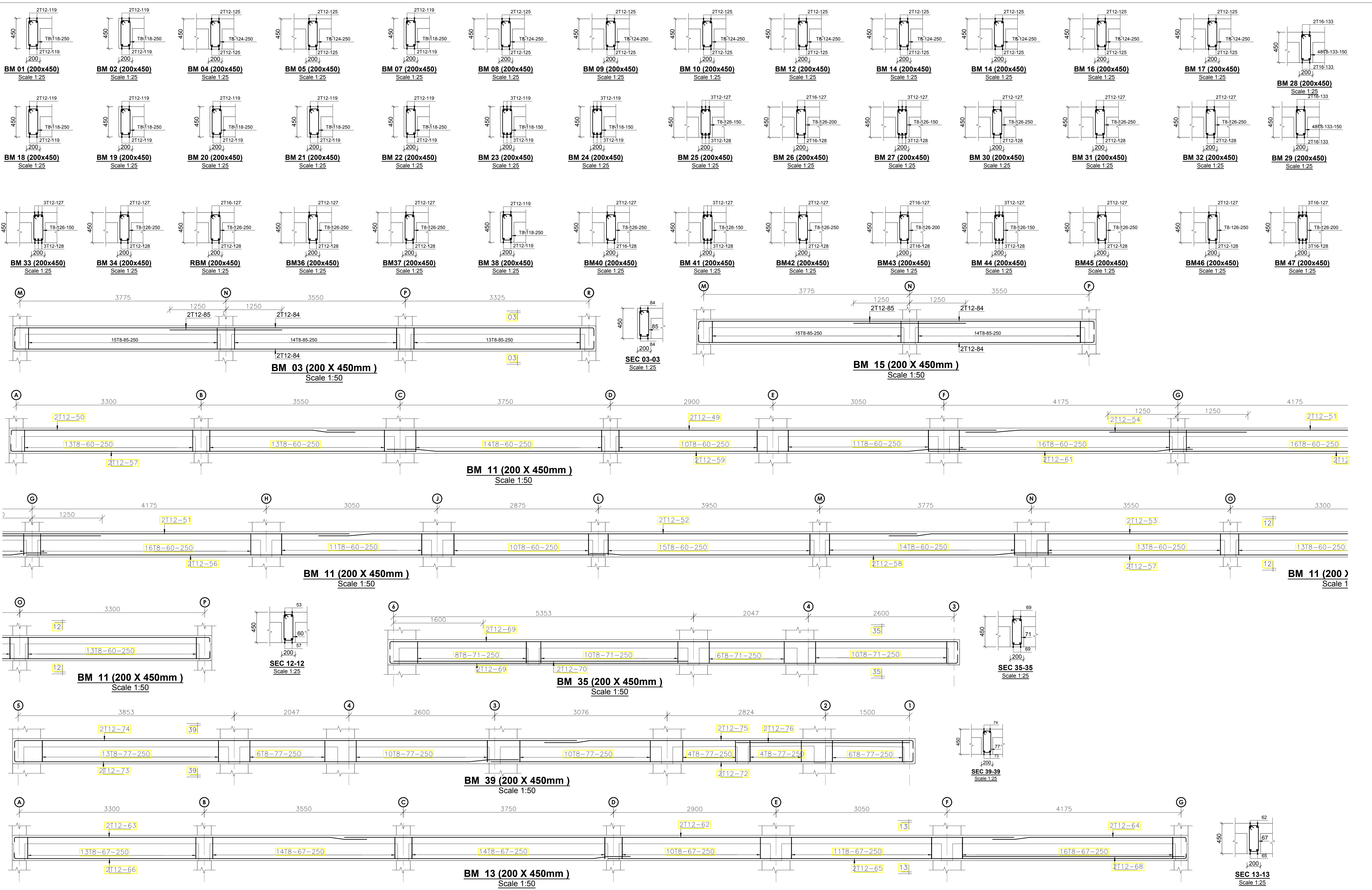
Client  
 MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024 Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 6.1B

Project  
 PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)  
 Title  
 TYPICAL FLOOR SLAB REBAR DETAILS

| Revisions |             |      |
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| No.       | Description | Date |
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|           |             |      |
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**NOTES**

- All dimensions are in millimetres unless otherwise stated.
- All reinforcements must be checked and approved by project structural engineer prior to concreting.
- All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.
- Only figured dimensions to be taken from this drawing.
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- Symbols; T-TMT Rebars to B S 4 461 : T - Top face  
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- Cover to reinforcement; Slabs - 20mm,  
Beams - 25mm, Columns - 40mm, Foundations -50mm
- All structural steel be grade 43A.
- All welds are 6mm thick.
- All structural steel to be painted with anti-rust primer paint.

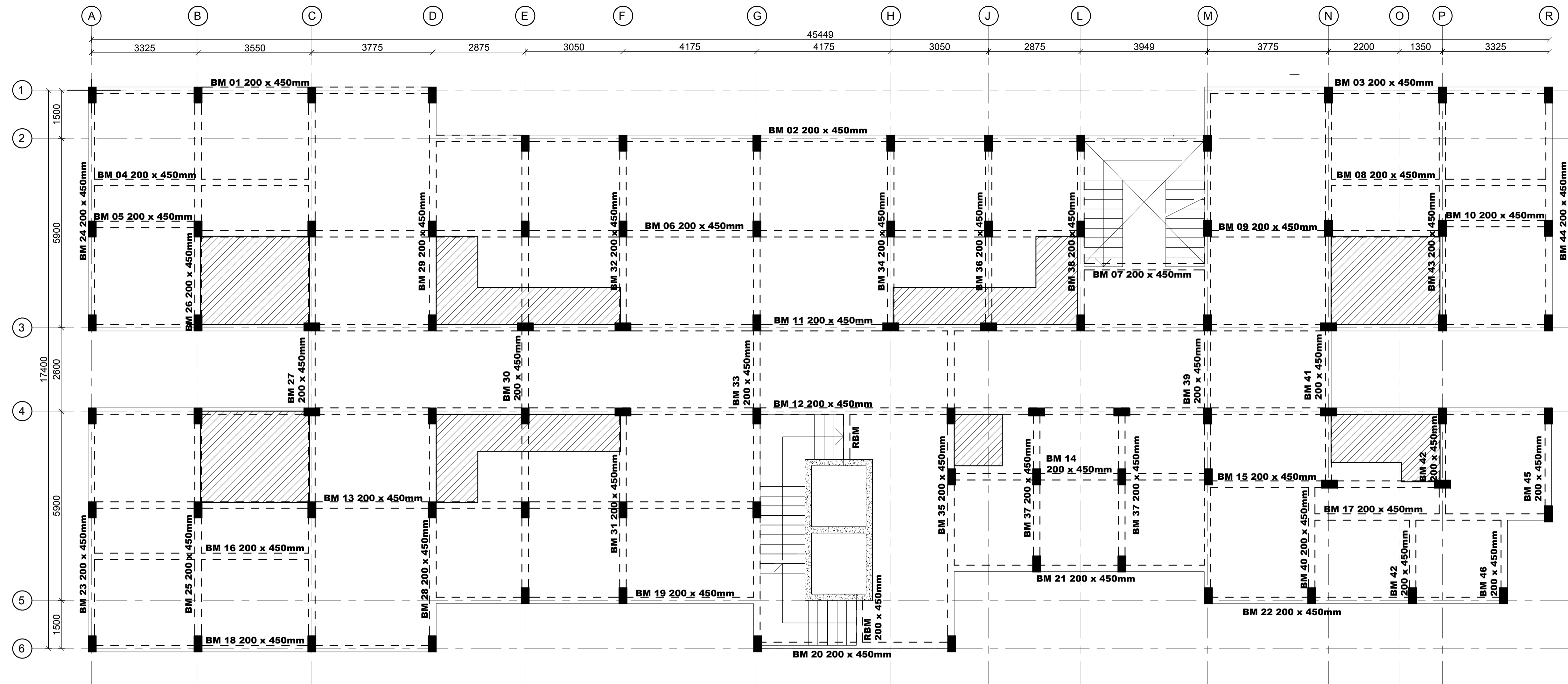
Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
HOUSING AND URBAN DEVELOPMENT**  
STATE DEPARTMENT FOR HOUSING AND URBAN  
DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN      Checked by: JMN  
Approved by: SECRETARY, HOUSING DEPARTMENT  
Date: 13th March 2024      Scale: As shown  
Drawing Number: AHP-G+9-BLK B 6.2B

Project  
**PROPOSED AFFORDABLE  
HOUSING DEVELOPMENT  
(BLOCK TYPE B MARKET UNITS)**  
Title  
**BEAMS RC DETAILS**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
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**ROOF TERRACE FLOOR SLAB REBAR DETAILS**  
150 MM THICK SLAB

**NOTE:**  
 -Terrace floor slab to be waterproofed with physical barrier waterproofing membrane such as APP or equivalent.  
 -APP membrane to be protected using screed and concrete interlocking tiles

**NOTES**  
 1. All dimensions are in millimetres unless otherwise stated.  
 2. All reinforcements must be checked and approved by project structural engineer prior to concreting.  
 3. All reinforced concrete to be Class 25 mix and blinding concrete to be Class 15 mix.  
 4. Only figured dimensions to be taken from this drawing.  
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6. Symbols; T-TMT Rebars to B S 4 461 : T - Top face  
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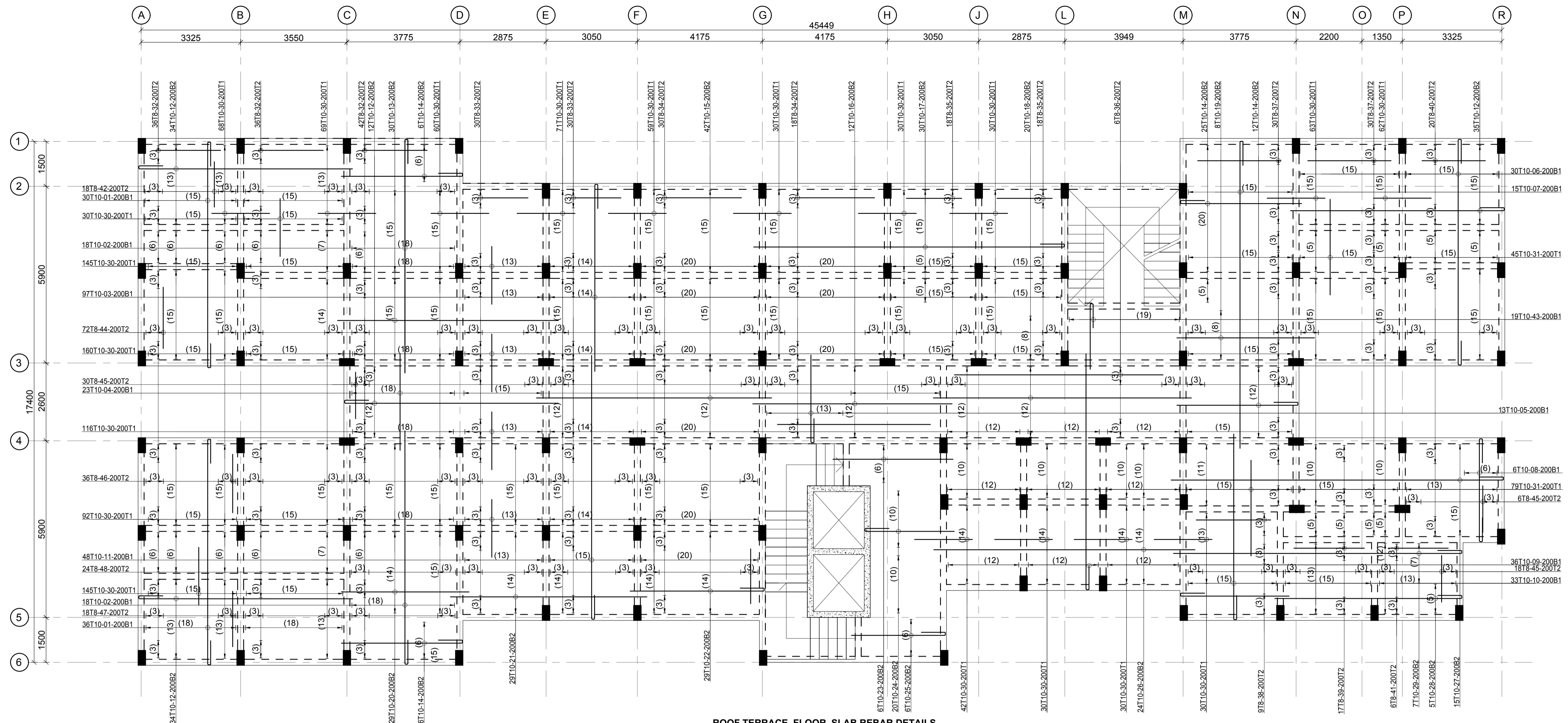
Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN      Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 7.0B

Project  
**PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)**  
 Title  
**ROOF TERRACE FLOOR  
 SLAB LAYOUT DETAILS**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



**ROOF TERRACE FLOOR SLAB REBAR DETAILS**  
150 MM THICK SLAB

**NOTES**  
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Beams - 25mm, Columns - 40mm, Foundations - 50mm  
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 9. All welds are 6mm thick.  
 10. All structural steel to be painted with anti-rust primer paint.

Client  
**MINISTRY OF LANDS, PUBLIC WORKS,  
 HOUSING AND URBAN DEVELOPMENT**  
 STATE DEPARTMENT FOR HOUSING AND URBAN  
 DEVELOPMENT

STRUCTURAL ENGINEER:

Designed by: JMN      Checked by: JMN  
 Approved by: SECRETARY, HOUSING DEPARTMENT  
 Date: 13th March 2024      Scale: As shown  
 Drawing Number: AHP-G+9-BLKB 7.1B

Project  
**PROPOSED AFFORDABLE  
 HOUSING DEVELOPMENT  
 (BLOCK TYPE B MARKET UNITS)**  
 Title  
**ROOF TERRACE FLOOR  
 SLAB REBAR DETAILS**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |

# AHP NGONG

# ELECTRICAL DRAWINGS

## GENERAL NOTES

1. This drawing to be read in conjunction with architectural drawings.
2. All dimensions are in mm unless otherwise specified.
3. Drawings are not to be scaled . Only figured dimensions should be used .
4. The contractor must check and verify all dimensions before commencement of work and if necessary confirm with the architect .

| REV. | DATE | DESCRIPTION |
|------|------|-------------|
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|      |      |             |
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### DRAWING ISSUED FOR:

- APPROVAL     RECORD  
 DETAILED     TENDER  
 SHOP DWG     AS BUILT

PROJECT:  
**PROPOSED MAGUGA AGRICITY AHP**

CLIENT: SATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

LOCATION: MAGUGA

DRAWING TITLE :  
COVER PAGE

SCALE : 1:100

DRAWN BY :

CHECKED BY :  
Date :                      Signature:

DATE :

MINISTRY OF LANDS, PUBLIC WORKS HOUSING AND URBAN DEVELOPMENT  
STATE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

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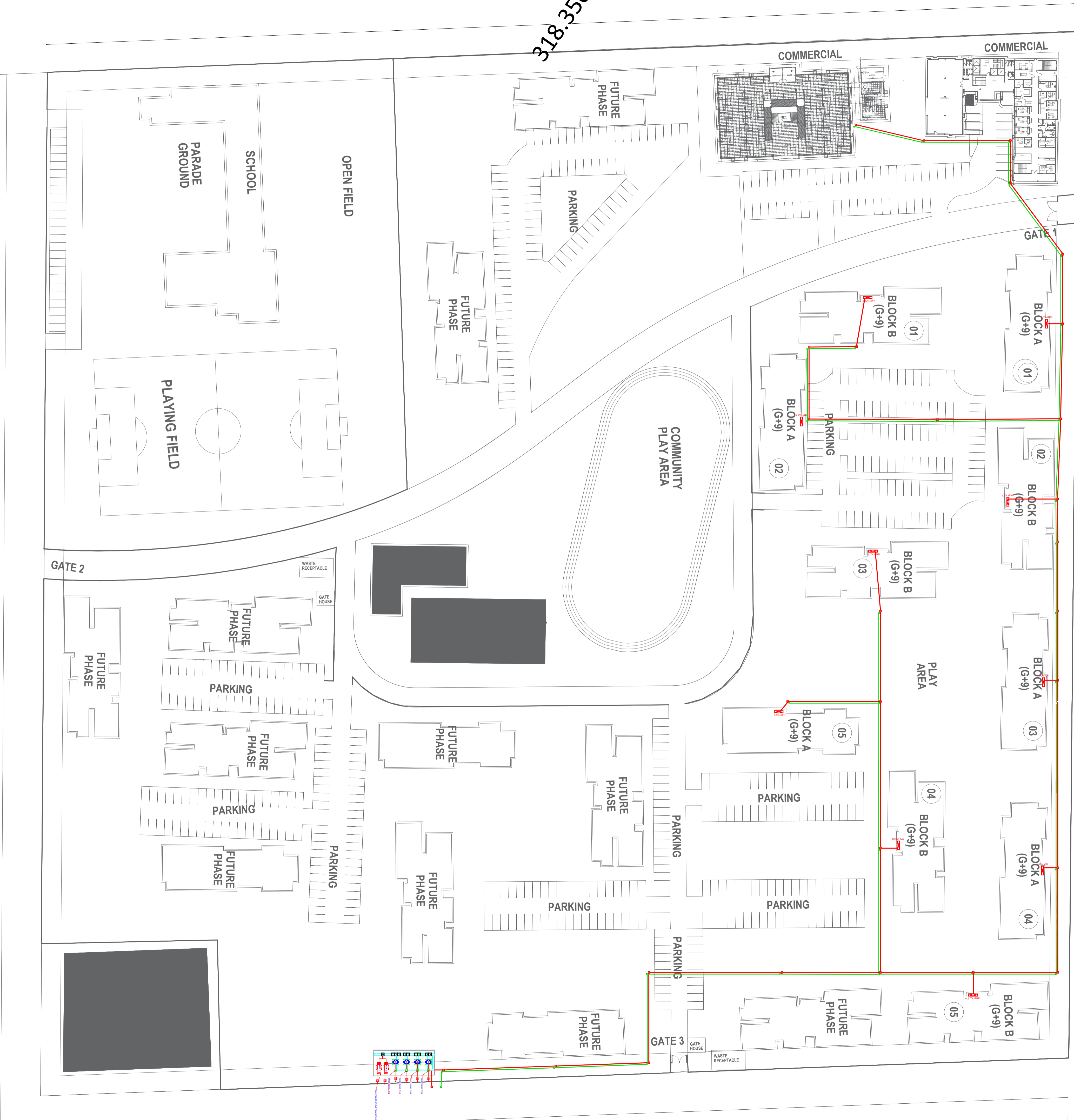
FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA

Notes:

1. THIS DRAWING IS TO BE READ WITH ALL OTHER DISCIPLINES, DRAWINGS, SCHEDULES AND SPECIFICATIONS, LEGEND AND STANDARD DETAILS.
2. THIS DRAWING IS A COPYRIGHT AND SHALL NOT BE REPRODUCED WITHOUT PERMISSION.
3. DIMENSIONS GOVERN ON ALL DRAWINGS AND DETAILS. SHOULD ANY DISCREPANCIES BE FOUND WITH THIS DRAWING AND ANY ASSOCIATED DRAWINGS, OR SPECIFICATIONS THIS SHOULD BE BROUGHT TO THE ATTENTION OF M&E BUILDING SERVICES CONSULTANT IMMEDIATELY.
4. UNLESS OTHERWISE STATED ALL DIMENSIONS ARE IN MILLIMETERS.
5. DO NOT SCALE FROM THIS DRAWING.
6. DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORKS IS PUT IN HAND OR PREFABRICATED.
7. THIS DRAWING SHOULD BE USED FOR THE SPECIFIC SERVICES INTENDED.
8. THIS DRAWING SHOWS THE DESIGN INTEND ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULL COORDINATION OF THE SERVICES INDICATED ON THIS AND ALL OTHER SERVICES DRAWINGS.
9. FINAL ACCESS AND SETTING OUT OF SERVICES SHALL BE AGREED BETWEEN THE ARCHITECT AND THE CONTRACTOR.
10. THE PROJECT NOTIS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT TECHNICAL SPECIFICATIONS.

318.350

| SYMBOL | DESCRIPTION              |
|--------|--------------------------|
|        | POWER MAINLINE           |
|        | KT MAINLINE              |
|        | POWER DISTRIBUTION BOARD |
|        | ADAPTABLE BOX            |
|        | POWER DUCTS              |
|        | KT DUCTS                 |



| REV | CHANGES | BY: | DATE: |
|-----|---------|-----|-------|
|     |         |     |       |
|     |         |     |       |
|     |         |     |       |

CLIENT:



STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: **AHP DEVELOPMENT NGONG**

TITLE: **ELECTRICAL SITE LAYOUT**

|                            |             |           |          |
|----------------------------|-------------|-----------|----------|
| SCALE: <b>NOT TO SCALE</b> | DATE:       | DRAWN:    | CHECKED: |
| PROJECT NO:                | DRAWING NO: | REVISION: |          |

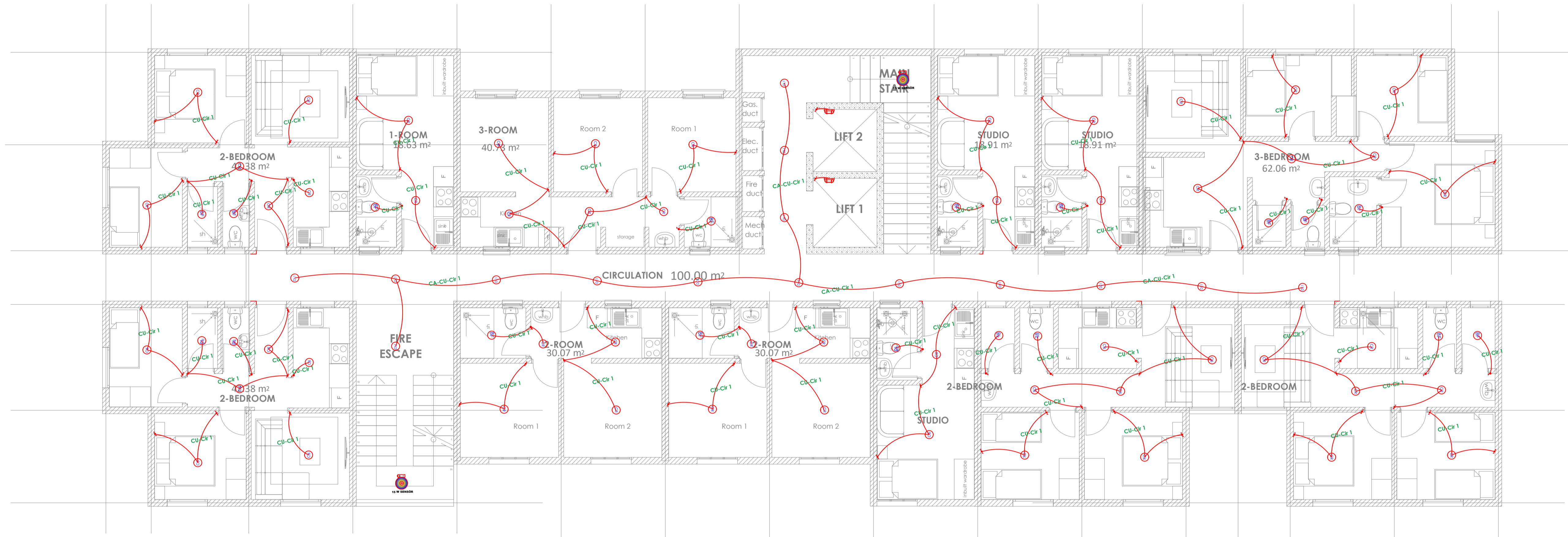


Notes:

1. THIS DRAWING IS TO BE READ WITH ALL OTHER DISCIPLINES, DRAWINGS, SCHEDULES AND SPECIFICATIONS, LEGEND AND STANDARD DETAILS.
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10. THE PROJECT NOTES ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT TECHNICAL SPECIFICATIONS.

| REV | CHANGES | BY: | DATE: |
|-----|---------|-----|-------|
|     |         |     |       |
|     |         |     |       |
|     |         |     |       |

PROPOSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A



PROPOSED TYPICAL 1ST-9TH FLOOR PLAN

| SYMBOL | DESCRIPTION                  | SYMBOL | DESCRIPTION         |
|--------|------------------------------|--------|---------------------|
|        | 12W Ceiling Rose             |        | 2 WAY 1 GANG SWITCH |
|        | 12W Surface LED Down lighter |        | 1 WAY SWITCH        |
|        | 12W Ball Fitting             |        | 2 WAY 2 GANG SWITCH |
|        | 15W Presence Sensor          |        |                     |
|        | 10W Ball Fitting             |        |                     |

PROPOSED GROUND FLOOR PLAN

CLIENT:



STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPMENT NGONG

TITLE: BLOCK TYPE A TYPICAL FLOOR LIGHTING LAYOUT

|                     |             |           |          |
|---------------------|-------------|-----------|----------|
| SCALE: NOT TO SCALE | DATE:       | DRAWN:    | CHECKED: |
| PROJECT NO:         | DRAWING NO: | REVISION: |          |

Notes:

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CLIENT:



STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

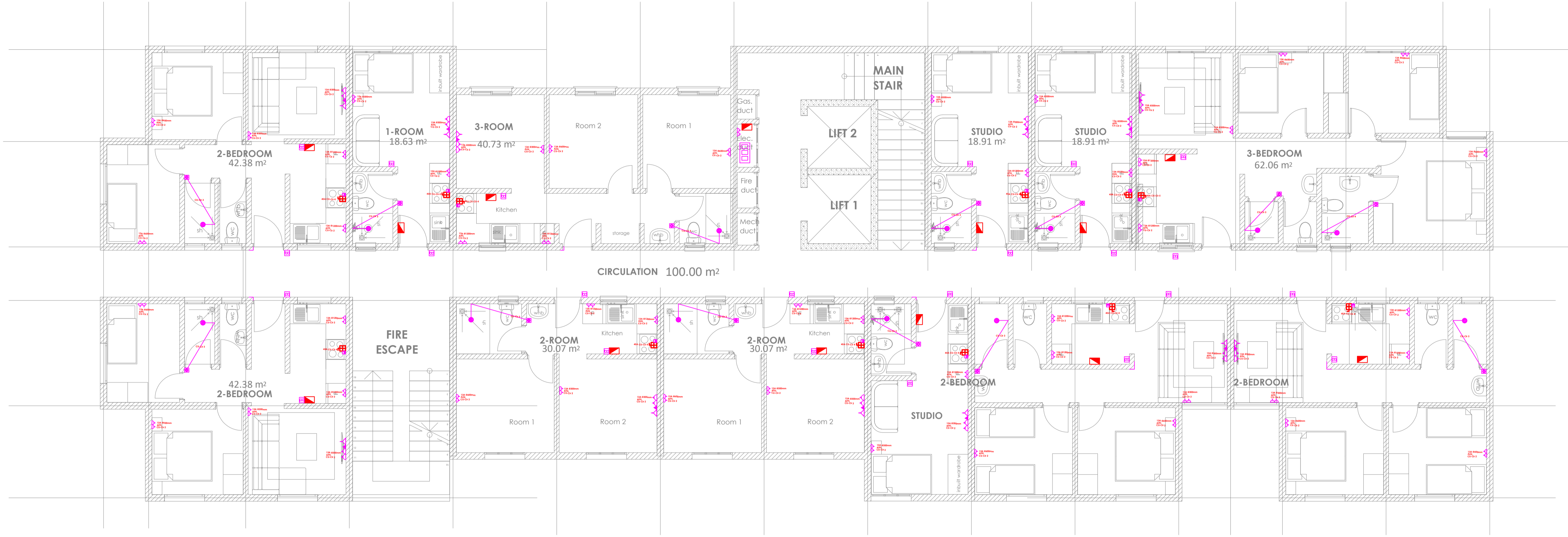
QUANTITY SURVEYOR:

SITE: **AHP DEVELOPMENT NGONG**











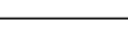
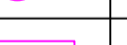
TITLE: **BLOCK TYPE A TYPICAL FLOOR POWER LAYOUT**

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| SCALE: <b>NOT TO SCALE</b> | DATE:       | DRAWN:    | CHECKED: |
| PROJECT NO:                | DRAWING NO: | REVISION: |          |

PROPOSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A



PROPOSED TYPICAL 1ST-9TH FLOOR PLAN

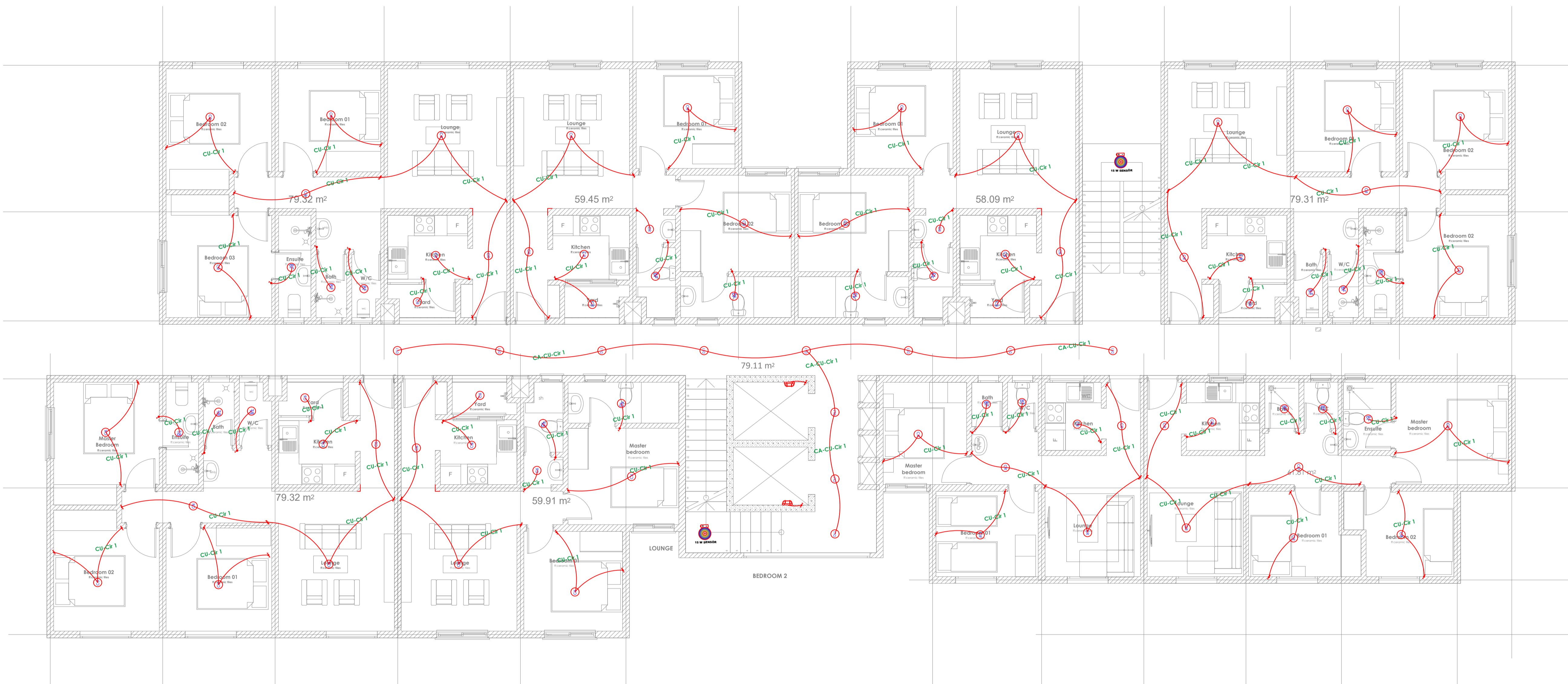
| SYMBOL  | DESCRIPTION                | SYMBOL  | DESCRIPTION                    |
|---|----------------------------|---|--------------------------------|
|  | 13A Twin sockets           |  | 3-ph ISOLATOR                  |
|  | 13A Twin sockets with data |  | 45A KITCHEN UNIT               |
|  | CONSUMER UNIT              |  | Surveillance Camera            |
|  | DISTRIBUTION BOARD         |  | 20A D.P Switch with Neon Light |
|  | TV Point                   |  | Instant Shower Point           |
|  | Door Bell                  |  | KPLC Meterboard                |

PROPOSED GROUND FLOOR PLAN

Notes:

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PROPOSED TYPICAL AFFORDABLE +MARKET UNITS BLOCK TYPE B



PROPOSED TYPICAL 1ST-9TH FLOOR PLAN

3 Bedroom AHP      3 Bedroom Market

Elevation 01 ▲

| SYMBOL | DESCRIPTION                  | SYMBOL | DESCRIPTION         |
|--------|------------------------------|--------|---------------------|
|        | 12W Ceiling Rose             |        | 2 WAY 1 GANG SWITCH |
|        | 12W Surface LED Down lighter |        | 1 WAY SWITCH        |
|        | 12W Ball Fitting             |        | 2 WAY 2 GANG SWITCH |
|        | 15W Presence Sensor          |        |                     |
|        | 10W Ball Fitting             |        |                     |

| REV | CHANGES | BY: | DATE: |
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CLIENT:



STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

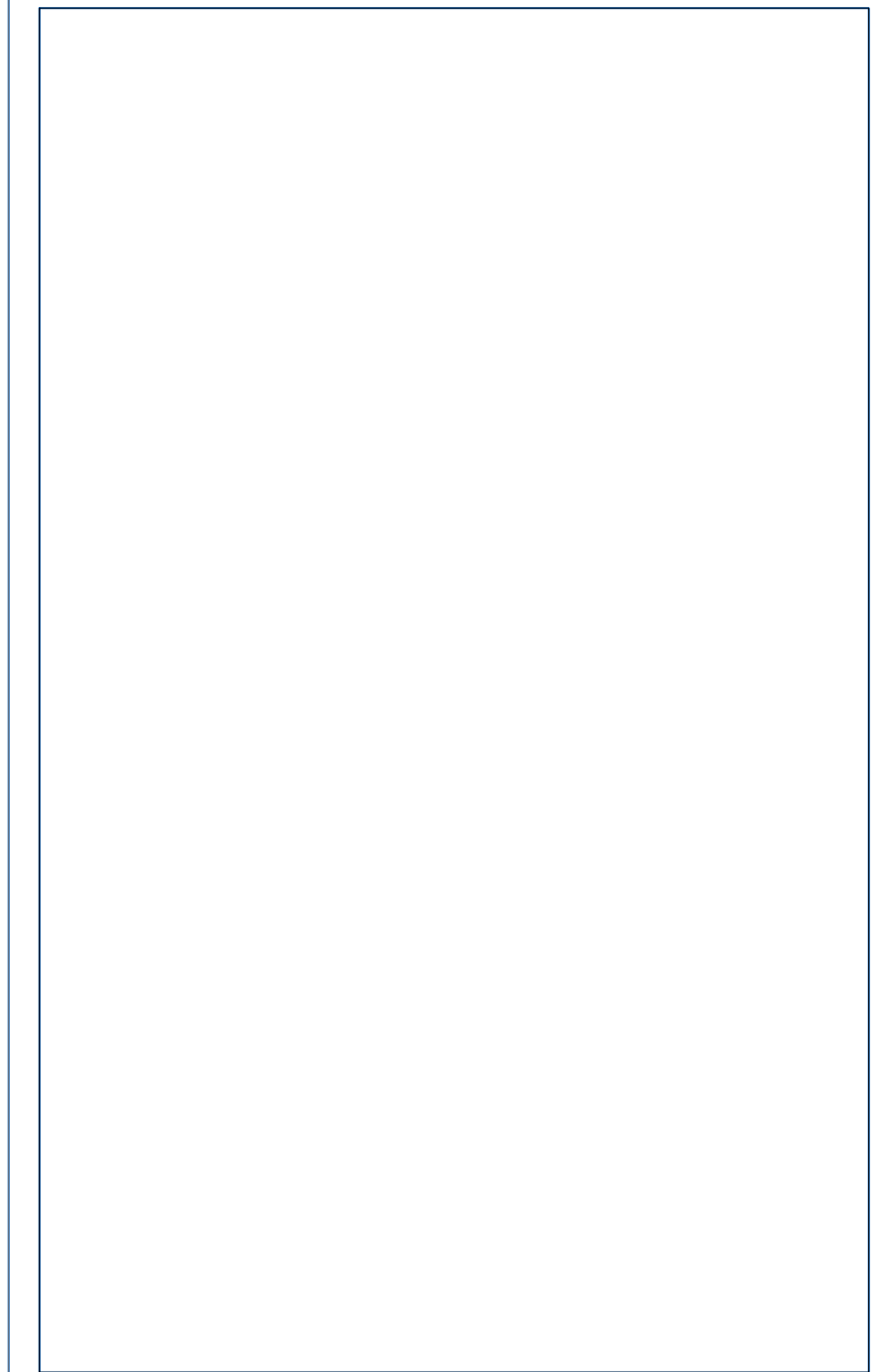
SITE: AHP DEVELOPMENT NGONG

TITLE: BLOCK TYPE B TYPICAL FLOOR LIGHTING LAYOUT

| SCALE:       | DATE:       | DRAWN: | CHECKED:  |
|--------------|-------------|--------|-----------|
| NOT TO SCALE |             |        |           |
| PROJECT NO:  | DRAWING NO: |        | REVISION: |

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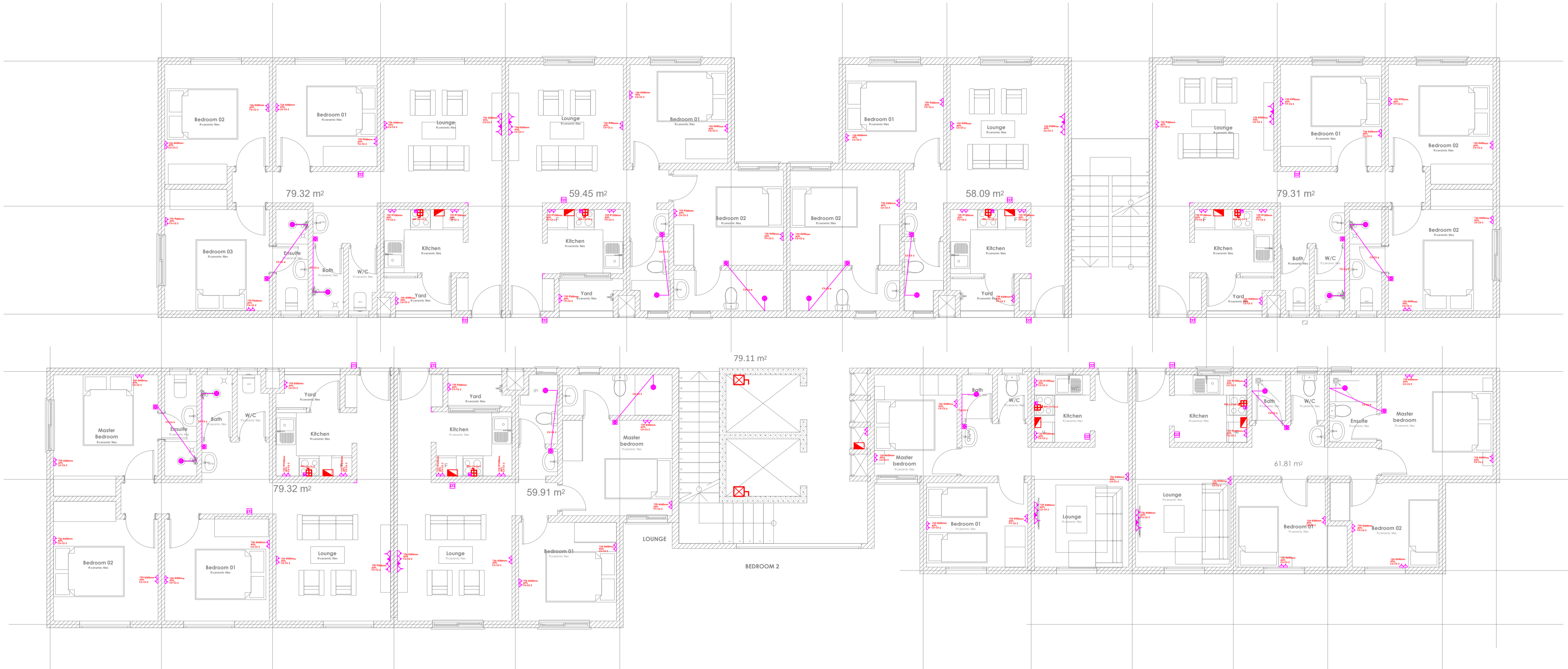
QUANTITY SURVEYOR:

SITE: **AHP DEVELOPMENT NGONG**

TITLE: **BLOCK TYPE B TYPICAL FLOOR POWER LAYOUT**

|                            |             |           |          |
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| SCALE: <b>NOT TO SCALE</b> | DATE:       | DRAWN:    | CHECKED: |
| PROJECT NO:                | DRAWING NO: | REVISION: |          |

PROPOSED TYPICAL AFFORDABLE +MARKET UNITS BLOCK TYPE B



PROPOSED TYPICAL 1ST-9TH FLOOR PLAN



Elevation 01▲

| SYMBOL | DESCRIPTION                | SYMBOL | DESCRIPTION                    |
|--------|----------------------------|--------|--------------------------------|
|        | 13A Twin sockets           |        | 3-ph ISOLATOR                  |
|        | 13A Twin sockets with data |        | 45A KITCHEN UNIT               |
|        | CONSUMER UNIT              |        | Surveillance Camera            |
|        | DISTRIBUTION BOARD         |        | 20A D.P Switch with Neon Light |
|        | TV Point                   |        | Instant Shower Point           |
|        | Door Bell                  |        | KPLC Meterboard                |




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STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPMENT NGONG

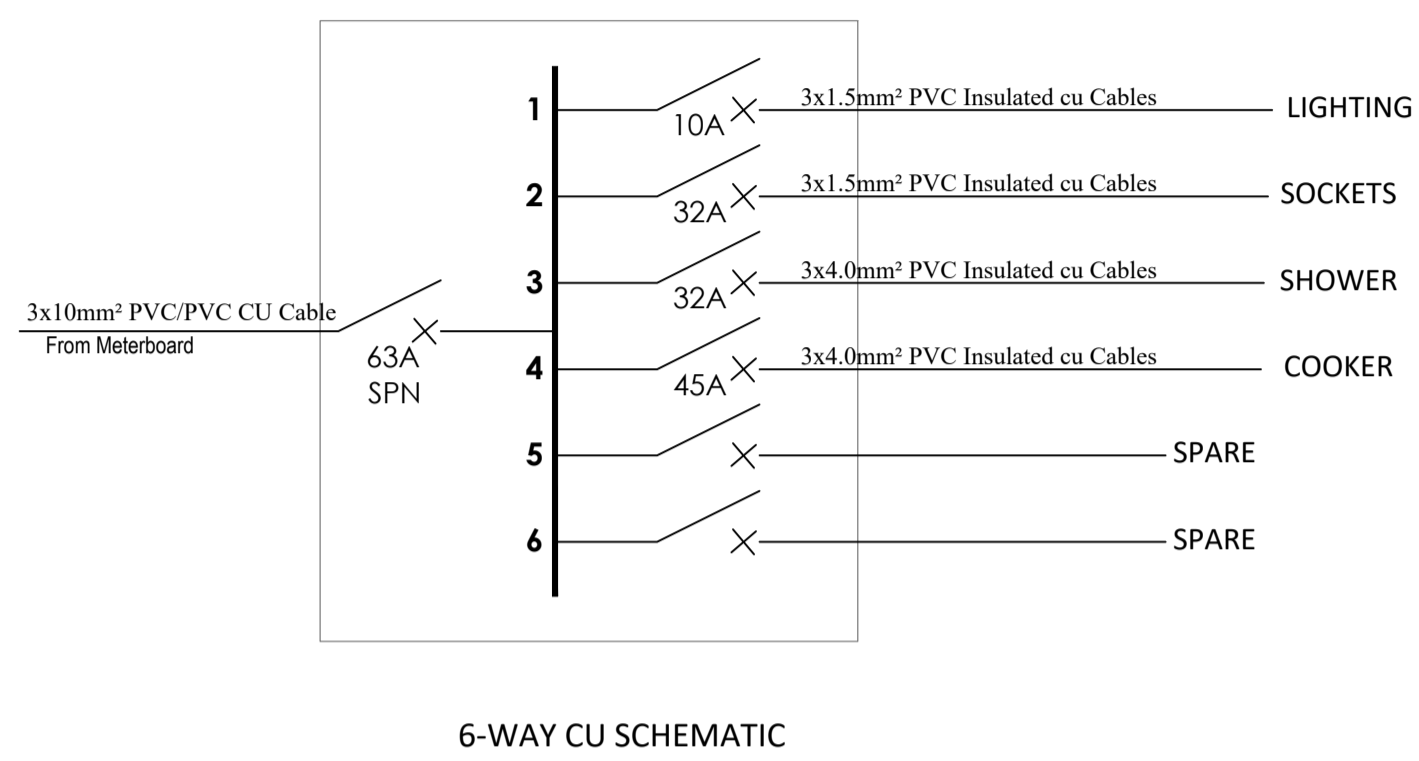
TITLE: BLOCK TYPE A & B TYPICAL BLOCK METERBOARD LAYOUT

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| PROJECT NO:         | DRAWING NO: | REVISION: |          |

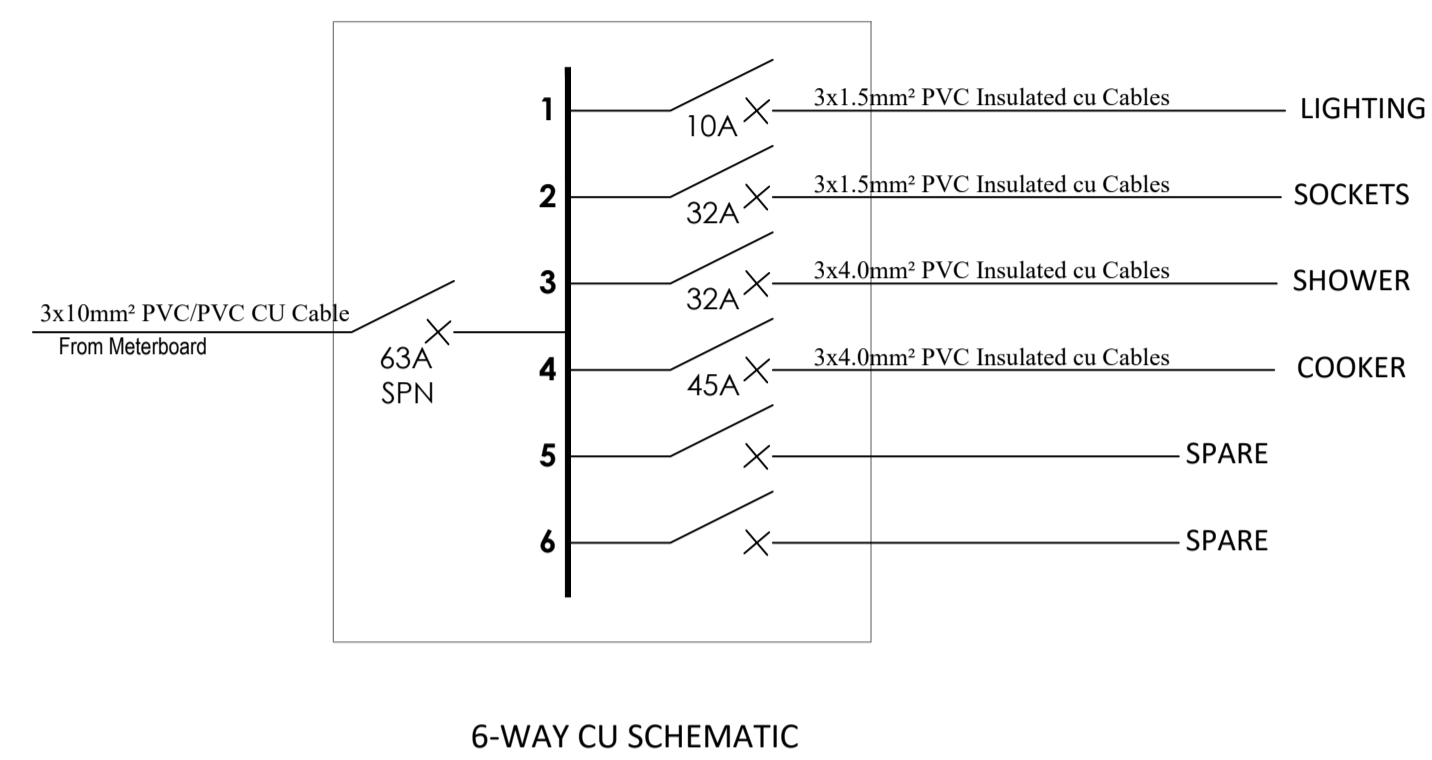
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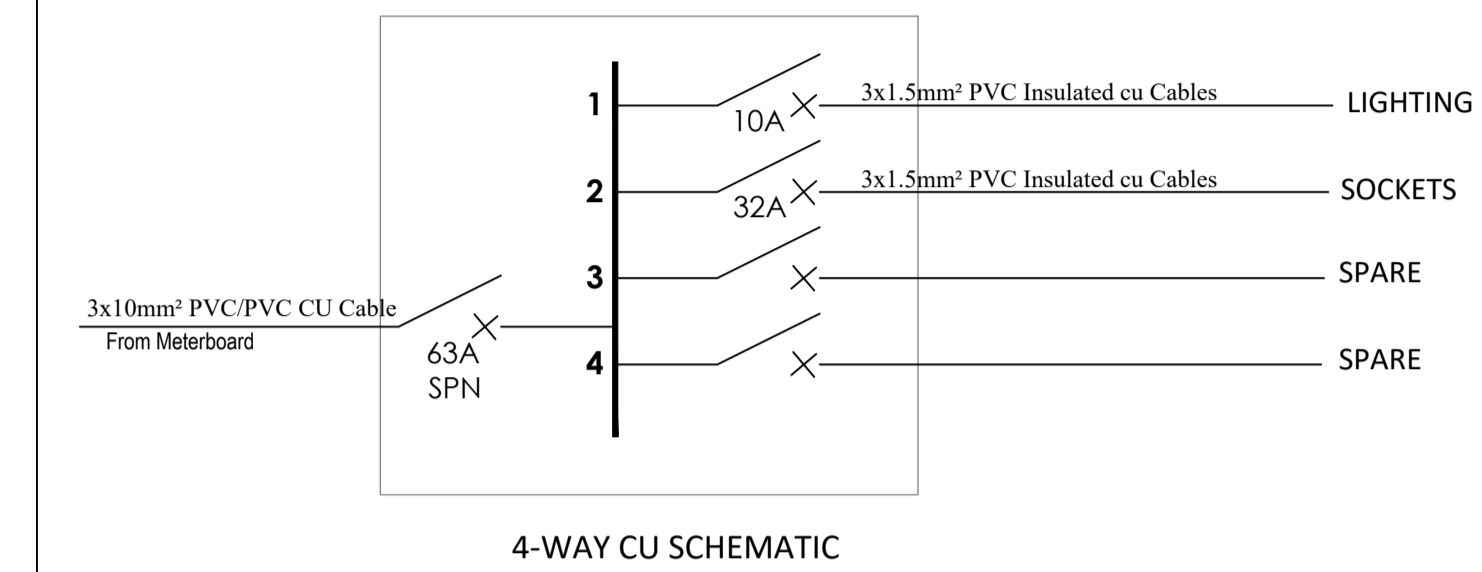
**TYPICAL STUDIO CU**



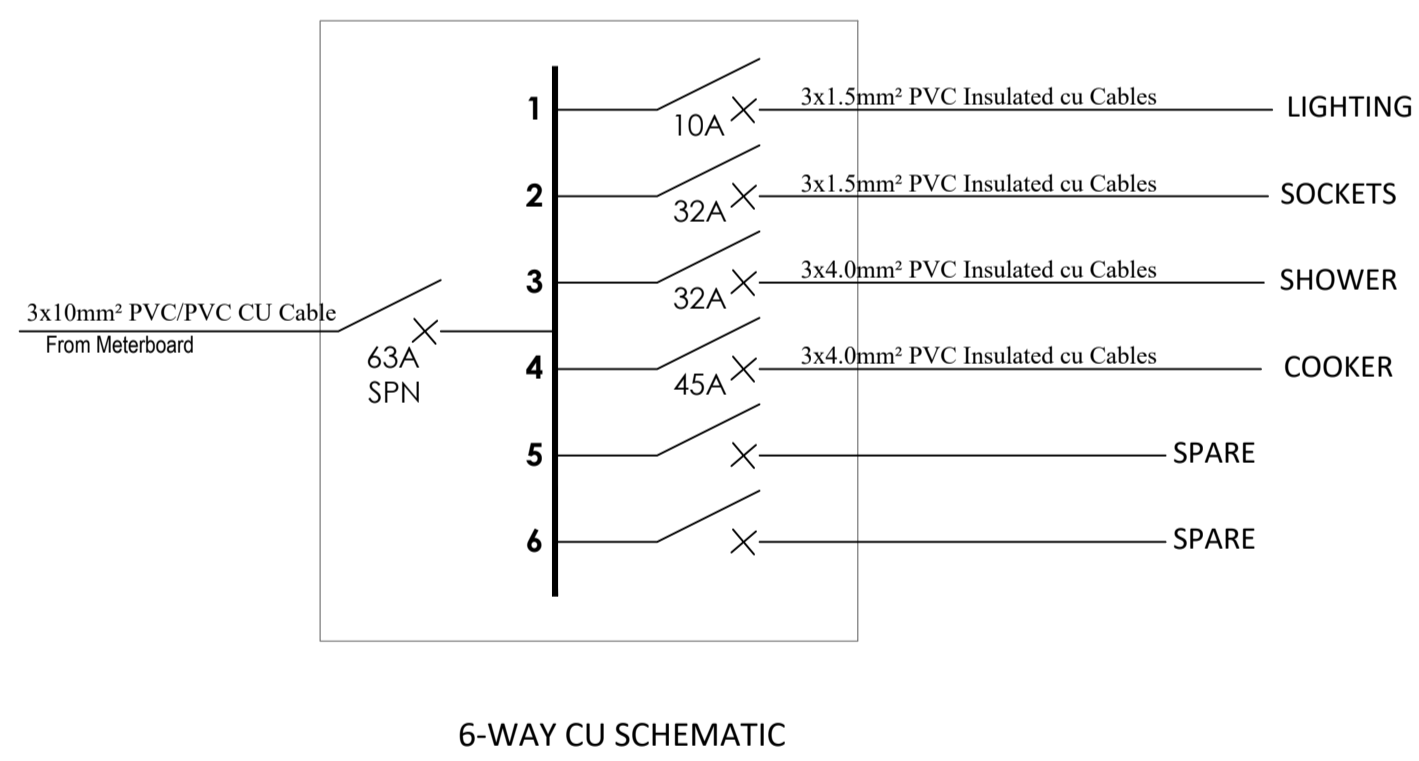
**TYPICAL TWO BEDROOM CU**



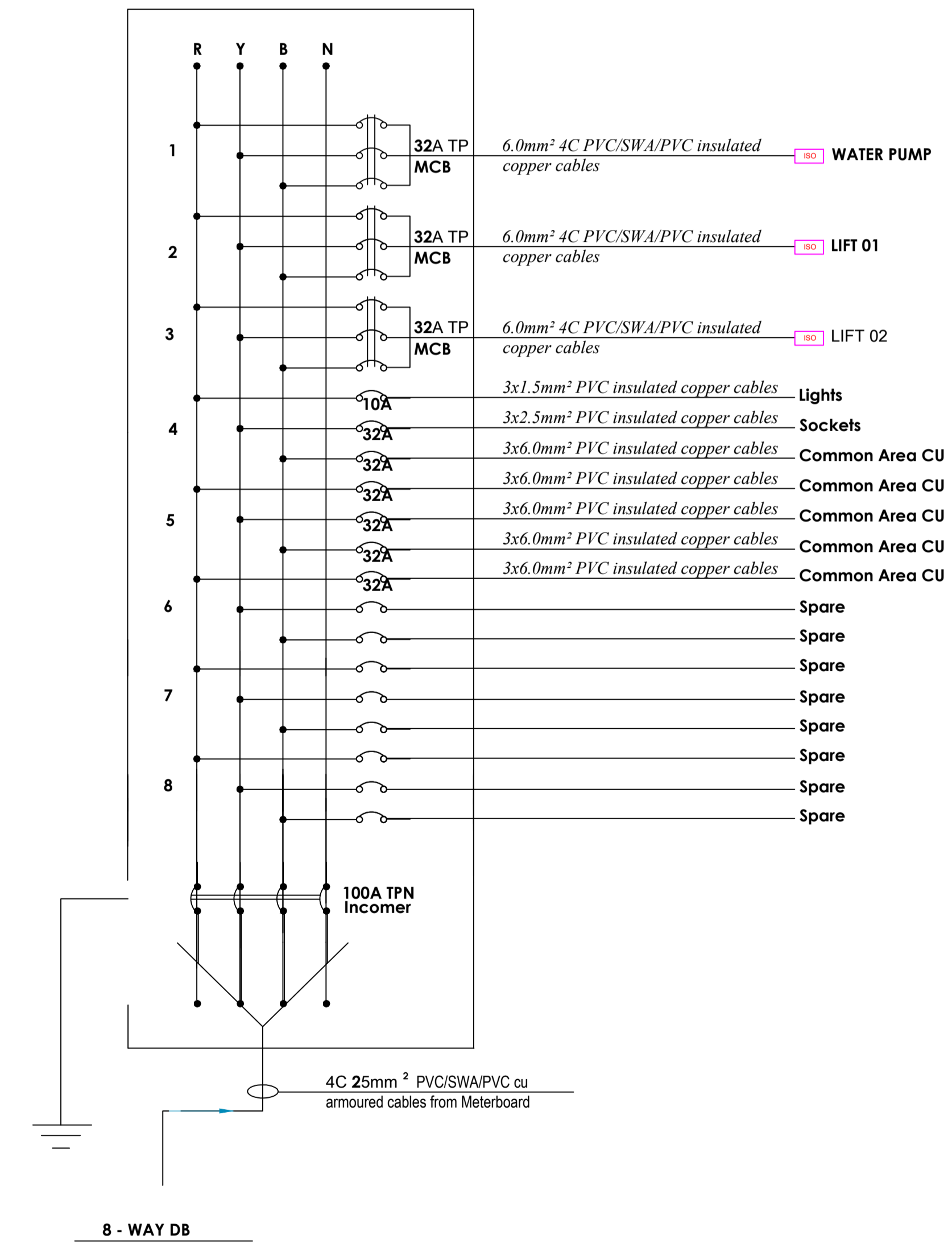
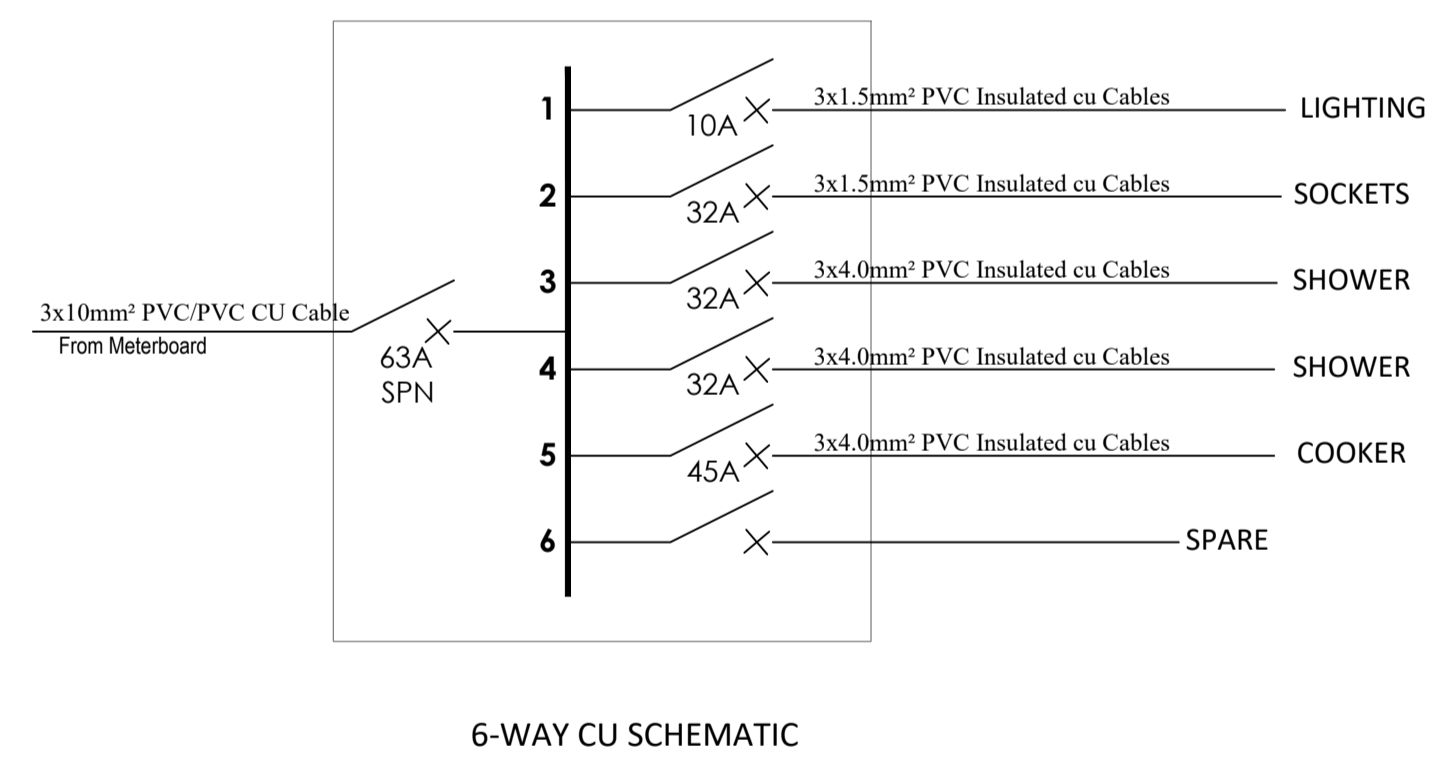
**TYPICAL FLOOR COMMON AREA CU**



**TYPICAL ONE BEDROOM CU**



**TYPICAL THREE BEDROOM CU**



**PROPOSED AFFORDABLE UNITS BLOCK TYPE A**

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CLIENT:



STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

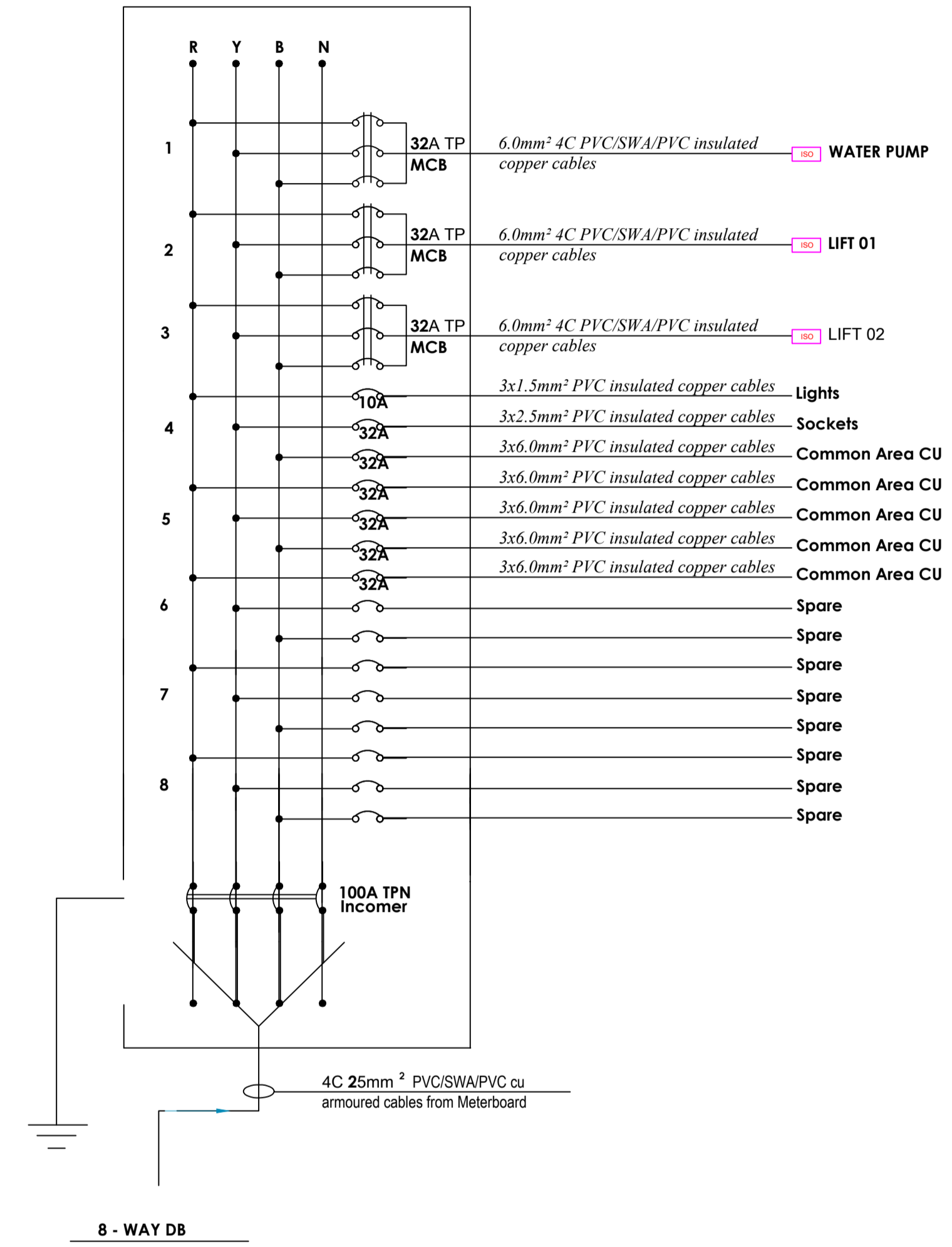
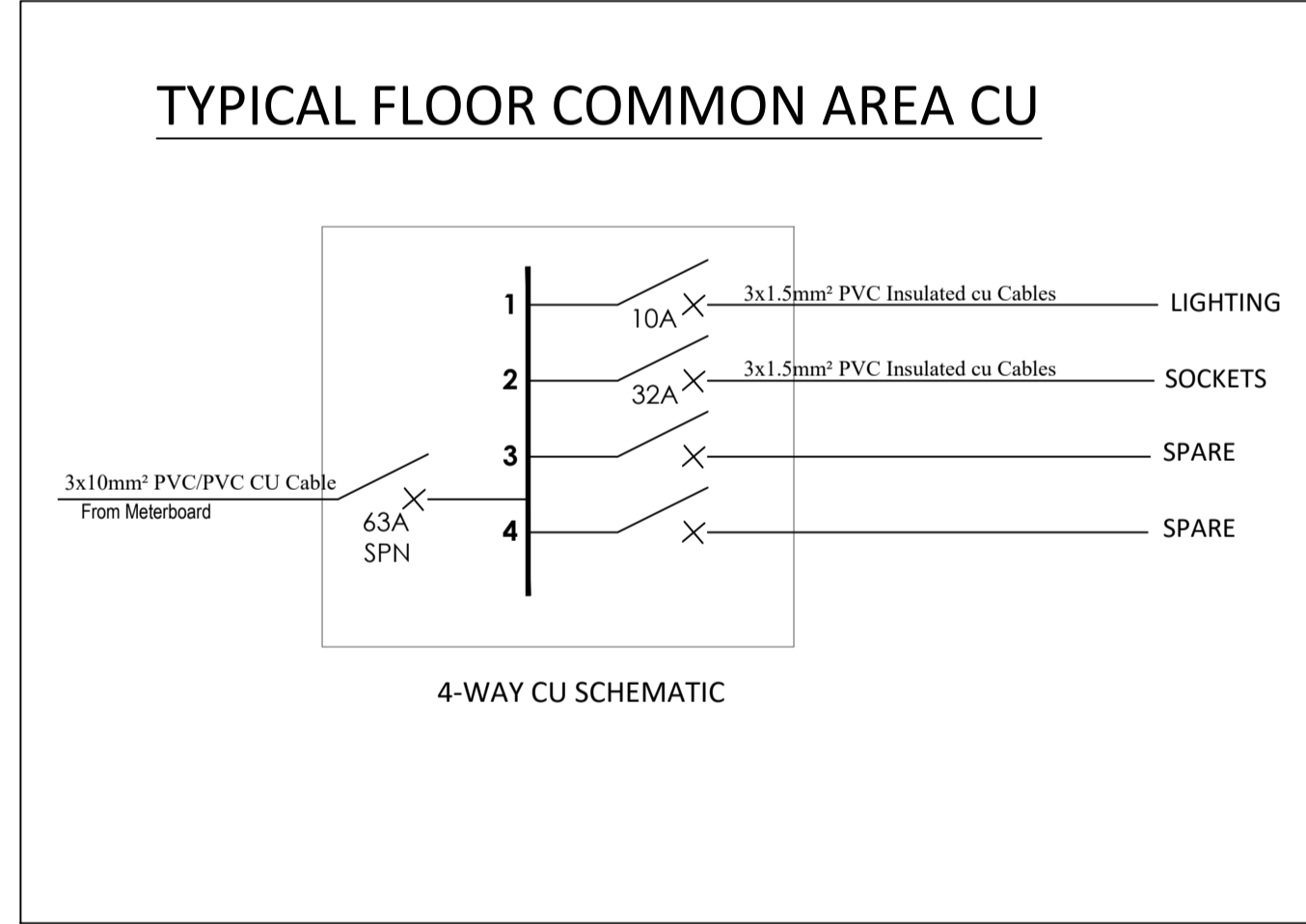
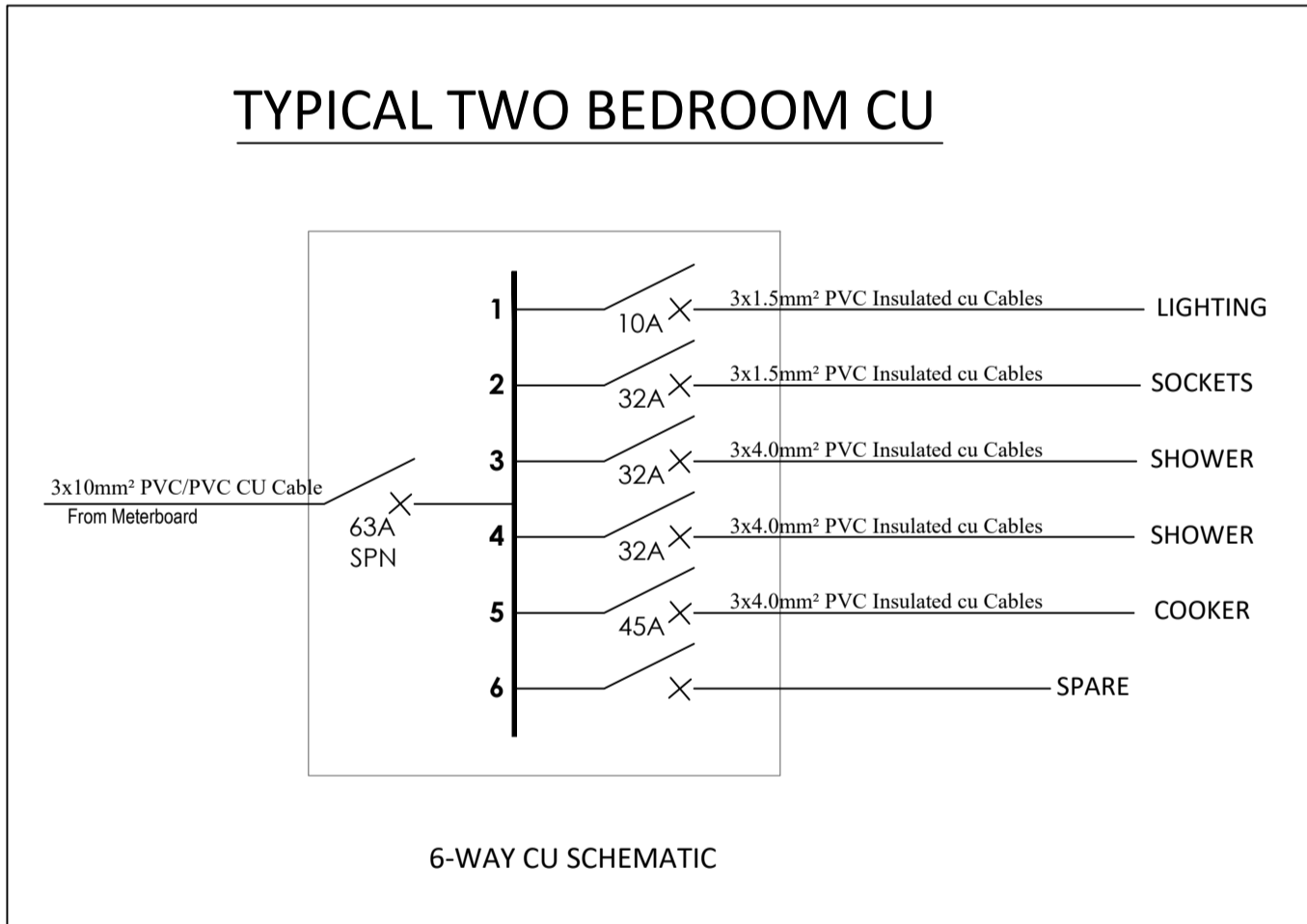
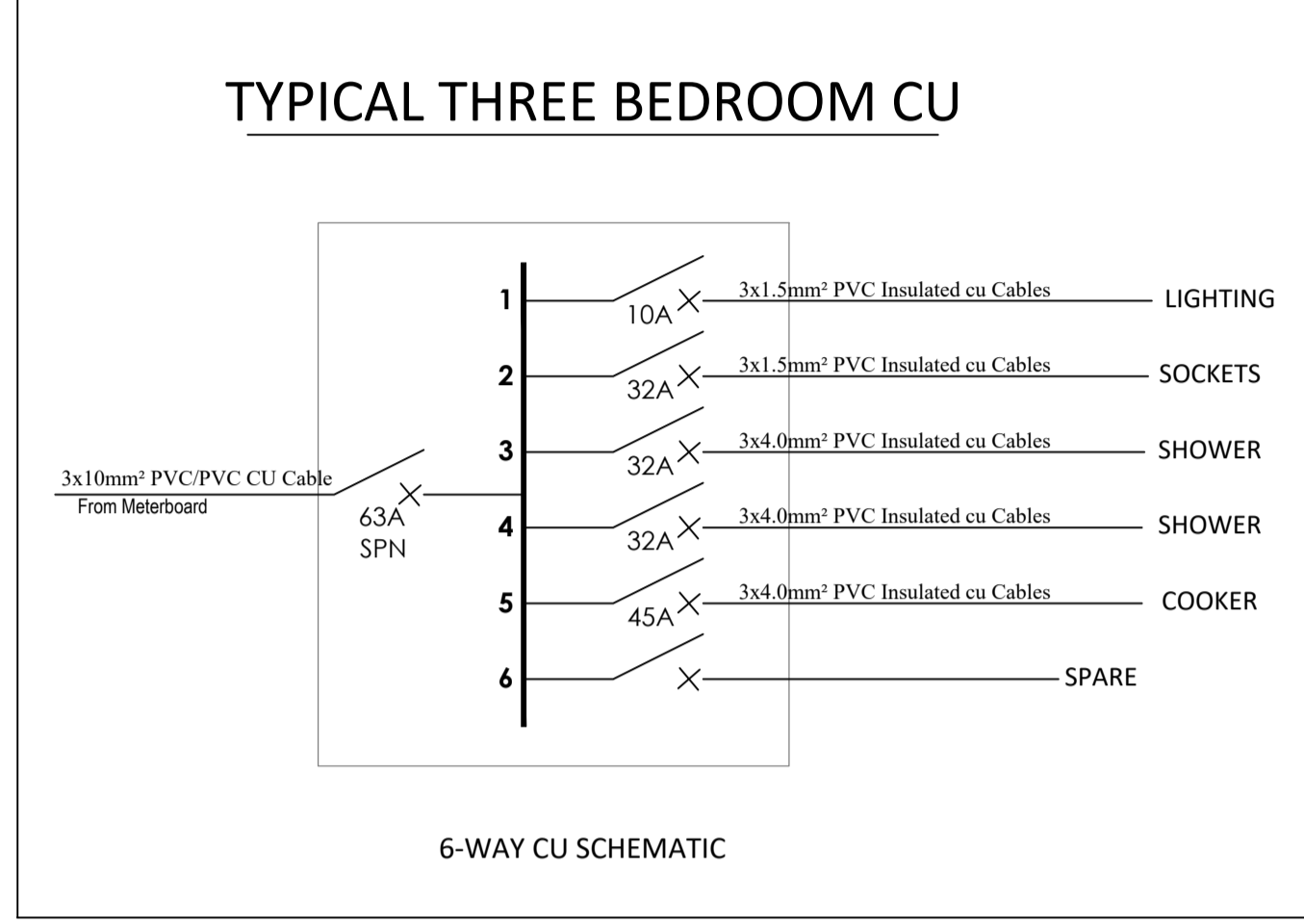
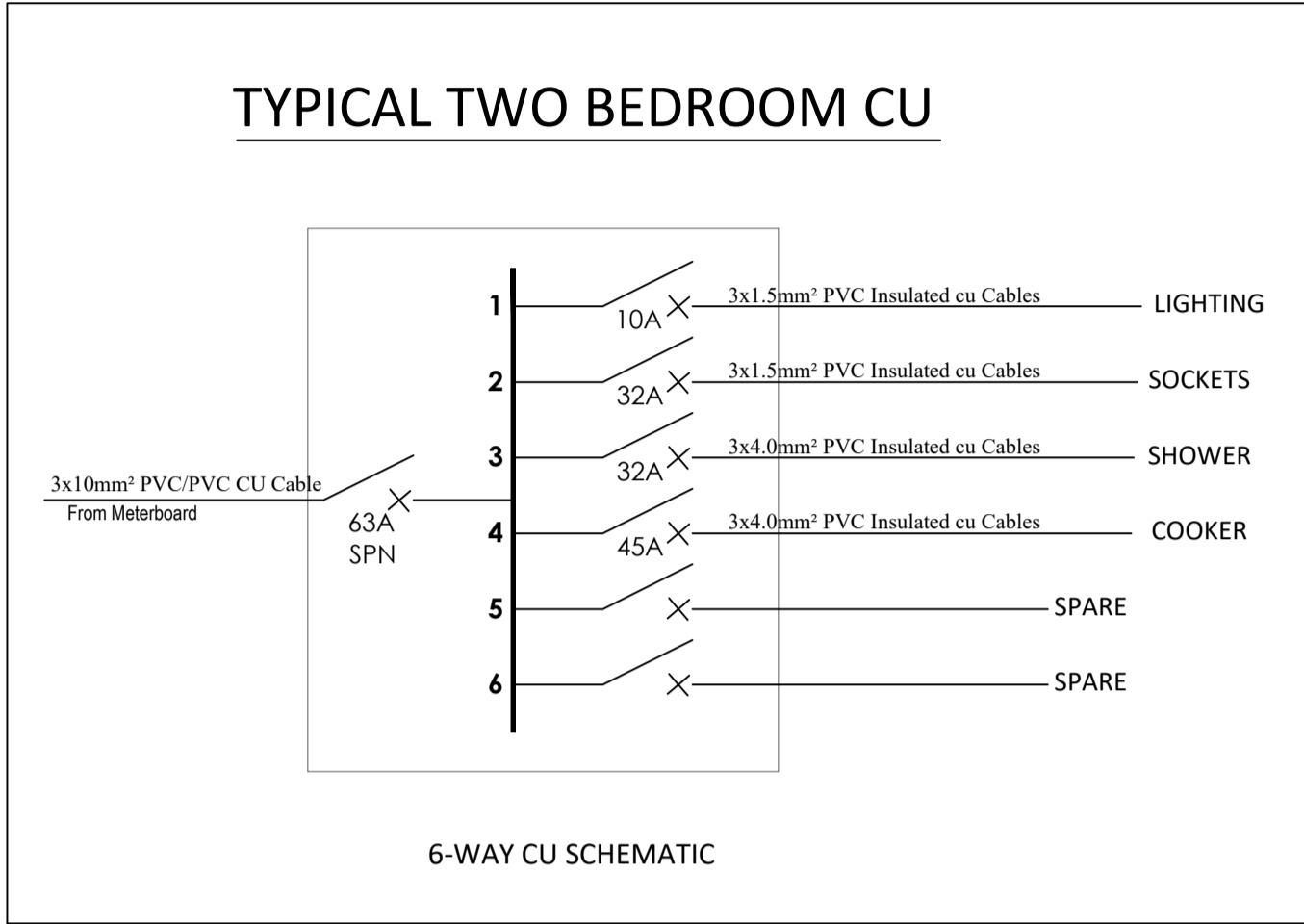
SITE: **AHP DEVELOPMENT NGONG**

TITLE: **BLOCK TYPE A TYPICAL BLOCK CU & DB SCHEMATICS**

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| SCALE: <b>NOT TO SCALE</b> | DATE:       | DRAWN:    | CHECKED: |
| PROJECT NO:                | DRAWING NO: | REVISION: |          |

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CLIENT:

STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: **AHP DEVELOPMENT NGONG**

TITLE: **BLOCK TYPE B TYPICAL BLOCK CU & DB SCHEMATICS**

SCALE: **NOT TO SCALE**      DATE:      DRAWN:      CHECKED:

PROJECT NO:      DRAWING NO:      REVISION:

# PROPOSED AFFORDABLE UNITS BLOCK TYPE B

# AHP NGONG

# MECHANICAL DRAWINGS

## GENERAL NOTES

1. This drawing to be read in conjunction with architectural drawings.
2. All dimensions are in mm unless otherwise specified.
3. Drawings are not to be scaled . Only figured dimensions should be used .
4. The contractor must check and verify all dimensions before commencement of work and if necessary confirm with the architect .

| REV. | DATE | DESCRIPTION |
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### DRAWING ISSUED FOR:

- APPROVAL     RECORD  
 DETAILED     TENDER  
 SHOP DWG     AS BUILT

PROJECT:  
**PROPOSED MAGUGA AGRICITY AHP**

CLIENT: SATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

LOCATION: MAGUGA

DRAWING TITLE :  
COVER PAGE

SCALE : 1:100

DRAWN BY :

CHECKED BY :  
Date :                      Signature:

DATE :

MINISTRY OF LANDS, PUBLIC WORKS HOUSING AND URBAN DEVELOPMENT  
STATE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

IGOK.png

FOR THE GOVERNMENT OF THE REPUBLIC OF KENYA



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**PPR INSTALLATION COLOURS**

**ORANGE NOTES**

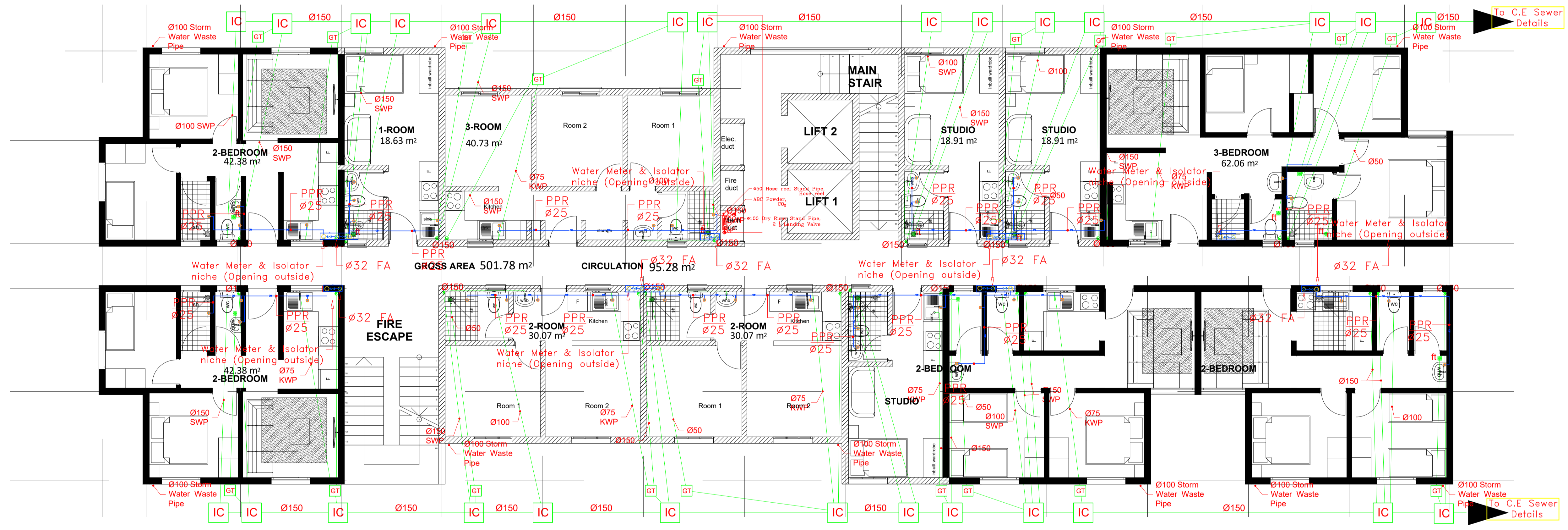
**LEGEND**

**WATER SUPPLY**

**FIRE EXTINGUISHER**

**FIRE HOSE REEL**

**PROPOSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A**



**PROPOSED GROUND FLOOR PLAN**

**CLIENT:** STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

**ARCHITECT:**

**STRUCTURAL:**

**QUANTITY SURVEYOR:**

**SITE:** AHP DEVELOPEMENT NGONG

**TITLE:** BLOCK A - GROUND FLOOR PLUMBING DRAINAGE & FIRE FIGHTING LAYOUT

**SCALE:** NOT TO SCALE

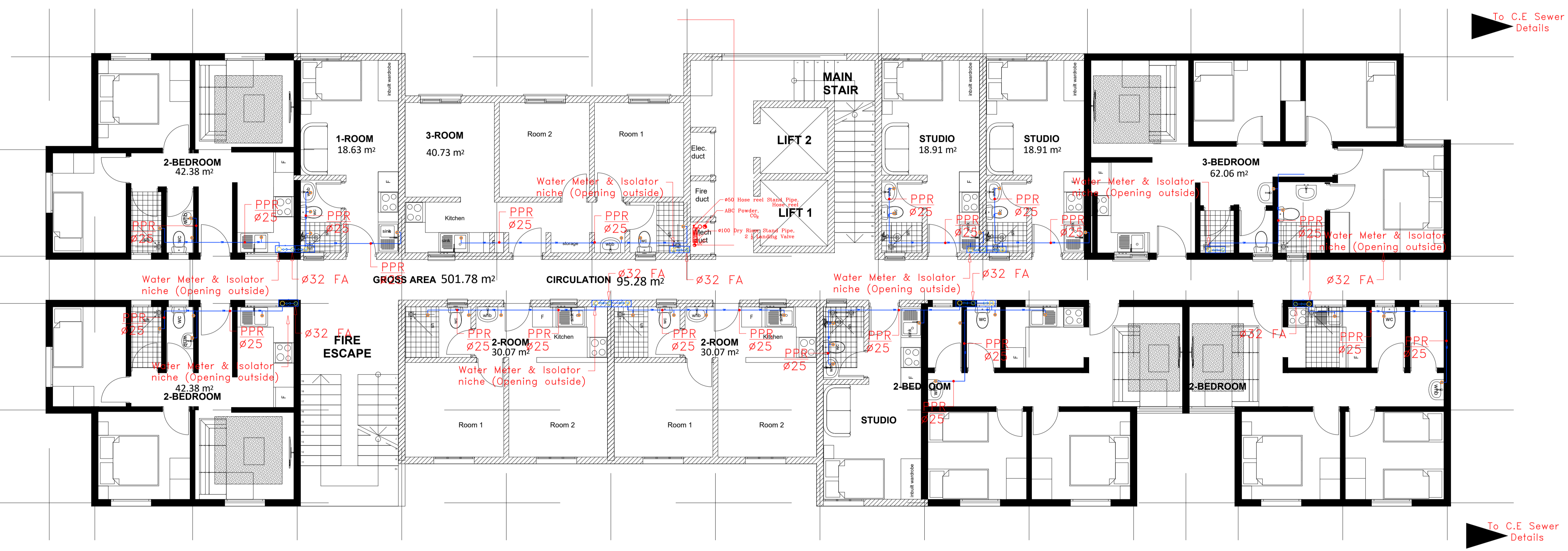
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**PROJECT NO:** **DRAWING NO:** **REVISION:**

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SED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A



**PPR INSTALLATION COLOURS**

|     |       |
|-----|-------|
| PPR | Blue  |
| PPR | Green |
| PPR | Red   |
| PPR | Black |


**ORAINAGE NOTES**

**LEGEND**

**DETAILS:**

- WATER SUPPLY
- PILLAR TAP
- 180 ANGLE VALVE
- 300 BOTTLE TRAP
- 400 DRAINAGE PIPE
- FIRE EXTINGUISHER
- FIRE HOSE REEL
- CO2 WATER SUPPLY
- DRINKING WATER
- WATER SUPPLY
- WATER SUPPLY
- WATER SUPPLY

SED GROUND FLOOR PLAN

CLIENT:  STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

TITLE: BLOCK A - GROUND FLOOR PLUMBING & FIRE FIGHTING LAYOUT

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|----------------------|-------------|-----------|----------|
| SCALE : NOT TO SCALE | DATE:       | DRAWN:    | CHECKED: |
| PROJECT NO:          | DRAWING NO: | REVISION: |          |

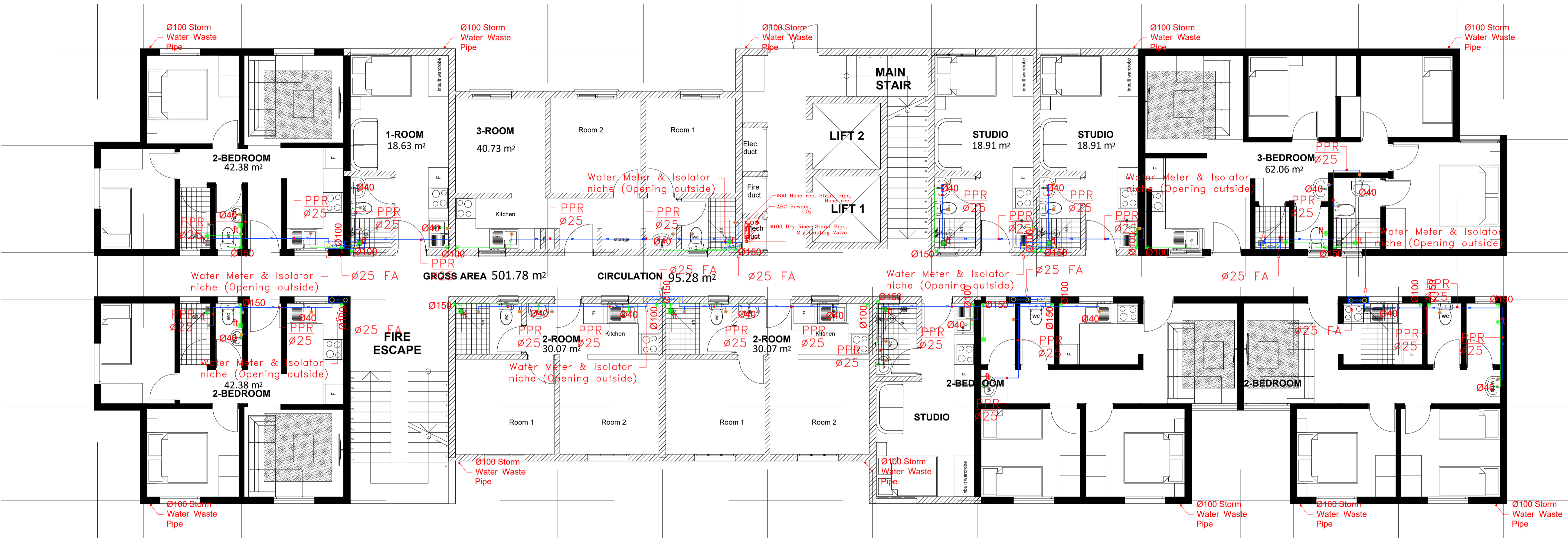


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|--|---------------------------------|------------------------------|----------------------------|
| <p><b>PPR INSTALLATION COLOURS</b></p>   | <p><b>ORANGE NOTES</b></p>      | <p><b>LEGEND</b></p>         | <p><b>WATER SUPPLY</b></p> |
| <p><b>WATER METER &amp; ISOLATOR</b></p> | <p><b>FIRE EXTINGUISHER</b></p> | <p><b>FIRE HOSE REEL</b></p> | <p><b>WATER SUPPLY</b></p> |
| <p><b>WATER SUPPLY</b></p>               | <p><b>WATER SUPPLY</b></p>      | <p><b>WATER SUPPLY</b></p>   | <p><b>WATER SUPPLY</b></p> |

POSED TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A



PROPOSED GROUND FLOOR PLAN  
PROPOSED TYPICAL FLOOR PLAN

CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

TITLE: BLOCK A - TYPICAL FLOOR PLUMBING DRAINAGE & FIRE FIGHTING LAYOUT

|                      |             |        |           |
|----------------------|-------------|--------|-----------|
| SCALE : NOT TO SCALE | DATE:       | DRAWN: | CHECKED:  |
| PROJECT NO:          | DRAWING NO: |        | REVISION: |

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**PPR INSTALLATION COLOURS**

**ORANGE NOTES**

**LEGEND**

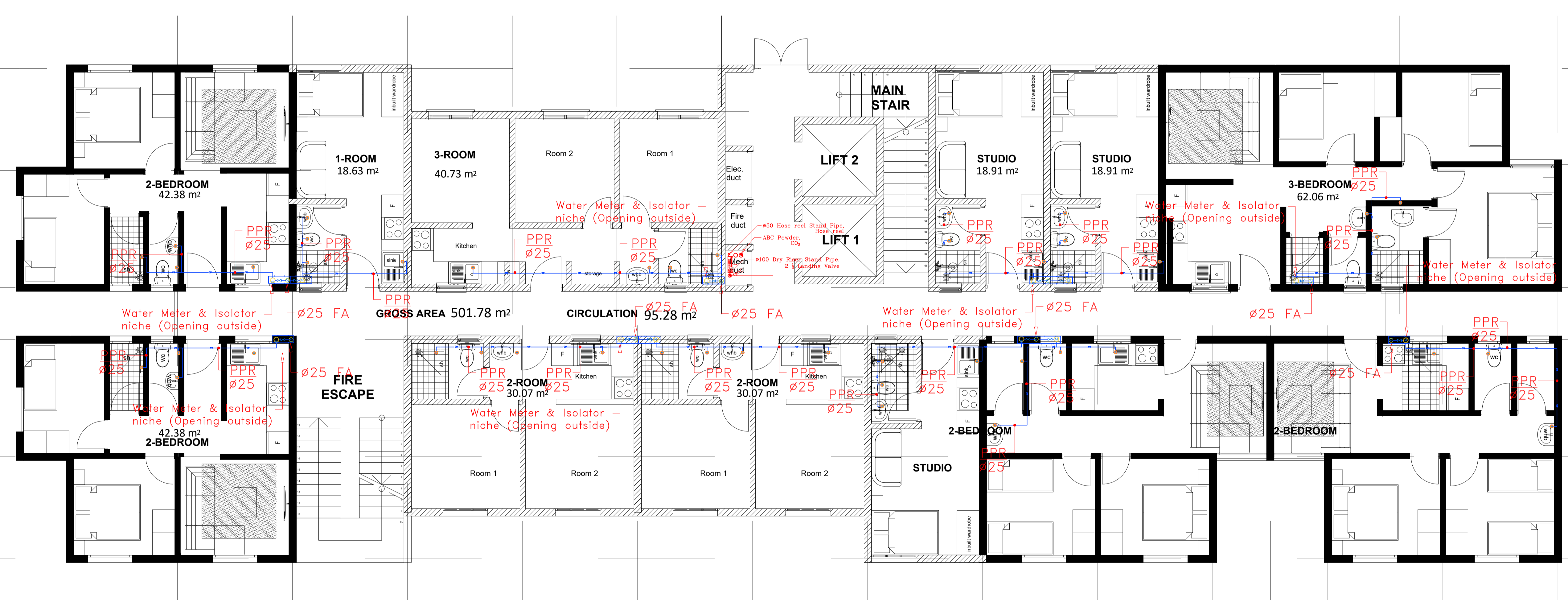
**WATER SUPPLY**

**FIRE FIGHTING**

**WATER SUPPLY**

**FIRE FIGHTING**

TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A



PROPOSED GROUND FLOOR PLAN

PROPOSED TYPICAL FLOOR PLAN

CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

TITLE: BLOCK A - GROUND FLOOR PLUMBING & FIRE FIGHTING LAYOUT

|                      |             |           |          |
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**PPRV INSTALLATION COLOURS**

**DRAINAGE NOTES**

**LEGEND**

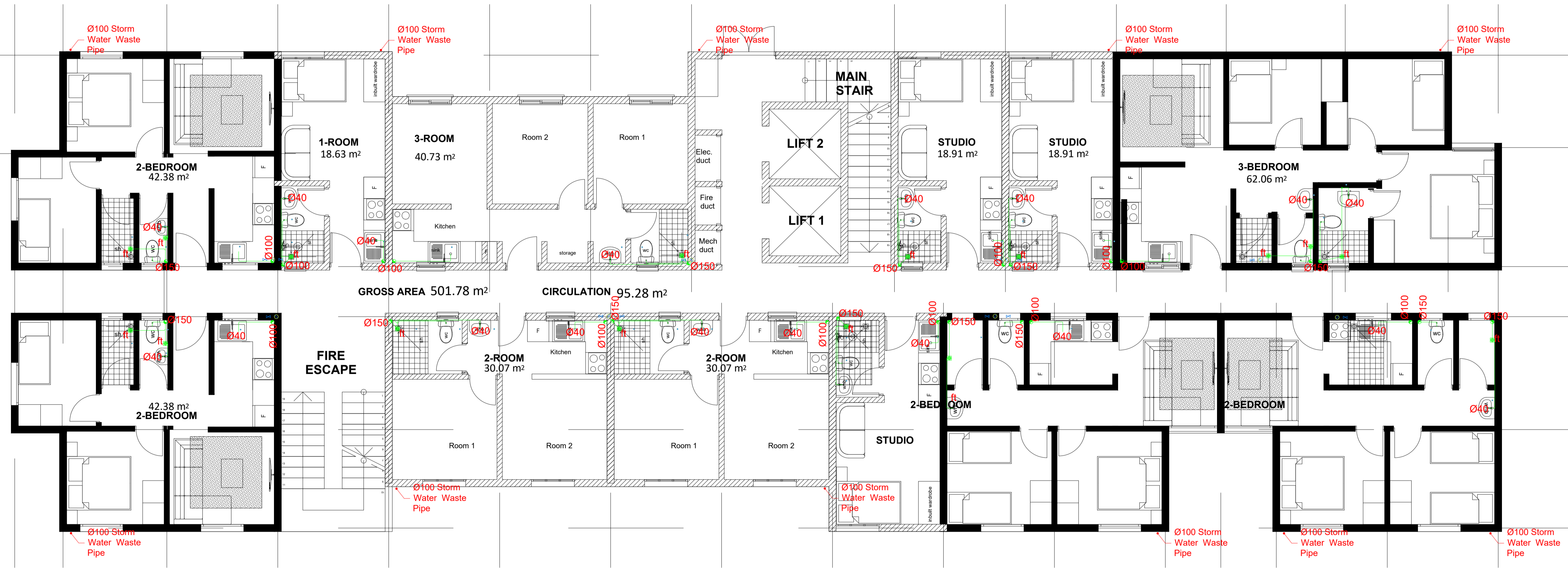
**WATER SUPPLY**

**FIRE EXTINGUISHER**

**FIRE HOSE REEL**

TYPICAL SOCIAL+ AFFORDABLE UNITS BLOCK TYPE A

MAIN ENTRY POINT



PROPOSED GROUND FLOOR PLAN  
PROPOSED TYPICAL FLOOR PLAN

CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

TITLE: BLOCK A - TYPICAL FLOOR DRAINAGE LAYOUT

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|----------------------|-------------|-----------|----------|
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PPR INSTALLATION COLOURS

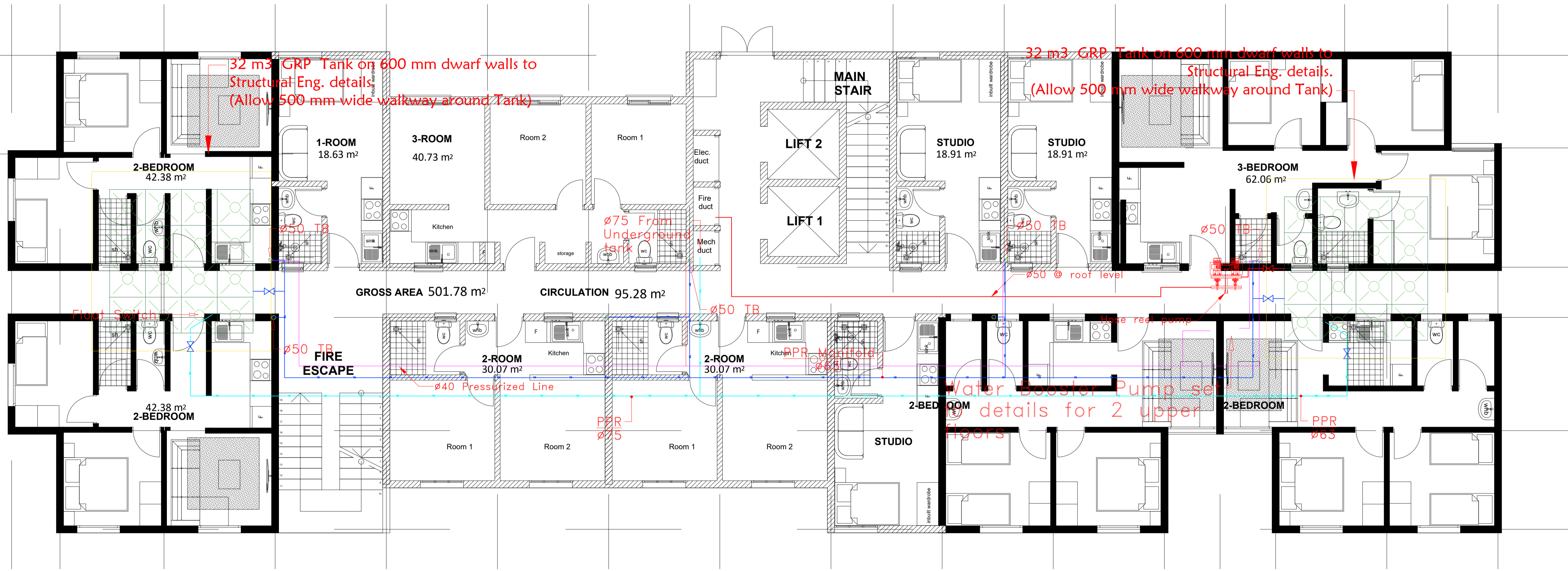
ORANGE NOTES

LEGEND

WATER SUPPLY

FIRE EXTINGUISHER

FIRE HOSE REEL



PROPOSED GROUND FLOOR PLAN  
 PROPOSED TYPICAL FLOOR PLAN

CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

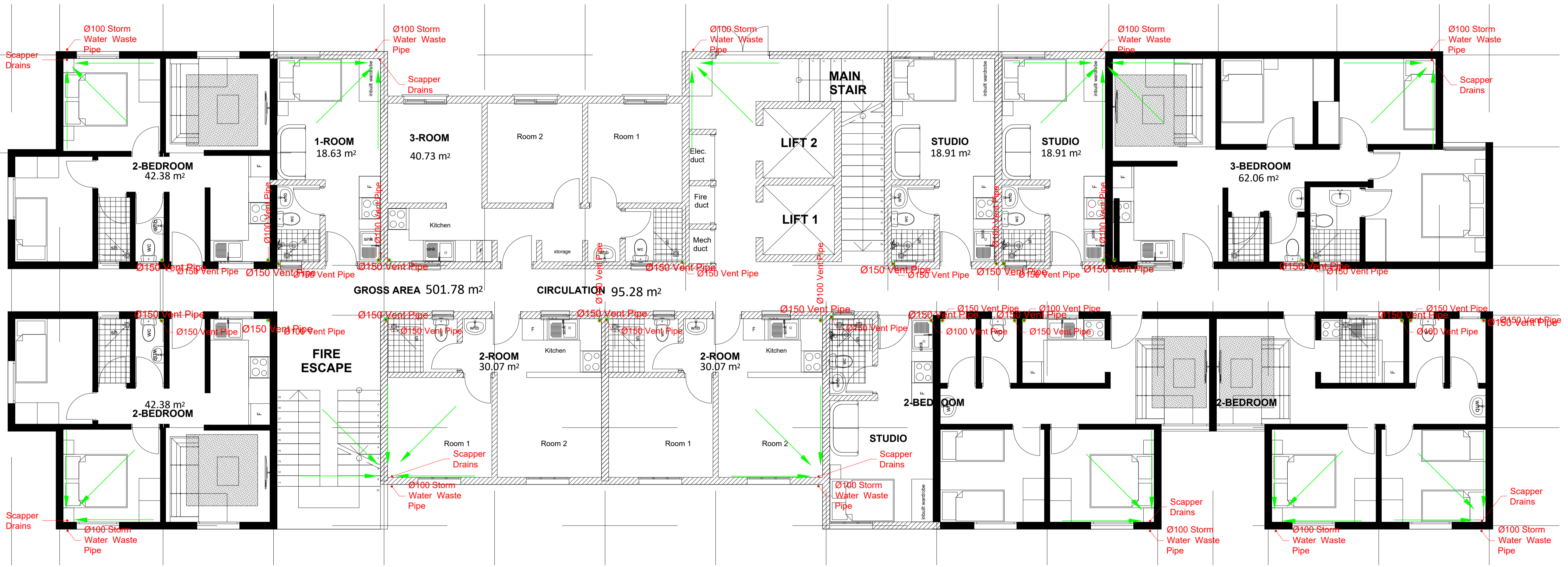
TITLE: BLOCK A - ROOF TERRACE FLOOR PLUMBING & FIRE FIGHTING LAYOUT

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|   |                                 |                              |                                     |
|---|---------------------------------|------------------------------|-------------------------------------|
| <p><b>PPFV INSTALLATION COLOURS</b></p> | <p><b>ORAINAGE NOTES</b></p>    | <p><b>LEGEND</b></p>         | <p><b>WATER SUPPLY</b></p>          |
| <p><b>SCAPPER DRAINS</b></p>            | <p><b>FIRE EXTINGUISHER</b></p> | <p><b>FIRE HOSE REEL</b></p> | <p><b>GENERAL SERVICES SHOP</b></p> |
| <p><b>CO2 WATER SUPPLY</b></p>          | <p><b>WATER SUPPLY</b></p>      | <p><b>WATER SUPPLY</b></p>   | <p><b>WATER SUPPLY</b></p>          |



Roof Floor Drainage

PROPOSED GROUND FLOOR PLAN  
PROPOSED TYPICAL FLOOR PLAN

CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

|  |             |           |          |
|--|-------------|-----------|----------|
| SITE:<br>AHP DEVELOPEMENT NGONG                        |             |           |          |
| TITLE:<br>BLOCK A - ROOF TERRACE FLOOR DRAINAGE LAYOUT |             |           |          |
| SCALE :<br>NOT TO SCALE                                | DATE:       | DRAWN:    | CHECKED: |
| PROJECT NO:  | DRAWING NO: | REVISION: |          |









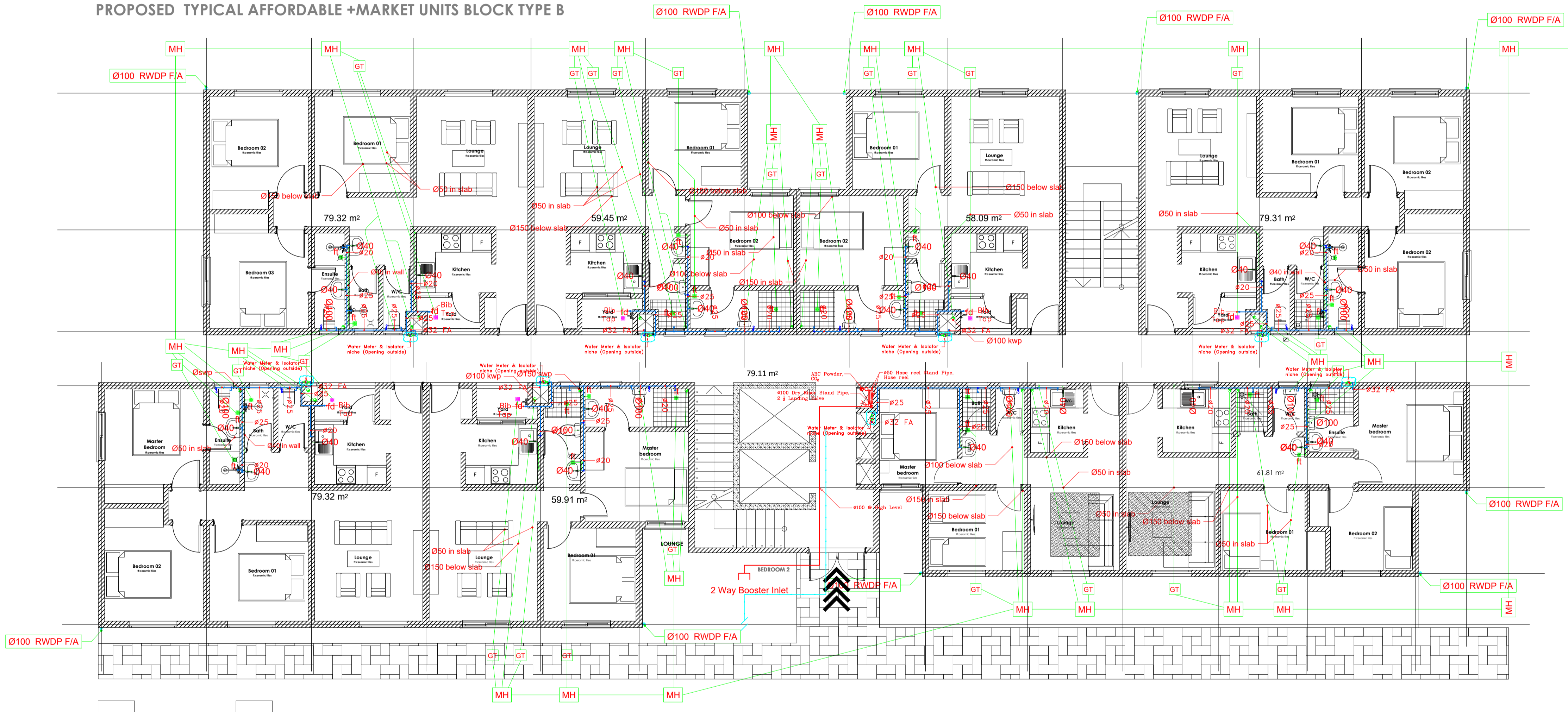
# TYPE B GROUND WATER SUPPLY

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|   |   |
|---|---|
| <p><b>PPFD INSTALLATION COLOURS</b></p> <p><b>ORANGE NOTES</b></p> <p><b>LEGEND</b></p> | <p><b>WATER SUPPLY</b></p> <p><b>FIRE FIGHTING</b></p> <p><b>LEGEND</b></p> |
|---|---|


PROPOSED TYPICAL AFFORDABLE + MARKET UNITS BLOCK TYPE B



To Civil Work Details

PROPOSED GROUND FLOOR PLAN

# TYPE B GROUND WATER SUPPLY

CLIENT:  STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

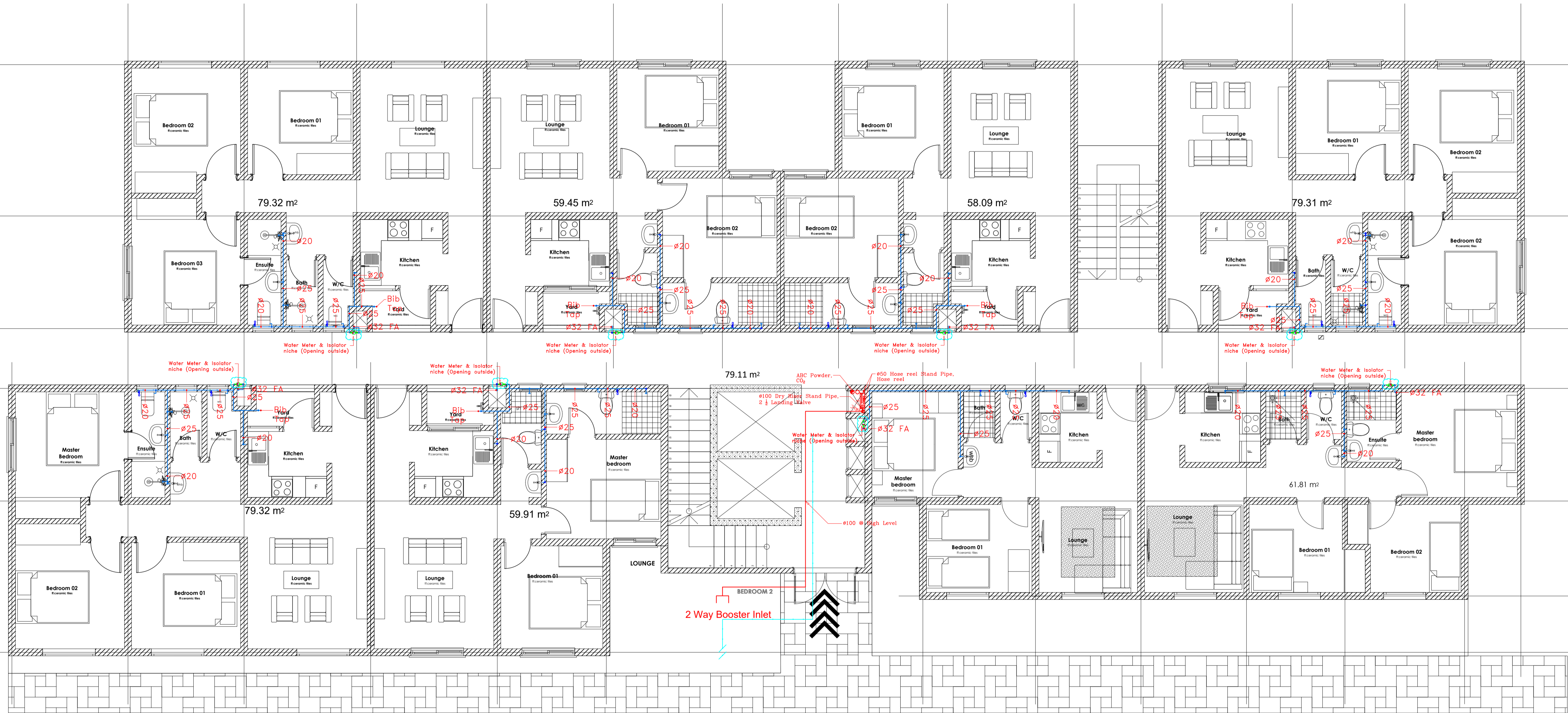
QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

TITLE: BLOCK B - GROUND FLOOR PLUMBING DRAINAGE & FIRE FIGHTING LAYOUT

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| PROJECT NO:         | DRAWING NO: | REVISION: |          |

PROPOSED TYPICAL AFFORDABLE +MARKET UNITS BLOCK TYPE B



PROPOSED GROUND FLOOR PLAN

# TYPE B GROUND WATER SUPPLY

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**PPRO INSTALLATION COLOURS**

**ORANGE NOTES**

**LEGEND**

**WATER SUPPLY**

**FIRE FIGHTING**

**WATER SUPPLY**

**FIRE FIGHTING**

**WATER SUPPLY**

**FIRE FIGHTING**

**WATER SUPPLY**

**FIRE FIGHTING**

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CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

TITLE: BLOCK B - GROUND FLOOR PLUMBING & FIRE FIGHTING LAYOUT

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PROPOSED TYPICAL AFFORDABLE + MARKET UNITS BLOCK TYPE B



To Civil Work Details

PROPOSED GROUND FLOOR PLAN

# TYPE B GROUND WATER SUPPLY

CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:  
QUANTITY SURVEYOR:

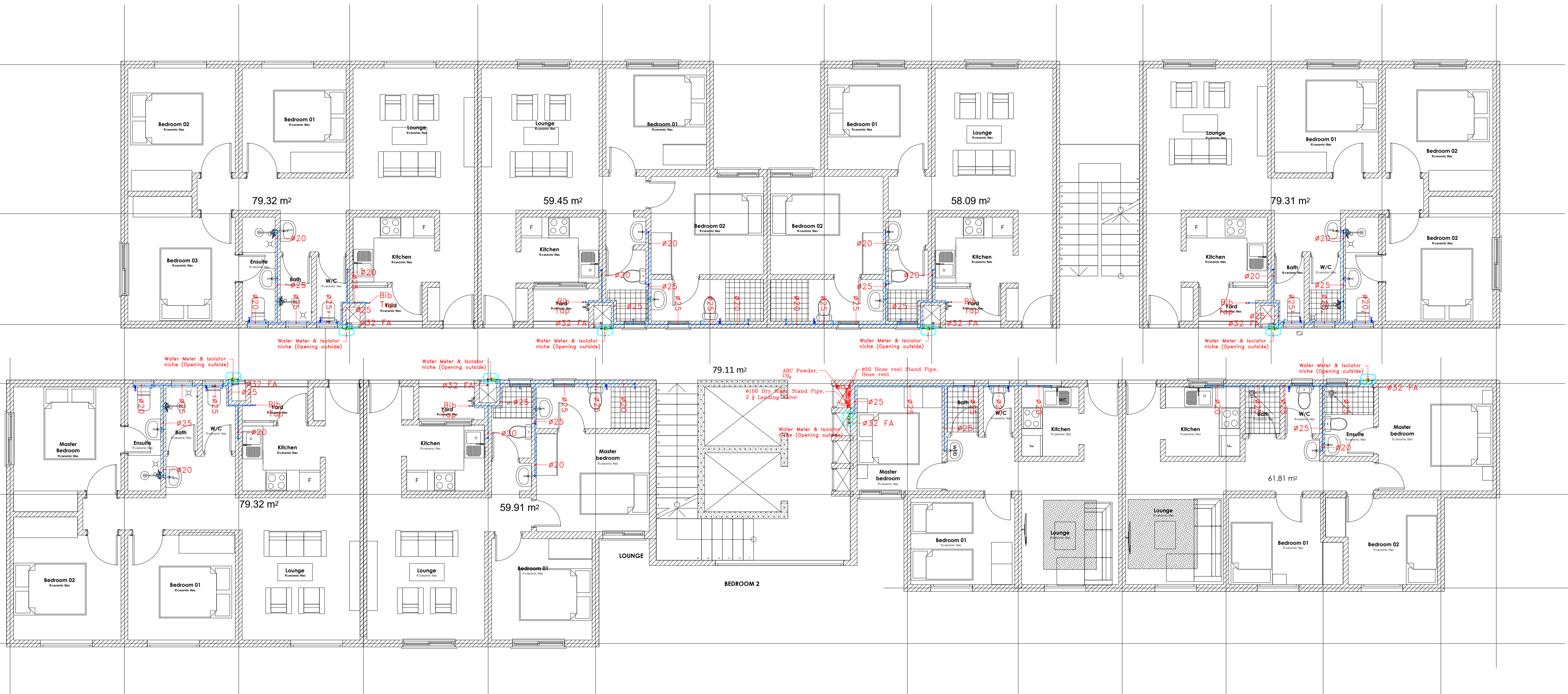
SITE: AHP DEVELOPEMENT NGONG  
TITLE: BLOCK B - GROUND FLOOR DRAINAGE LAYOUT  
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PROPOSED TYPICAL AFFORDABLE + MARKET UNITS BLOCK TYPE B




Elevation 01 ▲

PROPOSED TYPICAL 1ST-9TH FLOOR PLAN

# TYPE B TYPICAL WATER SUPPLY

|   |   |
|---|---|
| <p><b>PPFD INSTALLATION COLOURS</b></p> <p><b>ORANGE NOTES</b></p> <p><b>LEGEND</b></p> | <p><b>WATER SUPPLY</b></p> <p><b>FIRE FIGHTING</b></p> <p><b>WATER SUPPLY</b></p> <p><b>FIRE FIGHTING</b></p> |
|---|---|

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CLIENT:  STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

TITLE: BLOCK B - GROUND FLOOR PLUMBING & FIRE FIGHTING LAYOUT

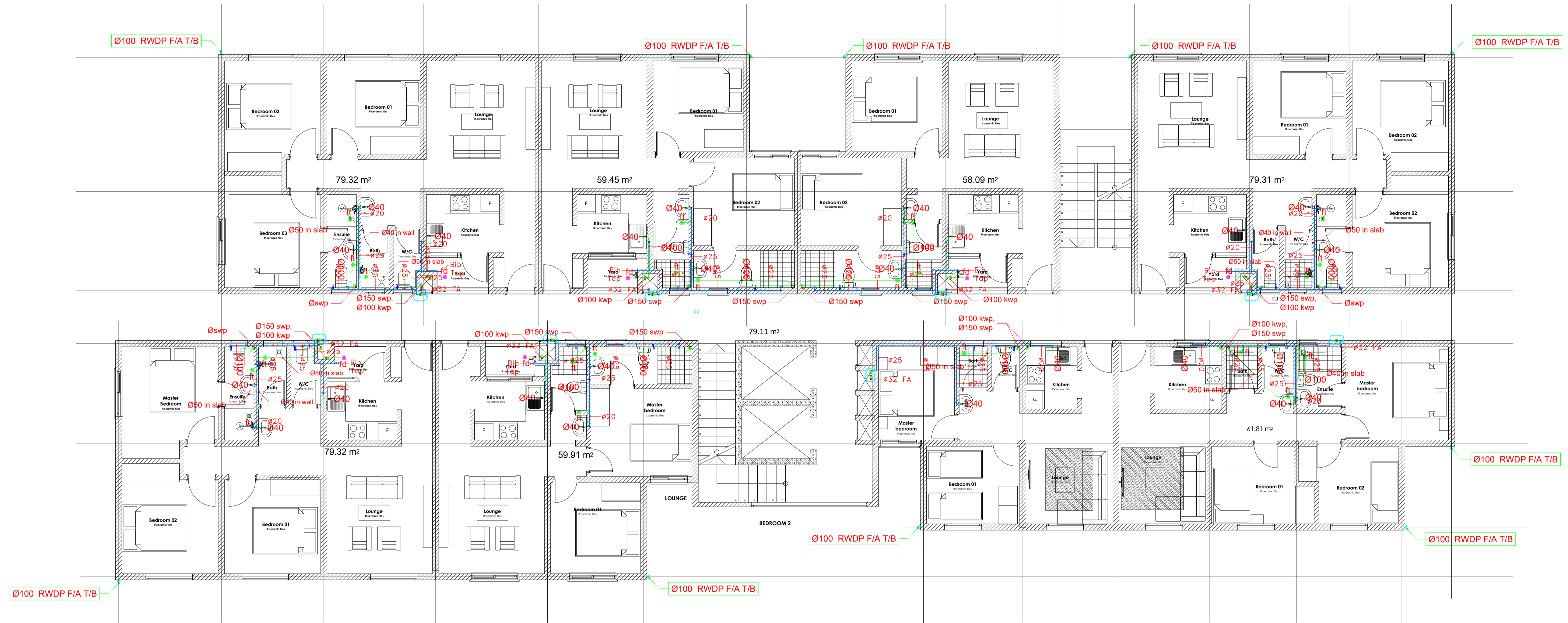
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PROPOSED TYPICAL AFFORDABLE + MARKET UNITS BLOCK TYPE B



Elevation 01 ▲

- 3 Bedroom AHP
- 3 Bedroom Market
- 2 Bedroom AHP
- 2 Bedroom Market

PROPOSED TYPICAL 1ST-9TH FLOOR PLAN

# TYPE B TYPICAL WATER SUPPLY

**PPFD INSTALLATION COLOURS**

|          |        |
|----------|--------|
| PPFD     | Blue   |
| Water    | Green  |
| Drainage | Red    |
| Gas      | Yellow |
| Fire     | Orange |

**ORANGE NOTES**

1. All fire services shall be installed in accordance with the relevant fire codes and standards.

2. Fire services shall be installed in accordance with the relevant fire codes and standards.

3. Fire services shall be installed in accordance with the relevant fire codes and standards.

**WATER SUPPLY**

WATER SUPPLY  
FILLER TAP  
180° ANGLE VALVE  
300 BOTTLE TRAY  
400 DRAINAGE PIPE

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CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG

TITLE: BLOCK B - TYPICAL FLOOR DRAINAGE LAYOUT

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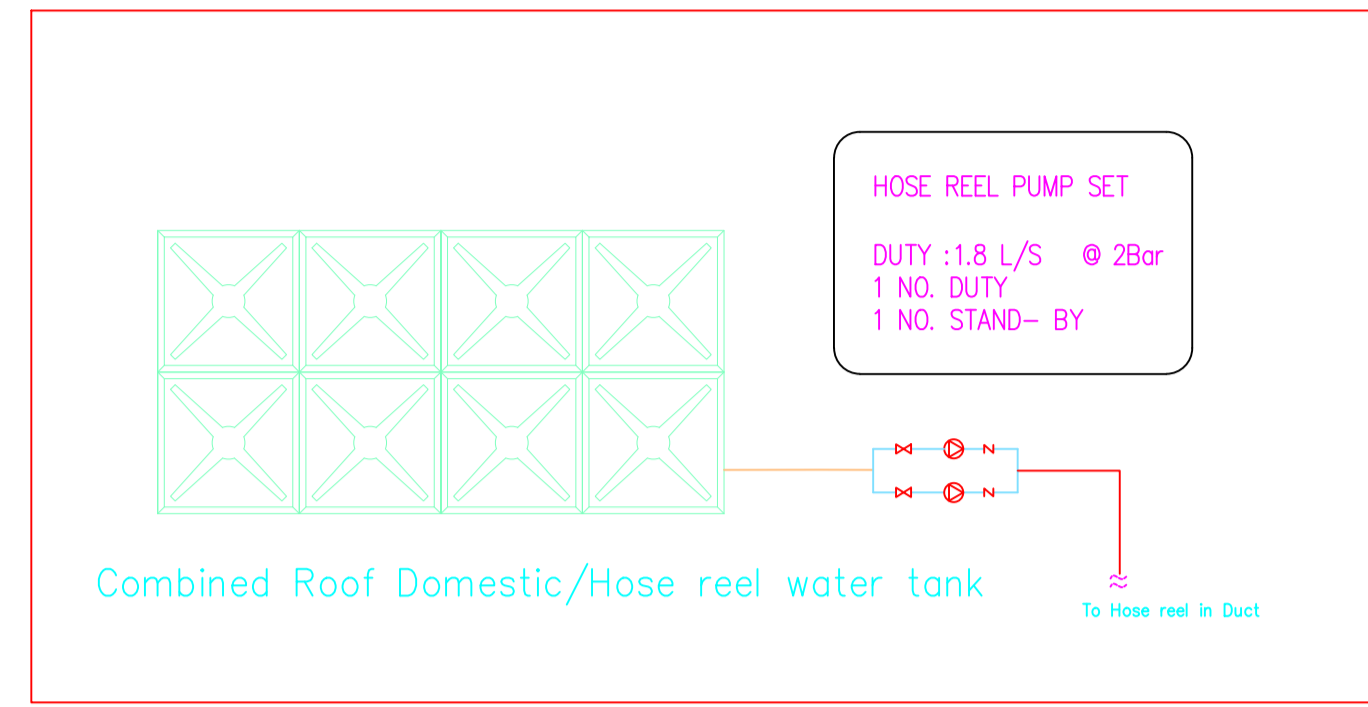






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Roof Hose Reel Typical Connection



Connection to Future City water Council Hydrant

| LEGEND |                                 |
|--------|---------------------------------|
| SYMBOL | DESCRIPTION                     |
|        | OS & Y GATE VALVE               |
|        | LANDING VALVE                   |
|        | EXTERNAL HYDRANT VALVE          |
|        | SINGLE HEADED HYDRANT VALVE     |
|        | HOSE REEL DRUM                  |
|        | BUTTERFLY VALVE                 |
|        | UNION WITH BALL VALVE FOR DRAIN |
|        | Ø50 HOSE REEL PIPE              |
|        | Ø160 EXTERNAL HYDRANT PIPE      |
|        | Ø100 DRY RISER PIPE             |

FIRE FIGHTING SCHEMATIC

CLIENT: STATE DEPARTMENT FOR HOUSING AND URBAN DEVELOPMENT

ARCHITECT:

STRUCTURAL:

QUANTITY SURVEYOR:

SITE: AHP DEVELOPEMENT NGONG  
 TITLE: BLOCK B - DRAINAGE  
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