A REPORT OF AN ONGOING BUILDING DEVELOPMENT PROJECT BY ROBINSON, ARIBA ISAAC AT OKWUTA LAND (HOLY HILL), BEHIND SCHOOL OF DIVINITY, OLD UMUAHIA, UMUAHIA SOUTH LOCAL GOVERNMENT AREA, ABIA STATE.

1. INTRODUCTION

Project Information

This report provides an update on the project's progress, highlighting key achievements and challenges. The key details are as follows:

Client: Grace Agu Onwuka

Title of Project: Proposed 2-Floor Residential Building Development

Project Location: Okwuta Land (Holy Hill), Behind School of Divinity, Old Umuahia, Umuahia South Local Government Area, Abia State.

Contract Sum: ₦289,625,907.93

Date of Site Possession: 1st April, 2025

Expected Date of Completion: 30th June, 2026

Project Duration: 15 Months

Consultants: Architect – (Arc. Dr. Ben Iwuagwu - Landmark Projects, Umuahia, Abia State), Structural Engineer – (Engr. Nwachukwu – Seretz, Umuahia, Abia State), Electrical Engineer (Engr. B. C. Okoli) and Mechanical Engineer – (Engr. C. U. Okolie), Quantity Surveyor – (Qs. Brenda Uche Ofoegbu)

Project Quantity Surveyor: Robinson, Ariba Isaac (Under Probation)

Contractor: A. A. Wills Ltd, Aba, Abia State

Contractual Arrangement: Negotiated Contract

Project Current Status: Ongoing

2. AIM AND OBJECTIVES OF THE PROJECT

The aim of the project is to meet the client's taste without violating the law. The specific objectives of the project are:

a. To complete the project within the scheduled timeframe as captured in programme of works.

b. To deliver the project within the agreed and approved contract sum (budget) as contained in the Bill of Quantities.

c. To meet statutory standards and specifications.

d. To ensure that the project is executed safely for workers and users on completion.

e. To minimize hazardous environmental impact during and after project delivery by promoting eco-friendly practices.

3. SCOPE OF THE PROJECT

The project land space comprising total area of the site is 1232.34m2. The built area of the site is 302.94m2 which is about 24.58% of total area of the site. The project's landmarks are SC/ABBH

9425, SC/ABBH 9426, SC/ABBH 9427, SC/ABBH 9428, SC/ABBH 9429, SC/ABBH 9430, SC/ABBH 9431, SC/ABBG 3354 and SC/ABBG 3355. The entire scope of the projects revolves around architectural, structural engineering, electrical engineering and mechanical engineering designs and calculations. The estimated cost is as contained in the Bill of Quantities. However, the existing road is not part of the project (see appendices for more details).

Generally, the ongoing project comprised of construction of a residential building at Okwuta Land (Holy Hill), Behind School of Divinity, Old Umuahia, Umuahia South Local Government Area, Abia State, Nigeria. Specifically, the project was a two – floor residential building construction development project comprising a framed building founded on reinforced concrete column bases and mass concrete strip foundation with hollow sandcrete block work (filled solid with all – in – aggregate concrete at substructure only) and 150mm thick mass concrete floor slab on hardcore and laterite beds. The walls were largely hollow sandcrete block work bonded with cement and sand (1:6 mix) mortar. The windows were made of factory glazed multi – unit aluminum complete with ironmongery. Both internal and external doors were made of hardwood. The roof was covered with aluminum roofing sheets on structural timber truss while the ceiling was internally made of Polyvinyl Chloride (PVC) boards with clips and externally made of reinforced concrete fascia. The walls were finished internally and externally with emulsion paint on cement and sand rendered walls except at the toilet areas where ceramic tiles were used to a height of 2100mm from the floor level. The floor finishes were generally porcelain tiles on cement and sand screeded bed backing. The building was fitted with mechanical installations and electrical appliances. The external works consisted of site preparations, fencing, floor paving and disposal systems with relevant plumbing services.

4. COST OF THE PROJECT

The total estimated cost of the project is summarized in Table 4.1.

Table 4.1 – Summary of Total Estimated Cost

SUMMARY		
S/N	**Description**	**Amount**
A.	Preliminaries	20,116,110.50
B.	Substructure	33,021,609.36
C.	Ground Floor (Insitu Concrete Works and Masonry)	43,966,762.12
D.	First Floor (Insitu Concrete Works and Masonry)	18,744,234.45
E.	Roof	23,313,511.13
F.	Fenestration	26,512,844.76
G.	Finishing	28,586,683.56
H.	Decoration	19,249,428.22
J.	External Works	62,018,612.83
K.	Services	14,096,111.00
	Sub - Total	**289,625,907.93**
	Estimated Cost	**289,625,907.93**

5. COMPLETION PERIOD OF THE PROJECT

The project completion period for the residential building construction as envisaged at the time of site possession in April, 2025 is summarized below:

a. Fencing (Masonry Only – simultaneously with foundation) - - 4 Months

b. Disposal System (simultaneously with foundation) - - - - 1 Month

c. Completion of Substructure (excluding finishing and decoration) - - 3 Months

d. Completion of Insitu Concrete Works and Masonry in Ground Floor - 4 Months

e. Completion of Insitu Concrete Works and Masonry in First Floor - - 3 Months

f. Completion of Roofing Works - - - - - - 1 Month

g. Services (Mechanical and Electrical Installations) - - - - 2 Months

h. External Floor Paving (simultaneously with services) - - - ½ Month

i. Fixing of Fence Gate with and Including Column Bases and Columns (simultaneously with services) - - - - - - - - ½ Month

j. General Finishing - - - - - - - - 2 Months

k. Decoration - - - - - - - - - ½ Month

l. Allowance for Contingency (Unforeseen Delays) - - - - 1 Month

Project Duration - 15 months (including contingency).
It was envisaged that the project would be completed in June, 2026.

5.01 Activity Overlaps

a. Fencing, disposal system and paving are done simultaneously with internal works to save time.

b. Services (mechanical and electrical installations) overlap with finishing.

c. External works started before completion of internal works.

Thus, the detailed work schedule is as contained in the Table 5.1

Table 5.1 – Showing the Work Schedule of the Residential Building Project

A. Substructure Stage				
Activity	**Duration**	**Start**	**Finish**	**Remarks**
Substructure (Foundation)	3 Months	April, 2025	June, 2025	Main structural base
Fencing (Masonry Only)	4 Months	April, 2025	July, 2025	Runs simultaneously with foundation
Disposal System	1 Month	May, 2025	May, 2025	Concurrent with foundation

B. Superstructure Stage				
Activity	**Duration**	**Start**	**Finish**	**Remarks**
Ground Floor Concrete & Masonry	4 Months	July, 2025	October, 2025	Structural works (ground floor)
First Floor Concrete & Masonry	3 Months	November, 2025	January, 2026	Structural works (first floor)
Roofing Work	1 Month	February, 2026	February, 2026	Covers structure
C. Services & External Works				
Activity	**Duration**	**Start**	**Finish**	**Remarks**
Mechanical & Electrical Services	2 Months	March, 2026	April, 2026	After roofing
External Floor Paving	0.5 Month	April, 2026	April, 2026	Concurrent with services
Fence Gate + Columns	0.5 Month	April, 2026	April, 2026	Runs with services
D. Finishing & Decoration				
Activity	**Duration**	**Start**	**Finish**	**Remarks**
General Finishing	2 Months	March, 2026	April, 2026	Overlaps with services
Decoration	0.5 Month	May, 2026	Mid-May 2026	Final stage
E. Contingency				
Activity	**Duration**	**Start**	**Finish**	
Contingency Allowance	1 Month	June, 2026	June, 2026	

5.02 Project Timeline Summary

a. April – June, 2025 → Substructure + Fencing + Disposal

b. July – October, 2025 → Ground Floor Structure

c. November – January, 2026 → First Floor Structure

d. February, 2026 → Roofing

e. March – April, 2026 → Services + Finishing + External Works

f. May, 2026 → Decoration

g. June, 2026 → Contingency

5.03 Key Programme Features

a. Parallel activities were:

i. Fencing and disposal system executed during foundation

ii. External floor paving and fixing of fence gate during services stage

b. Overlap strategies were:

   i. Finishing overlapping with electrical and mechanical services

   ii. Integration of external works to reduce idle time

c. Performance efficiency was taken care of through:

   i. Commencement of decoration (painting) immediately after finishing

   ii. Ensuring that there was no idle gaps between major stages of the project

d. One month allowance for contingency was included as risk management measure.

6. CONSTRUCTION SITE ACTIVITIES

a. **Construction Method:** Construction method is the technique used to build a structure or used to deliver a project. The construction process requires coordination among different professionals/consultants that have been mentioned earlier in this report. The project adopted a hybrid construction approach, combining traditional and modern techniques in concrete mixing with modern marine board formwork structure for efficiency and durability. Key features included strip and pad foundation for strength and stability. The strip foundation was done before pad foundation to save cost as the labourers overlaps the joints during their measurement for payment. The sandcrete block walling was done before placing of insitu reinforced concrete columns and beams for bonding, speedy completion and cost reduction. In other words, some block works served as formwork. Materials were sourced locally for cost effectiveness. The method ensures cost savings, timely delivery and compliance with regulatory standards. My role as a Project Quantity Surveyor allowed me to observe how these professionals work together as a team to ensure effective project delivery.

b. **Preliminary:** I watched and observed how the workforce and materials were mobilized by the contractor; how borehole was provided on site for water for works; how temporary storage facilities were provided and setting out was carried out using Builder's Square, pegs, profiles, nails and lines.

c. **Substructure:** I also watched and observed how strip and pad foundations were jointly excavated followed by disposal, compacting, insitu concreting, masonry and fillings. Thereafter, physical site measurements were taken by me since sub-structural quantities were provisional.

d. **Superstructure:** After casting the oversite concrete, masonry and insitu concrete works began. Presently, the work is at concrete fascia. I was part of the entire construction activities up to this stage.

Generally, construction site activities really exposed me to practical knowledge and skills in construction management and technology. I watched and observed how skilled and unskilled labourers were carrying out their duties at various stages of the construction project namely excavating and filling, compacting, concreting, block laying, carpentry and the like. I also participated in physical measurements on site where actual dimensions of completed or ongoing construction works were measured and compared with the one in the Bill of Quantities. It should be noted that accurate measurement is important in Quantity Surveying practice because it forms basis for calculation of cost, variations, payment certificate, final accounts and reconciliation. So far, excavations, fillings, concrete works and masonry had been measured. The minor variations were ignored as their cost implications are minute. I was involved in project monitoring and site meetings where work progress, financial issues, technical challenges and client's observations were discussed.

7. LESSONS LEARNT

7.01 Skills and Knowledge Acquired

During ongoing construction of the residential building project, I acquired skills and practical knowledge; some of which include:

a. **Understanding of Construction Site Activities:** These are ground work (site clearance, excavating, filling and compacting), concreting, masonry and carpentry. Others still awaiting commencement are roofing, finishing, drainage below the ground, electrical, mechanical works and the like.

b. **Interpretation of Working Drawings:** I learnt how to interpret working drawings namely architectural, structural, electrical and mechanical drawings.

c. **Practical Taking Off:** This is quite different from classroom taking off where the working drawings are not put on the ground as building project. Taking off is the technique of measuring quantities from drawings, sketches and specifications prepared by designers, principally architects and engineers in order to prepare tender documents for contractual purpose. Typically, the quantities of work taken off are used to prepare Bill of Quantities, which usually are prepared in accordance with a published Building and Civil Engineering Standard Method of Measurement (BESMM) as agreed to by the Quantity Surveying profession and representatives of the construction industry. Here, taking off quantities were compared with physical site measurements and variations were taken note of.

d. **Preparation of Bill of Quantities:** As the Project Quantity Surveyor, I prepared the Bill of Quantities through billing direct under supervision of Qs. Brendan Ofoegbu. Microsoft Excel software was used in the production of the Bill of Quantities. In billing direct, abstracting was avoided. Preparing Bill of Quantities for a practical building construction project is challenging because any omitted item had cost implication. As such, care and

due diligence were not toyed with. Thus, during the preparation, all building components were measured based on available working drawings and specifications. Where no clear details were given, I made reasonable assumptions at my discretion. Participating in preparation of Bill of Quantities exposed me to documentation skills in Quantity Surveying practice. These skills among others were vetting for error-free presentation, speed for timely submission and use of right construction dictions.

e. **Valuation of Work Done:** During the project, I participated in interim valuations which were done at different to determine the amount payable to the workforce. Valuation involves measurement and quantification of completed work on site, comparing site measurements with the ones in Bill of Quantities and preparing of payment certificates.

f. **Management of Variations:** Variations are changes that occur as a result of design modifications. So far, no variation order has been given by the client or his representative.

7.02 Professional Experienced Gained

a. **Project Management:** As at the time of writing this report, the project is ongoing and at concrete fascia. Proper coordination of activities of the project by the Project Architect ensures that project timeline is being met with slight and tolerable variations. I saw how the client, consultants and contractor worked together as a team; ensuring alignment in resolution of minor disputes.

b. **Cost Management:** So far, I observed that there has not been any major project cost overrun. The project is still within the cost plan. Through effective monitoring, the Project Quantity Surveyor is ensuring cost control and efficiency. Construction resources were ordered as and when due. Wastages had been minimized; and labour output had been encouraging.

c. **Quality and Safety:** I observed that the standard of service delivery had been satisfactory to the Client and no injury had been recorded on site. This means that safety measures were satisfactory.

As a Probationer Quantity Surveyor, I carefully observed and learnt how the various stakeholders played their respective roles in ensuring that the above milestones were achieved. There was effective communication and so far, the teamwork is topnotch. I also observed and learnt how to use protective equipment and strictly adhere to safety guides.

8. CHALLENGES ENCOUNTERED

Challenges encountered at the ongoing project were:

a. Understanding complex working drawings especially roof plan and structural details of the first floor plan. Some dimensions had to be traced from known to unknown as the Architects and Engineers did not clearly insert them on the working drawings.

b. Reconciliation of all the working drawings to align with one another was difficult.

c. Absence of a centralized data bank for collection of rates and market prices which should have served as guide.

d. Slight fluctuations of market prices for basic building construction resources like cement and chippings

e. Force majeure issues like inclement weather which slightly affected ground work and all cement related construction activities.

f. Slight delay in honouring of payment certificates

With assistance of the construction professionals, these challenges were overcome. They strengthened my resilience, adaptability, and time management skill.

9. CONCLUSION

Participating in the construction of a two-floor residential building development project helped me in accurate measurement, cost analysis and project management. The training was instrumental in acquisition of skills in measurement, cost estimation, documentation, oral communication and teamwork. These skills will be valuable in pursuit of professional career in Quantity Surveying. The experience was rewarding and has provided insights in construction cost management which is the fulcrum of Quantity Surveying profession.

10. RECOMMENDATIONS

Having participated in the ongoing construction of 2-Floor residential building project, the following recommendations were made:

a. Clients should financially mobilized contractors and consultants before commencement of projects. The practice of paying after service delivery is hereby discouraged.

b. Perfomance bond should be statutory and enforceable by the local planning authority to enable client release money to contractors and consultants on time.

c. Bills of Quantities should be registered in a centralized data bank at Headquarters of Nigerian Institute of Quantity Surveyors. This centralized data bank should also contain market prices of construction resources across Nigeria.

Robinson, Ariba Isaac
P00080R

APPENDICES (attached)

Appendix I – Bill of Quantities
Appendix II – Working Drawings
Appendix III – Gantt Chart for the Work Programme
Appendix IV – Photographs

APPENDIX I – BILL OF QUANTITIES

BILL OF QUANTITIES

FOR

PROPOSED 2-FLOOR RESIDENTIAL BUILDING DEVELOPMENT PROJECT

CLIENT

CONTRACTOR	**PROJECT LOCATION**
A. A. WILLS LTD	OKWUTA LAND (HOLY HILL), BEHIND SCHOOL OFDIVINITY, OLD UMUAHIA
100 JUBILEE ROAD	
ABA	OSISIOMA NGWA LOCAL GOVERNMENT AREA
ABIA STATE	
NIGERIA	ABIA STATE
	NIGERIA

MARCH, 2025

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
	PREAMBLES				
a.	The Bill of Quantities (BOQ) is in accordance with Building and Engineering Standard of Measurement Fourth Edition REVISED 2017 (BESMM 4R) with negligible deviations that have no adverse cost implications. BESMM is a document prepared by Nigerian Institute of Quantity Surveyors (NIQS), a body recognized by Decree No. 31 of 1986 of the Federal Republic of Nigeria **(NOW CAP Q1 LAWS OF THE FEDERATION OF NIGERIA, LFN 2004)**. It provides a uniform basis for measuring construction works and embodies the essentials of good practice. BOQs shall fully describe and accurately represent the quality and quantity of the works to be carried out.				
b.	The rules of BESMM 4R shall apply to measurement of proposed and executed works.				
c.	The BOQ is prepared based on available working drawings. As such, works and materials whose specifications were not fully substantiated were measured and billed at discretion of the **QUANTITY SURVEYOR**.				
d.	**Generally,** materials used in the works, shall so far as obtainable comply with the requirements of the latest British and Nigerian Standards issued by the British Standard Institution (BSI) and Standard Organization of Nigeria (SON) respectively. The contractor shall produce all necessary certificates to substantiate this fact if so required by the Project Coordinator/Architect. The materials shall be of best quality unless otherwise described and shall also comply with relevant local authorites.				
e.	Workmanship shall be of the highest standard obtainable and to the satisfaction of the Project Coordinator/Architect, and in all cases where British Standard Code of Practice exists and is applicable to any portion of the works. The contractor shall allow for complying with the recommended practice unless the procedure is in conflict with requirements stated elsewhere in the BOQ or any other contract documents.				

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
A.	**PRELIMINARIES/GENERAL CONDITIONS** The contractor should allow against the following listed clauses any sum or sums of money he may require for complying with all the requirements contained therein. Clause				
a.	1. Contractor's Obligation		item		
b.	2. Project Coordinator's/Architect's		item		
c.	3. Contract Documents		item		
d.	4. Statutory Obligations, Notices, Fees and Charges		item		
e.	5. Levels and Setting out of the Works		item		
f.	6. Materials, Goods and Workmanship to conform to Description, Testing and Inspection		item		
g.	7. Royalties and Patent Rights		item		
h.	8. Foreman Incharge		item		
j.	9. Access for Project Coordinator/Architect to the Work		item		
k.	10. Work Superintendent		item		
m.	11. Variations, Provisional and Prime Cost Sums		item		
n.	12. Contract Bills		item		
p.	13. Contract Sum		item		
q.	14. Unfixed Goods and Materials		item		
r.	15. Practical Completion and Defect Liability		item		
t	16. Sectional Completion		item		
u.	17. Assignment or Sub-letting		item		
v.	17a. Fair Wages		item		
w.	18. Injury to Persons and Property		item		
x.	19. Insurance against Injury to Persons and Property		item		
y.	20. Insurance of the Works against Fire, etc.		item		
z.	21. Possession, Completion and Post Postponement		item		
aa.	22. Damages for Non-completion		item		
ab.	23. Extension of time		item		
ac.	24. Loss and Expenses Caused by Disturbance of Regular Progress of the Works		item		
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A1				-

a.	25. Determination by Employer		item		
b.	26. Determination by Contractors		item		
c.	27. Nominated Sub-contractors		item		
d.	28. Nominated Suppliers		item		
e.	29. Artists and Tradesmen		item		
f.	30. Certificates and Payments		item		
g.	31. Fluctuations		item		
h.	32. Outbreaks of Hostilities		item		
j.	33. War Damages		item		
k.	34. Antiquities		item		
m.	35. Arbitration		item		
	Visit Site and Scope of Works				
n.	The Contractor is advised to visit and inspect the site and to make himself thoroughly and completely informed as to the condition of the site, the entire nature of the ground and the full extent and character of the works to be executed, means of access and storage space, the conditions affecting the supply of labour and the availability and supply of water. No claims for extra payment above the Contract Sum will be paid to the Contractor for want of knowledge of any conditions affecting the execution of the works.		item		40,825.00
p.	A brief outline of the scope of the works appears immediately inside the front cover of this document and the Contractor is to allow here any sum in respect of the scope or nature of works		item		
	Bills of Quantities				
q.	The pricing, moneying out and totalling of this Bills of Quantities are to be in INK through and are to be in Nigerian currency. The Bills of Quantities shall not be used for ordering materials. Any descriptions in the Bills and those to be ordered are to be reported to the Quantity Surveyor immediately.		item		
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A2				**40,825.00**

a.	**Arithmetical Errors in Pricing Bills of Quantities** The contractor's attention is drawn to the fact that should the priced Bills of Quantities of the Tender considered for acceptance show (after a complete arithmetical check) a corrected figure, the difference will be brought to the relevant Contractor's notice and with his consent, the prices of the "builder's work" (that is the arithmetically corrected figure less all prime Costs, Provisional Sums and Contingencies) shall be subject to a percentage adjustment calculated upon the total amount of such errors in relation to the "builders work" or such other method as may be agreed between the Quantity Surveyor and the Contractor so that the original tender figure shall remain unaltered		item		
b.	**Drawings** All drawings, tracings, photo prints, etc., are the sole properties of the Architect/Project Coordinator and must be returned to him upon completion of the works.		item		40,825.00
c.	The contractor shall check the whole of the dimensions on site and if any discrepancy is found between the drawings and conditions on site, he shall notify the Architect/Project Coordinator and request instructions		item		53,072.50
d.	The contractor shall provide and do everything necessary for the proper execution of the works according to the true intent and meaning of the drawings, whether the same may or may not be particularly shown on the drawings, provided that the same is reasonably to be inferred there from. Figured dimensions are to be followed in preference to scaled dimensions.		item		
e.	Allow for mounting one complete set of drawings on Plywood or other suitable rigid panels and keeping them on site throughout the contract period.		item		2,449.50
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A3				**96,347.00**

a.	The Contractor shall give adequate advance notice to the Architect/Supervising Officer of requirements with regards to instructions, detailed drawings, etc., and in the absence of advance written notification to the work is not affected by the want of such information.		item		85,732.50
	Insurance Declaration				
b.	On signing the contract, the Contractor shall obtain from his insurers and lodge with the Architect/Project Coordinator a declaration that the insurance provided is strictly in accordance with clauses of the condition of contract.		item		816,500.00
	Setting Out				
c.	The Contractor shall accurately set out the works and include for providing all pegs, templates, instruments and labour necessary for so doing and as required by the Architect/Project Coordinator for Checking this work		item		163,300.00
d.	Excavation shall not be commenced until the permission of the Architect/Project Coordinator is obtained.		item		
e.	Provide when required on the site a "Dumpy" or "precise" free use of the levelling equipment by the Architect/Project Coordinator, Engineer or Quantity Surveyor **Site Accommodation**		item		40,825.00
f.	Allow for providing a suitable weather-proof office on the site for the use of the Foreman- in-charge and other site staff and including for providing necessary furniture and lighting and clear all away on completion Allow for providing suitable weather-proof office on the site for the use of the Clerk of works and		item		244,950.00
g.	Consultants and large enough for the holding of site meetings and include for providing necessary furniture and lightening and clear all away on completion		item		408,250.00
h.	Allow for providing a temporary hut for the watchman complete with lighting and necessary furniture and clear away on completion		item		163,300.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A4				**1,922,857.50**

a.	Allow for providing and maintaining all necessary temporary buildings for storage and protection of goods and materials on site and other works that may be brought or executed on the site including the tools and materials of sub-contractors and remove on completion. Sheds for the storage of cement are to have floors raised from the ground		item		88,182.00
	Electricity				
b.	Allow for providing all temporary lighting and power for the works including that for use by special tradesmen and sub- contractor; paying all fees and charges and providing all necessary temporary mains and clearing away and making good on		item		1,633,000.00
	Water				
c.	Allow for providing all water required for the works including that for sub-contractors. The water is to be clean, fresh water		item		4,082,500.00
d.	Allow for executing all temporary plumbing and paying all fees and charges incurred in the connection and supply of the water for building purposes and the removal of all temporary plumbing on completion		item		40,825.00
	Temporary works				
e.	The contractor shall ensure that all temporary electrical, water and other installations are executed in accordance with the requirements of the Authorities concerned.		item		
	Temporary Fencing and Access Roads				
f.	Allow for any necessary access roads, crossovers, gangways, gates, entrances and the like required, maintain and clear away and make good		item		367,425.00
g.	Allow for adequate temporary security fencing to the perimeter of site, maintain and clear away and make good.		item		489,900.00
	Welfare and Safety				
h.	Allow for providing adequate latrine accommodation and keeping same in a clean and sanitary condition to the satisfaction of the Health Authorities and clearing away latrines and soil whenever necessary and making good all works disturbed.		item		310,270.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A5				**7,012,102.00**

a.	Allow for providing sheds and workshop for use by workmen on site and maintaining and subsequently dismantling and carting away on completion and allow for providing and maintaining welfare and safety measures and amenities of a suitable standard approved by the Architect/Project Coordinator of required by the Authorities.		item		244,950.00
b.	The contractor is to provide on site a "First Aid Box" or cupboard prominently marked with the words "First Aid" for the purpose of treating any of his employees injured on site. The contents of this box or cupboard are to comply in all respects with the Factories Ordinance. The Contractor is to ensure that there is always adequate stocks in the first Aid box or cupboard which to be produced and opened for the inspection of the Architect/Project Coordinator on request.		item		48,990.00
	Watching and Lighting				
c.	Allow for providing all necessary guards, day and night watchmen and lighting for the protection of the works and the safety of the public.		item		195,960.00
	Hoardings and Barriers				
d.	Allow for providing all fans, gantries, hoardings, guardrails, barriers or any other form of special protection to all sides of the buildings and site as necessary to protect adjoining property, persons, vehicles and the like from injury.		item		81,650.00
	Ordering of Materials				
e.	Upon receipt of the order to commence the works, the Contractor shall immediately place orders for all the required materials and will be held responsible for any delays occurring due to the placing of such orders		item		
f.	The Contractor shall, if so requested by the Architect/Project Coordinator make available to him all document in connection with the ordering of materials for the works showing agreed delivery dates, sources of supply and the like		item		8,165.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A6				**579,715.00**

a.	If upon receiving quotation for any materials required for the works it appears that delivery by the dates quoted will delay the works, the Contractor shall inform the Architect/Project Coordinator of this fact before placing the orders		item		8,165.00
	Time and Progress				
b.	The works shall be proceeded within sections and sequences as will affect completion of all works within the time for completion or as directed by the Architect/Project Coordinator		item		
c.	Immediately upon signing the contract, or before signing the contract, if requested, the contractor shall, in collaboration with sub- contractors shall, submit to the Architect/Project Coordinator for acceptance programme and progress charts to cover all activities on the site and shall record progress thereon throughout the execution of the works		item		122,475.00
d.	The Contractor shall arrange for representatives to attend site meetings as and when reasonably required by the Architect/Project Coordinator and shall provide siting and other necessary facilities for such meetings.		item		244,950.00
e.	The contractor's attention is drawn to his responsibility for co-ordination and programming of sub-contractor's work. The co-ordinator is expected to arrange suitable programmes with his sub-contractors and to check regularly that such programmes are adhered to. Where delays arise in connection with sub- contractors' works the Contractor will be expected to have been aware of such at an early stage and to have taken the appropriate action defined in the sub- contract document by the giving of such notice as may be required in preparation for the determination of same. Determination shall not be effected without the prior consent of the contract periods on the grounds of delay by sub-contractors will not be considered unless the contractor can establish requirements.		item		
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A7				**375,590.00**

	Materials found on the Site				
a.	Any sand, laterite, gravel, or other building materials discovered on the site shall be the property of the Employer and shall not be used in the construction of the works without the prior written consent of the Architect/Supervising Officer. The market price of the materials so used shall be allowed to the Employer by the Contractor and the contract sum adjusted accordingly. Precious articles or antiquities found on the site shall be handed over to the Architect/Project Coordinator		item		
	Scaffolding and Plant				
b.	Allow for providing all scaffolding, hoists, tackle and other plant, profiles, templates, centring and equipment generally required for the proper, safe and efficient execution of the works including sub-contract works and providing all labour and things required by the Architect/Supervising Officer for testing and measuring the works and for weighing, measuring or testing the efficiency of any portion of the works		item		612,375.00
c.	The Contractor is particularly to note that scaffolding, staging and the like is to be provided both for the execution of his work and that of sub-contractors employed under this contract, including that required solely for the execution of work by sub-contractors.		item		
d.	Allow for providing all gangways, walkways, planking, decking, temporary platforms, etc., necessary to construct and afford access to or between all parts of the works		item		81,650.00
	Records				
e.	Allow for keeping such books, accounts and other document and records as are necessary to show in the increases in costs incurred or the reductions obtained under Clause 31 of the Conditions of Contract and furnishing such books, account document and records to the quantity Surveyor or other person authorized to receive then at monthly intervals or as requested throughout the duration of the contract.		item		176,364.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A8				**870,389.00**

a.	In the events of adjustments arising under Clause 31 of the conditions of Contract, the Contractor shall submit monthly fully priced out and totalled statements showing the total adjustments claimed, together with separate sheets relating individually to the various sub-contractors.		item		40,825.00
	Protection of the Works				
b.	Allow for covering up and protecting from injury, from weather or from any cause, all new works, also for supplying all temporary doors, protection to windows and any other requisite protection for the whole of the works executed whether by the contractor or special tradesmen or sub-contractors and any damage caused must be made good by the Contractor at his own expense		item		204,125.00
c.	During inclement weather the Contractor shall suspend such parts of the Works for such time as the Architect/Project Coordinator may decide and shall protect from injury all works then in the course of erection.		item		81,650.00
	Test and Samples				
d.	Allow for carrying out tests of any material, either before or after use in the works and for providing samples of all material and specimen of colours for approval as required by the Architect/Project Coordinator of Engineering before use or application in the works.		item		204,125.00
	Covering up				
e.	No work shall be covered up until it has been examined and approved by the Architect/Project Coordinator		item		
f.	In the case of works executed against provisional quantities in the Bills of Quantities (and therefore subject to re- measurement) the Contractor shall notify the Quantity Surveyor before proceeding to cover up the works		item		8,165.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A9				**538,890.00**

	Opening up				
a.	The contractor shall, at the request of the Architect/Project Coordinator open up for inspection any work cored, and should the contractor refuse or fail to comply with such request, the Architect/Supervising Officer may employ other workmen to open up same. If the said work has been covered in contravention of the Architect/Project Coordinator's instructions and if on being opened up it be found not in accordance with the drawings or instructions of the Architect/Supervising Officer, the expenses of opening up and covering up again, whether done by the Contractor or other workmen, shall be borne by or recoverable from the Contractor r otherwise may be deducted as aforesaid. If the work has not been covered up in contravention of such instructions and be found in accordance with the said drawings etc., then the expenses aforesaid shall be borne by the Employer and be added to the employer and be added to the contract sum.		item		
	Existing Installation				
b.	Allow for protecting and maintaining all pipes, ducts and cables met in excavations, for keeping all ditches, gullies and channels clear and unobstructed and for making good any damage caused to public or private roads, paths kerbs and drains and paying all costs and charges incurred		item		40,825.00
	Temporary Storm water Drainage				
c.	Allow for ensuring that whole of the site is kept free from the risk of storm water flooding and providing such temporary ditches, gullies and the like as may be necessary and for subsequently back filling such excavations and making good. Any damage arising from non-compliance with this clause is to be made good at the Contractor's own expenses		item		81,650.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A10				**122,475.00**

	Prevention of Nuisance				
a.	Allow for taking all necessary precautions with regard to the order and method of execution of the work to avoid causing disturbances or nuisance to the users and occupiers of existing buildings and premises adjacent to the works and for complying with any directions of the Architect/Project Coordinator in this respect.		item		195,960.00
	Access for Workmen				
b.	The contractor shall at all times give access to workmen employed by the Employer or by local or other authorities or any other parties with proper, sufficient and if required, special scaffolding, hoists and ladders and provide them with water and lighting etc.		item		163,300.00
	Delays				
c.	The Contractor will be deemed to have made allowance for all delays caused by difficulty in obtaining labour and materials or by suspension of part or the whole of the works due to adverse weather conditions.		item		244,950.00
	Overtime and Completion				
d.	The whole of the works are to be completed by the time stated in the contract and no extra will be allowed in respect of overtime paid to achieve this.		item		
e.	In the event of the works falling behind programme for reasons other than those which would entitle the contractor to an extension of time under the conditions of Contract, then the Contractor shall, if so instructed by the Architect/ Project Coordinator, arrange at no extra cost, double shift working on the site until such times as progress on the site is in accordance with the programme.		item		
f.	If overtime is specifically ordered in writing by the Architect/Project Coordinator in respect of extra works, the net extra cost over and above normal daily rates, will be paid to the contractor.		item		
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A11				**604,210.00**

	Dismissal by Request				
a.	The Contractor shall, on the written request of the Architect/Project Coordinator or his representative on the site, immediately dismiss from the works any person employed by him thereon who may, in the opinion of the Architect/ Project Coordinator be incompetent or misconduct himself and such person shall not again be employed on the works without the written permission of the Architect/Project Coordinator.		item		
	Imported Material				
b.	Where materials are to be supplied from outside Nigeria the cost of such material C.I.F Apapa Docks together with landing charges, duty and other Government taxes will be set against the Prime Cost or Provisional Sum included in the Bills of Quantities. The Contractor will be required to collect and clear the materials from Apapa Docks, handle loads and transport them from the site and will be responsible for any loss or damage to the materials after they are landed, an item for this is included in the Bill of Quantities after the relevant Prime Cost sums.		item		
	Prime Cost Sums				
c.	The following items in connection with prime cost sums are in addition to the Contractor's obligations described elsewhere (for example, provision of scaffolding etc.)		item		
d.	Receipt vouchers for the all articles for which prime cost amounts are included in the Bills of Quantities must be produced at the final settlement of accounts and the final certificate will not be issued until such receipt have been produced.		item		
e.	The Contractor shall allow for checking Nominated Supplier's invoice and quotations etc.		item		
f.	The Contractor shall allow for checking all materials supplied by Nominated Suppliers at the time of receipt on the site, unpacking, repacking and taking all necessary action in respect of insurance claims and re-ordering of broken or damaged articles.				
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A12				**-**

a.	Where the contractor is required to "Fix Only" materials supplied by Nominated Suppliers or others, the rates inserted in the Bills of Quantities are to allow for taking delivery, unloading on the site, handling, checking, stacking, storing and protecting until required, assembling as necessary and getting into position for fixing.		item		
b.	Where the term "attendance" or "attend" upon is used in the bills of Quantities in connection with Nominated Sub-contract work, or work executed by others, the Contractor shall allow for the use of standing scaffolding, canteens, sanitary accommodation, office accommodation, space for storage of plant and materials and for providing light and water, special scaffolding where necessary and clearing away rubbish and for taking delivery of all materials when received on site, unloading, handling, stacking or storing until required and hoisting into position. The Contractor shall allow for affording the maximum co- operation in arranging that builder's work is carried out as far as possible to suit the convenience of the sub-contractors. The Contractor shall obtain from the sub contractors their requirement for recesses, chases, holes and the like so that these may be formed correctly as the work proceeds. No extra charge will be allowed for cutting chases, holes etc out of proper sequence.		item		
	<u>Provision Sums</u>				
c.	The term "Provisional Sum" in the Bills of Quantities indicates a sum of money allowed to cover the cost of a portion of the works, the extent or nature of which is not known at the time of preparing the contract document, or which cannot be determined accurately until the works are executed.		item		
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A13				-

a.	Provisional, Prime Cost and Contigency Sums are entirely at the disposal of the Architect/Project Coordinator and may be deducted in whole or in part if not required.		item		
b.	Work executed against Provisional Sums shall be measured and valued in accordance with clause 11 of the Conditions of contract with the exception that cost of materials falling within the scope of P.C items elsewhere in the Bills of Quantities will be offset against those Prime Cost items.		item		
c.	**Omission of Prime Cost or Provisional Sums** The Employer reserves the right to omit any Prime Cost or Provisional Sums from the contract and no claim for lost of profit arising from such omissions will be entertained		item		
d.	**Advertisement** The Contractor shall not display or permit the display of any advertisement within the boundaries of the site without the written instructions of the Architect/Project Coordinator		item		
e.	**Site Board** Provide and erect a site board showing the title of the contract, names and addresses of the Consultants, Nominated Suppliers and Sub-contractors and such other information as may be required by the Architect/Project Coordinator who shall approve the design layout colours of the board. Lettering shall be "cut-out" plywood or plastic of an approved thickness and shall be 100mm high for the main title and 50mm or 38mm high elsewhere. The whole board shall be maintained in good condition, repainted as necessary and removed when no longer required.		item		16,330.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A14				16,330.00

	Clearing Rubbish				
a.	Allow for clearing away all shavings, cuttings and other rubbish as it accumulates from time to time during the progress of the works and at completion, including that of Sub-contractors and special tradesmen and the disposal of all materials condemned by the Architect/Project Coordinator or his representatives		item		204,125.00
	Clearing On Completion				
b.	Allow for cleaning down the whole of the premises, including grasses both sides and cleaning of all floors, paving, metalwork, finishing and fittings throughout, touching up generally and removing all stains, dirt and surplus materials and rubbish and leaving the works and site in a clean and tidy condition and ready for immediate use, with all damage to property, roads, paths and drains etc. made good to the satisfaction of the Architect/Project Coordinator.		item		204,125.00
	Defect after Completion				
c.	Allow for inspecting works at the end of the Defects liability Period and making good all defects in accordance with Clause 15 of the Conditions of Contract. Allow also for inspection and making good such defects as may be of an urgent nature during the Defects Liability period.				81,650.00
	Exterminate and Prevent Pests				
d.	Allow for effective destroying all vermin, insects and pests to the whole areas of the site and taking all preventive measures to maintain the site in clean and sanitary condition to the satisfaction of the Architect/Project Coordinator.		item		97,980.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A15				587,880.00

a.	**<u>Production of Tender Documents</u>** Allow for tender documents including preparation and computer generation of all Architectural, Structural, Electrical and Mechanical drawings and details, production of all Bills of Quantities, photocopying and binding of documents for tender purposes, tender analysis and production of tender reports and production of all final working documents and drawings.		item		7,348,500.00
	To Collection (PRELIMINARIES/GENERAL CONDITIONS) - Page A16				**7,348,500.00**
	Collection				
	Page A1				-
	Page A2				40,825.00
	Page A3				96,347.00
	Page A4				1,922,857.50
	Page A5				7,012,102.00
	Page A6				579,715.00
	Page A7				375,590.00
	Page A8				870,389.00
	Page A9				538,890.00
	Page A10				122,475.00
	Page A11				604,210.00
	Page A12				-
	Page A13				-
	Page A14				16,330.00
	Page A15				587,880.00
	Page A16				7,348,500.00
	To Grand Summary **(PRELIMINARIES/GENERAL CONDITIONS)** - Page A				**20,116,110.50**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
1	**SUBSTRUCTURE (ALL PROVISIONAL)**				
1.05	**EXCAVATING AND FILLING**				
	Site Preparation				
a.	Clear site of debris and vegetation.	303	m2	61.60	18,664.80
	Excavation				
b.	Excavate topsoil for preservation; 150mm average depth	319	m2	693.00	221,067.00
c.	Excavate trenches for foundation commencing from natural ground level; exceeding 300mm wide; maximum depth not exceeding 2.00m.	102	m3	3,564.82	363,611.64
d.	Ditto; pit excavation	82	m3	5,374.63	440,719.66
e.	Ditto; pit excavation (basement); maximum depth not exceeding 4.00m	0	m3	1,732.50	-
	Disposal				
f.	Dispose topsoil excavation in temporary spoil heaps on site.	48	m3	2,165.63	103,950.24
g.	Dispose surplus excavated materials on site for reuse.	45	m3	2,165.63	97,453.35
h.	Ditto; surface water		Item		127,512.00
	Fillings				
j.	Return, fill and ram selected earth-filling materials arising from excavation and compact in 100mm layers.	139	m3	2,598.75	361,226.25
k.	Laterite earth-filling to make up level under floor; materials obtained on site; exceeding 250mm thick, 100mm thick (average) compacted in layers.	45	m3	2,598.75	116,943.75
m.	Ditto; off site	104	m3	13,622.10	1,416,698.40
n.	Ditto; bed of hardcore materials	37	m3	19,523.59	722,372.83
1.06	**GROUND REMEDIATION AND SOIL STABILIZATION (Provisional)**				
	Surface Packing to Filling				
p.	Hand pack hardcore to form vertical face not exceeding 250mm high.	49	m2	727.05	35,625.45
	Surface Treatments				
q.	Blinding surface of hardcore with approved fine materials (sand) to receive concrete (25mm thick).	12	m3	24,645.45	295,745.40
r.	Compacting bottom of excavation to receive concrete works.	127	m2	1,783.05	226,447.35
t.	Apply anti-termite treatment solution (Dieldrex "20") to surfaces of excavation.	490	m2	669.38	327,996.20
	To Collection (SUBSTRUCTURE) - Page 1/1				**4,876,034.32**

1.11	**INSITU CONCRETE WORKS** **Insitu Concrete Construction Generally**				
a.	Plain concrete (1:4:8 – 20mm aggregate) blinding.	5	m3	125,190.20	625,951.00
b.	Ditto; (1:3:6 – 38mm aggregate) foundation footing.	10	m3	139,250.40	1,392,504.00
c.	Ditto; steps	2	m3	139,250.40	278,500.80
d.	Ditto; ramp	0	m3	139,250.40	-
e.	Reinforced concrete (1:2:4 – 20mm aggregate) in column bases; well packed around reinforcement in formwork (both measured separately) and poured on against earth.	19	m3	165,362.21	3,141,881.99
f.	Ditto; basement	0	m3	165,362.21	-
g.	Ditto; columns	3	m3	165,362.21	496,086.63
h.	Ditto; plinth beams	10	m3	165,362.21	1,653,622.10
j.	Ditto; floor slab	45	m3	165,362.21	7,441,299.45
	Formwork for Insitu Concrete ***Rectangular shaped sawn marine board wooden formwork to: (6nr Uses)***				
k.	Vertical sides of columns	33	m2	19,866.83	655,605.39
m.	Ditto; plinth beams	86	m2	19,866.83	1,708,547.38
n.	Ditto; ramp	0	m2	19,866.83	-
p.	Vertical sides of columns (circular - radius 150mm)	6	m2	25,881.84	155,291.04
	Narrow Widths				
q.	Column bases not exceeding 250mm high	61	m	5,969.22	364,122.42
r.	Ditto; edges of floor bed	79	m	5,969.22	471,568.38
t.	Ditto; steps	19	m	5,969.22	113,415.18
u.	Ditto; ramp	0	m	5,969.22	-
	Reinforcement for Insitu Concrete High tensile steel bars to BS 4449 and BS 4461:				
v.	12mm diameter straight bars in column bases (nominal length 12.00m).	1056	kg	1,693.44	1,788,272.64
w.	Ditto; columns	0	kg	1,693.44	-
x.	Ditto; 16mm	540	kg	1,874.80	1,012,392.00
y.	Ditto; plinth beams	1238	kg	1,874.80	2,321,002.40
z.	Ditto; 8mm links im columns	85	kg	2,056.16	174,773.60
aa.	Ditto; plinth beams	285	kg	2,056.16	586,005.60
ab.	BRC mesh fabric reinforcement to BS 1221with 150mm end and side laps laid on concrete slab well lapped at joints and intersections.	301	m2	1,015.63	305,704.63
	To Collection (SUBSTRUCTURE) - Page 1/2				**24,686,546.63**

1.14	**MASONRY**				
a.	230mm thick hollow sand-crete vertical block work in cement and sand (1:6) mortar filled solid with concrete (1:4:8 - 19mm aggregate)	172	m2	17,568.44	3,021,771.68
	Ditto; 150mm thick				
b.	**Accessories/Sundry Items for Block Walling** ***Damp Proofing***	10	m2	12,076.11	120,761.11
	Polythene Damp Proof Membrane laid on blinded hardcore (measured elsewhere)				
c.	38mm thick cement and sand (1:3) Damp Proof Course (DPC); not exceeding 225mm wide	0	m2	949.47	-
d.		42	m2	7,535.61	316,495.62
	To Collection (SUBSTRUCTURE) - Page 1/3				**3,459,028.41**
	Collection Page				
	1/1 Page 1/2				4,876,034.32
	Page 1/3				24,686,546.63
					3,459,028.41
	To Summary (SUBSTRUCTURE) - Page 1				**33,021,609.36**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
2	**GROUND FLOOR - INSITU CONCRETE WORKS AND MASONRY**				
1.11	**INSITU CONCRETE WORKS** **Insitu Concrete Construction Generally**				
a.	Reinforced concrete (1:2:4 – 19mm aggregate) in columns; well packed around reinforcement in formwork (both measured separately).	7	m3	165,362.21	1,157,535.47
b.	Ditto; beams/lintels	22	m3	165,362.21	3,637,968.62
c.	Ditto; upper floor	36	m3	165,362.21	5,953,039.56
d.	Ditto; staircases	3	m3	165,362.21	496,086.63
e.	Ditto; wardrobes	1	m3	165,362.21	165,362.21
	Formwork for Insitu Concrete ***Rectangular shaped left in sawn formwork to:***				
f.	Vertical sides of columns	82	m2	19,866.83	1,629,080.06
g.	Ditto; sides of beams/lintels	211	m2	19,866.83	4,191,901.13
h.	Ditto; soffits of upper floor	181	m2	19,866.83	3,595,896.23
j.	Ditto; staircases	14	m2	19,866.83	278,135.62
k.	Ditto; wardrobes	7	m2	19,866.83	139,067.81
	Narrow Widths:				
m.	Ditto; upper floor not exceeding 250mm high	79	m	5,969.22	471,568.38
n.	Ditto; staircases	41	m	5,969.22	244,738.02
p.	Ditto; wardrobes	31	m	5,969.22	185,045.82
q.	13mm thick cement and sand (1:3 mix) one coat precast formwork in isolated columns (hollow section) with capping and footing; finished fair and smooth (ready for painting); overall size; 300 x 300 x 3600mm high	5	nr	94,693.88	473,469.40
r.	Ditto; overall size; 300 x 300 x 3000	0	nr	78,911.57	-
t.	225mm thick hollow sand-crete vertical block work in cement and sand (1:6) mortar filled solid with concrete (1:2:4 - 19mm aggregate) measured elsewhere	0	m2	15,190.53	-
	To Collection (GROUND FLOOR - INSITU CONCRETE WORKS AND MASONRY) - Page 2/1				**22,618,894.96**

	Reinforcement for Insitu Concrete				
	High tensile steel bars to BS 4449 and BS 4461:				
a.	20mm diameter straight bars in beams (nominal length 12.00m).	0	kg	1,983.62	-
b.	Ditto; 16mm	1239	kg	1,874.80	2,322,877.20
c.	Ditto; columns	1125	kg	1,874.80	2,109,150.00
d.	Ditto; 12mm	0	kg	1,693.44	-
e.	Ditto; beams/lintels	660	kg	1,693.44	1,117,670.40
f.	Ditto; upper floors	4742	kg	1,693.44	8,030,292.48
g.	Ditto; staircases	258	kg	1,693.44	436,907.52
h.	Ditto; 10mm in wardrobe slab	122	kg	2,099.69	256,162.18
j.	Ditto; 8mm links in columns.	187	kg	2,056.16	384,501.92
k.	Ditto; beams/lintels	576	kg	2,056.16	1,184,348.16
1.14	**MASONRY**				
	Block Walling				
m.	230mm thick hollow sand-crete block work in cement and sand (1:6) mortar.	346	m2	15,190.53	5,255,923.38
n.	Ditto; 150mm thick	24	m2	10,418.08	250,033.92
	To Collection (GROUND FLOOR - INSITU CONCRETE WORKS AND MASONRY) - Page 2/2				**21,347,867.16**
	Collection				
	Page 2/1				22,618,894.96
	Page 2/2				21,347,867.16
	To Summary (GROUND FLOOR -INSITU CONCRETE WORKS AND MASONRY) - Page 2			-	**43,966,762.12**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
3	**SECOND FLOOR - INSITU CONCRETE WORKS AND MASONRY**				
1.11	**INSITU CONCRETE WORKS** **Insitu Concrete Construction Generally**				
a.	Reinforced concrete (1:2:4 – 19mm aggregate) in columns; well packed around reinforcement in formwork (both measured separately).	7	m3	169,650.23	1,187,551.61
b.	Ditto; beams/lintels	12	m3	169,650.23	2,035,802.76
c.	Ditto; wardrobes	1	m3	169,650.23	169,650.23
	Formwork for Insitu Concrete				
	Rectangular shaped left in sawn formwork to:				
d.	Vertical sides of columns	82	m2	17,137.66	1,405,288.12
e.	Ditto; sides of beams/lintels	112	m2	17,137.66	1,919,417.92
f.	Ditto; wardrobes	3	m2	17,137.66	51,412.98
	Narrow Widths:				
g.	Ditto; wardrobes not exceeding 250mm high	15	m	5,558.78	83,381.70
h.	13mm thick cement and sand (1:3 mix) one coat precast formwork in isolated columns (hollow section) with capping and footing; finished fair and smooth (ready for painting); overall size; 300 x 300 x 2400mm high	5	nr	63,129.26	315,646.30
j.	Ditto; overall size; 300 x 300 x 3000	0	nr	78,911.57	-
k.	225mm thick hollow sand-crete vertical block work in cement and sand (1:6) mortar filled solid with concrete (1:2:4 - 19mm aggregate) measured elsewhere	0	m2	15,397.28	-
	To Collection (SECOND FLOOR - INSITU CONCRETE WORKS AND MASONRY) - Page 3/1				**7,168,151.62**

	Reinforcement for Insitu Concrete				
	High tensile steel bars to BS 4449 and BS 4461:				
a.	20mm diameter straight bars in beams (nominal length 12.00m).	0	kg	2,060.36	-
b.	Ditto; 16mm	0	kg	1,946.74	-
c.	Ditto; columns	990	kg	1,946.74	1,927,272.60
d.	Ditto; 12mm	0	kg	1,757.39	-
e.	Ditto; beams/lintels	856	kg	1,757.39	1,504,325.84
f.	Ditto; 10mm in wardrobe slab	61	kg	2,181.54	133,073.94
g.	Ditto; 8mm links in columns.	437	kg	2,136.09	933,471.33
h.	Ditto; beams/lintels	304	kg	2,136.09	649,371.36
1.14	**MASONRY**				
	Block Walling				
j.	230mm thick hollow sand-crete block work in cement and sand (1:6) mortar.	412	m2	15,397.28	6,343,679.36
k.	Ditto; 150mm thick	8	m2	10,611.05	84,888.40
	To Collection (SECOND FLOOR - INSITU CONCRETE WORKS AND MASONRY) - Page 3/2				**11,576,082.83**
	Collection				
	Page 3/1				7,168,151.62
	Page 3/2				11,576,082.83
	To Summary (SECOND FLOOR -INSITU CONCRETE WORKS AND MASONRY) - Page 3				**18,744,234.45**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
4	**ROOFING**				
1.16	**CARPENTRY** **Structural Timber Framing and First Fixing** ***Anti-termite treated sawn hardwood:***				
a.	100 x 100mm thick wall plates.	79	m	1,789.35	141,358.65
	Pitched Roof Members:				
b.	100 x 50mm thick king posts	124	m	1,095.53	135,845.72
c.	75 x 50mm thick struts	1105	m	943.73	1,042,821.65
d.	Ditto; bracers	79	m	943.73	74,554.67
e.	100 x 50mm thick rafters	392	m	1,225.47	480,384.24
f.	Ditto; hip and valley rafters	324	m	1,225.47	397,052.28
g.	50 x 50mm thick purlins	554	m	784.09	434,385.86
h.	100 x 75mm tie beam.	274	m	1,485.75	407,095.50
j.	Ditto; 225 x 25mm thick fascia board	0	m	1,615.69	-
k.	50 x 50mm thick ceiling noggins (including hangars)	831	m	575.37	478,132.47
m.	**Metal fixing, fasteners and fittings:** 6mm diameter straight steel rods tied across wall plates (measured elsewhere); nominal length 2400mm.	37	kg	3,789.17	140,199.29
1.17	**SHEET ROOF COVERING**				
	<u>Aluminium Sheet Covering</u> Long span aluminum roofing sheets and accessories of approved superior quality make lapped and fixed in accordance to manufacturer's instruction on timber truss (measured separately):				
n.	Roofing not exceeding 50^0 from horizontal	486	m2	25,573.42	12,428,682.12
p.	300mm wide horizontal ridge caps	26	m	7,865.69	204,507.94
q.	Ditto; slopes	73	m	7,865.69	574,195.37
r.	Ditto; gutters	37	m	7,865.69	291,030.53
t.	Ditto; trimmed edges	153	m	7,865.69	1,203,450.57
u.	Fascia paneling 350mm girth.	0	m	9,176.64	-
	To Collection (ROOFING) - Page 4/1				**18,433,696.86**

1.11	**INSITU CONCRETE WORKS**				
	Insitu Concrete Construction Generally				
a.	Reinforced concrete (1:2:4 – 19mm aggregate) in columns; well packed around reinforcement in formwork (both measured separately).	9	m3	169,650.23	1,526,852.07
	Formwork for Insitu Concrete				
	Rectangular shaped left in sawn formwork to:				
b.	Vertical sides of columns	125	m2	17,137.66	2,142,207.50
	Reinforcement for Insitu Concrete				
	High tensile steel bars to BS 4449 and BS 4461:				
c.	10mm diameter straight bars in beams (nominal length 12.00m).	555	kg	2,181.54	1,210,754.70
1.14	**MASONRY**				
	Block Walling				
d.	230mm thick hollow sand-crete block work in cement and sand (1:6) mortar.	0	m2	15,397.28	-
e.	Ditto; 150mm thick	0	m2	10,611.05	-
	To Collection (ROOFING) - Page 4/2				**4,879,814.27**

	Collection	
	Page 4/1	18,433,696.86
	Page 4/2	4,879,814.27
	TO Summary (ROOFING) - Page 4	**23,313,511.13**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
5	**FENESTRATION**				
1.23	**WINDOWS, SCREENS AND LIGHTS**				
	Windows				
	Glass framed multi-unit aluminium casement window with and including fixed light at the top; 2-panel anodised aluminium mosquito netting fixed as directed:				
a	Overall size; 1200 x 5100mm high	7	nr	477,338.14	3,341,366.98
b.	Overall size; 1500 x 2400mm high	31	nr	170,750.22	5,293,256.82
c.	Overall size; 750 x 1800mm high	7	nr	78,773.84	551,416.88
1.24	**DOORS, SHUTTERS AND HATCHES**				
	Doors				
d.	38mm thick single swing, sdouble leaf hardwood *(akala or any other approved)* door hung on wooden frame (measured separately); opening size; 1100 x 2050mm high	4	nr	466,200.00	1,864,800.00
e.	Ditto; opening size; 800 x 2050mm high	33	nr	291,375.00	9,615,375.00
	Wooden Frames				
f.	225 x 50mm thick rebated hardwood door frame complete with fixing cramps (for painting)	186	m	2,550.75	474,439.50
g.	Ditto; 150 x 50mm thick	0	m	2,085.75	-
	Ironmongery				
h.	Pair of 100mm butt hinges nailed to wood work.	41	nr	2,386.13	97,831.33
j.	Single cylindrical mortise locks with lever handle screwed to wood work	37	nr	10,358.25	383,255.25
k.	100mm mild steel barrel bolts nailed to wood work	74	nr	1,079.93	79,914.82
	To Collection (FENESTRATION) - Page 5/1				**21,701,656.58**

1.25	**STAIRS, WALKWAYS AND BALUSTRADES**				
a.	19mm raduis x 5mm thick galvinized hollow steel handrail pipe; one end grouted into concrete works and the other welded to galvinized iron balusters (both measured separately)	81	m	10,129.36	820,478.16
b.	19mm raduis x 5mm thick galvinized hollow steel balusters; one end grouted into concrete works and the other welded to galvinized iron handrails (both measured	79	m	10,129.36	800,219.44
1.26	**METAL WORKS**				
	Allow Provisional Sum to be expended at the instruction of the Project Coordinator for reinforced steel (16mm diameter external framing and 12mm diameter internal framing) **Burglary Proof** to window openings installed complete as required with application of gloss paint:		sum	3,190,490.58	3,190,490.58
c.	Overall size; 450 x 4500mm high	7	nr	160,543.57	1,123,804.99
d.	Overall size; 900 x 1500mm high	31	nr	56,062.84	1,737,948.04
e.	Overall size; 600 x 900mm high	7	nr	22,017.41	154,121.87
	To Collection (FENESTRATION) - Page 5/2				**4,811,188.18**
	Collection Page 5/1 Page 5/2				 21,701,656.58 4,811,188.18
	To Summary (FENESTRATION) - Page 5				**26,512,844.76**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
6	**FINISHINGS**				
1.28	**FLOOR, WALL, CEILING AND ROOF FINISHINGS**				
	Internal Works				
	Ceiling				
a.	5mm thick moisture proof polyvinly chloride (PVC) ceiling fixed with clips on hardwood noggins (both measured separately)	263	m2	8,438.29	2,219,270.27
b.	5mm thick polyvinly chloride (PVC) clips on hardwood noggins (measured separately)	318	m	1,086.43	345,484.74
c.	13mm thick cement and sand (1:3 mix) screeded floor paving, leveled on soffits of upper floors finished fair and smooth	181	m2	3,954.59	715,780.79
d.	Ditto; staircases	14	m2	3,954.59	55,364.26
e.	Ditto; wardrobe	10	m2	3,954.59	39,545.90
	Ditto; narrow width not exceeding 300mm wide:				
f.	Ditto; upper floor	0	m	1,402.94	-
g.	Ditto; staircases	41	m	1,402.94	57,520.54
h.	Ditto; wardrobe	23	m	1,402.94	32,267.62
	Walls				
	Plasterwork: 13mm thick cement and sand (1:6 mix) one coat rendering to:				
j.	Block and concrete works	1316	m2	2,721.31	3,581,243.96
k.	Ditto; not exceeding 300mm wide	231	m	982.72	227,008.32
	Backing				
m.	38mm thick cement and sand (1:6 mix) screeded floor paving, leveled on vertical concrete bed to receive ceramic tiles	122	m2	8,747.35	1,067,176.70
n.	Ditto; walls not exceeding 300mm wide	21	m	3,019.22	63,403.62
	Tiling				
p.	400 x 250 x 10mm non-slip ceramic tiles of approved colour and design; laid on screeded bed (measured separately); bedded, jointed and pointed in matching colour in accordance to manufacturer's instruction.	122	m2	25,549.65	3,117,057.30
q.	Ditto; walls not exceeding 300mm wide	21	m	7,989.74	167,784.54
	Floor				
	Backing				
r.	38mm thick cement and sand (1:6 mix) screeded floor paving, leveled on vertical concrete bed to receive ceramic tiles	452	m2	8,747.35	3,953,802.20
t.	Ditto; staircases	3	m2	8,747.35	26,242.05
u.	Ditto; floors not exceeding 300mm wide (skirting)	346	m	3,019.22	1,044,650.12
v.	Ditto; staircases	35	m	3,019.22	105,672.70
	To Collection (FINISHINGS) - Page 6/1				**16,819,275.63**

	Tiling				
a.	600 x 600 x 10mm non-slip ceramic tiles of approved colour and design; laid on screeded bed (measured separately); bedded, jointed and pointed in matching colour in accordance to manufacturer's instruction.	452	m2	15,523.60	7,016,667.20
b.	Ditto; staircases	3	m2	15,523.60	46,570.80
c.	Ditto; floors not exceeding 300mm wide (skirting)	346	m	6,768.57	2,341,925.22
d.	Ditto; staircases	35	m	6,768.57	236,899.95
	External Works				
	Roof				
	Plasterwork: 13mm thick cement and sand (1:6 mix) one coat rendering on:				
e.	Concrete works	63	m2	2,721.31	171,442.53
	Walls				
	Plasterwork: 13mm thick cement and sand (1:6 mix) one coat rendering on:				
f.	Block and concrete works	472	m2	2,721.31	1,284,458.32
g.	Ditto; not exceeding 300mm wide	245	m	982.72	240,766.40
h.	Isolated columns	0	m2	2,721.31	-
	Backing				
j.	38mm thick cement and sand (1:6 mix) screeded floor paving, leveled on ramp (sloppy bed)	0	m2	8,747.35	-
k.	Ditto; vertical sides of ramp to receive ceramic tiles	0	m2	8,747.35	-
m.	Ditto; steps	10	m2	8,747.35	87,473.50
n.	Ditto; not exceeding 300mm wide	19	m	3,019.22	57,365.18
	Tiling				
p.	600 x 600 x 10mm non-slip ceramic tiles of approved colour and design; laid on screeded steps (measured separately); bedded, jointed and pointed in matching colour in accordance to manufacturer's instruction.	10	m2	15,523.60	155,236.00
q.	Ditto; steps	19	m	6,768.57	128,602.83
	To Collection (FINISHINGS) - Page 6/2				**11,767,407.93**
	Collection				
	Page 6/1				16,819,275.63
	Page 6/2				11,767,407.93
	To Summary (FINISHINGS) - Page 6				**28,586,683.56**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
7	**DECORATION**				
1.29	**DECORATION** **Painting and Clear Finishes** ***General Surfaces (New Work)*** **Prepare and apply one undercoat and two finishing coats of Dulux (or any other approved) silk emulsion paint on:**				
a.	Soffits of upper floor	181	m2	7,987.01	1,445,648.81
b.	Ditto; staircases	14	m2	7,987.01	111,818.14
c.	Ditto; wardrobes	10	m2	7,987.01	79,870.10
	Ditto; narrow width not exceeding 300mm wide:				
d.	Ditto; staircases	7	m	2,665.60	18,659.20
e.	Ditto; wardrobes	23	m	2,665.60	61,308.80
f.	Walls	1316	m2	7,345.40	9,666,546.40
g.	Ditto; not exceeding 300mm wide	231	m	2,290.92	529,202.52
	Knot, prime, stop, prepare and apply one undercoat and one finishing coats of gloss paint on:				
h.	Door leafs	145	m2	8,618.46	1,249,676.70
j.	Door frames	145	m2	8,618.46	1,249,676.70
k.	Balustrades	7	m2	8,618.46	60,329.22
	External Works **Walls** **Painting and Clear Finishes** ***General Surfaces (New Work)*** **Prepare and apply one undercoat and two finishing coats of Dulux (or any other approved) silk emulsion paint on:**				
m.	Roof	63	m2	8,054.36	507,424.68
n.	Walls	472	m2	8,054.36	3,801,657.92
p.	Ditto; not exceeding 300mm wide	245	m	988.11	242,086.95
q.	Isolated columns	28	m2	8,054.36	225,522.08
	To Summary (DECORATION) - Page 7				**19,249,428.22**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
8	**EXTERNAL WORKS**				
1.05	**EXCAVATING AND FILLING**				
	Site Clearance				
a.	Clear site of debris, vegetation and other growths to follow natural terrain for ease of water flow; with and including disposal offsite.	929	m2	386.45	359,012.05
1.34	**DRAINAGE BELOW GROUND**				
b.	Inspection Chamber; size 450 x 450 x 600mm deep (average) internally constructed of 115mm plain insitu concrete (1:2:4 - 20mm aggregate) base, 115mm hollow sandcrete block work sides filled solid with plain concrete (1:10 - all in aggregate) and capped with 100mm thick precast concrete cover slab (1:2:4 - 20mm aggregate); reinforced with BRC No. 12; with and including 75mm thick (average) plain concrete (1:2:4 - 20mm aggregate) benching and forming 150mm diameter half round channel and rendering insides in water proof cement mortar (1:3 mix) with and including all necessary excavations,	8	nr	67,770.22	542,161.72
c.	Two-Chamber septic tank; size 6000 x 1800 x 2100 deep (average) internally constructed of 150mm hollow sandcrete block work sides filled solid with plain concrete (1:10 - all in aggregate) and capped with 50mm thick concrete cover slab (1:2:4 - 20mm aggregate) reinforced with BRC No. 126 and fitted with 2nr. inspection chambers (measured separately) housed to sides of septic tank including 2nr. 100mm diameter tee piece built into sides and 900 x 1800 x 50mm thick precast baffle wall reinforced with 10mm high tensile steel bars to BS 8110, CP 3 Chapter V Part 1. All to include excavations, earthworks, formworks and pipe works. The septic tank having 75mm (average) screeded bed finished to falls and rendered	1	nr	3,406,011.28	3,406,011.28
	To Collection (DISPOSAL SYSTEM) - Page 8/1				**4,307,185.05**

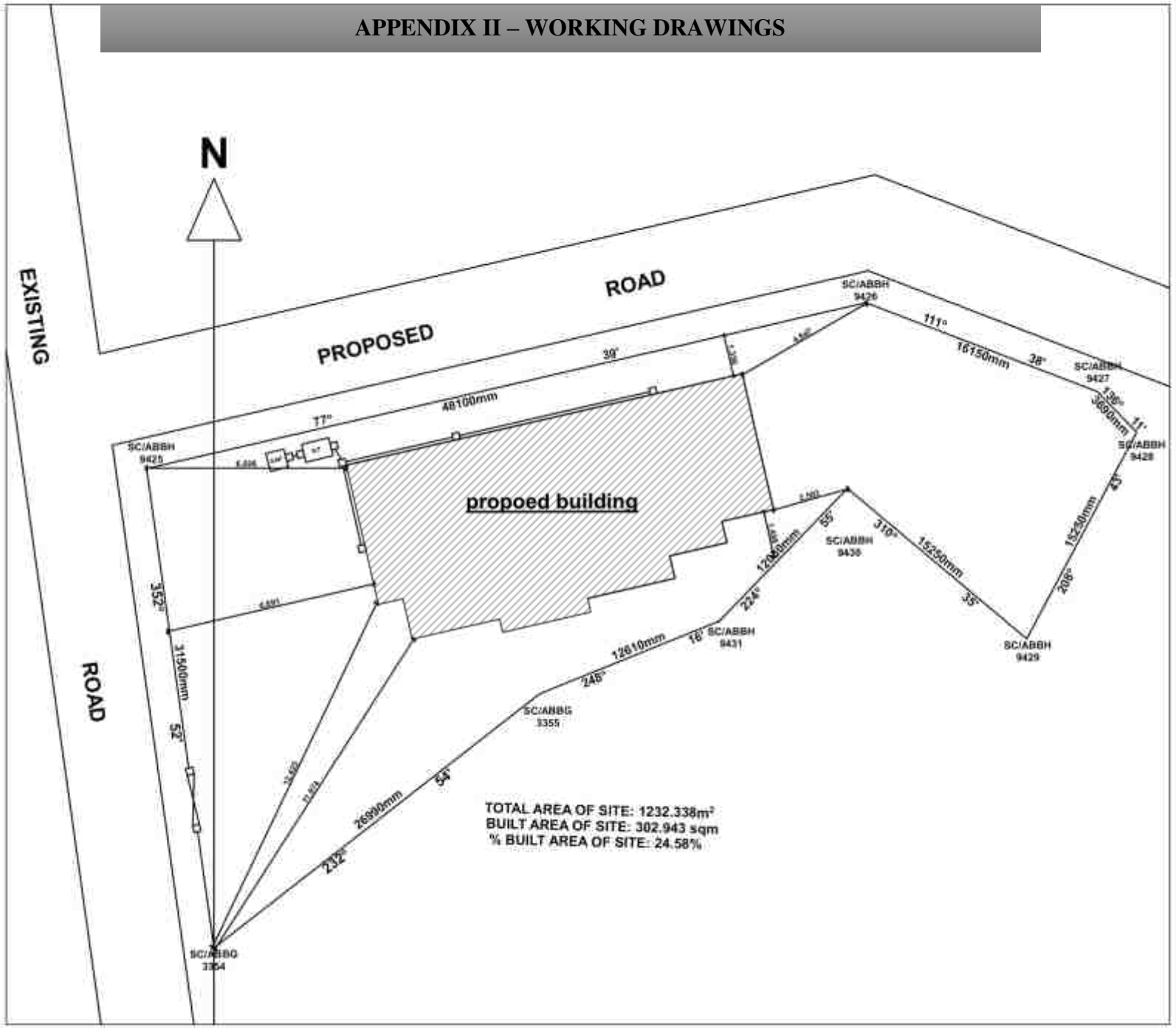
a.	Soak away pit size 2100 x 2100 x 2100mm deep internally of 150mm hollow sandcrete blockwork sides built honeycomb on 675 x 225mm concrete (1:3:6 - 20mm aggregate) foundation on 50mm thick concrete slab cover (1:2:4 - 20mm aggregate) reinforced with 10mm high tensile steel bars to BS 8110, CP 3 Chapter V Part 1, supported on 2250 x 150 x 100mm thick concrete beam reinforced with BRC No. 126; having 550mm wide space around soakaway (internally) filled with loose stones or rubbles minimium size 1500mm gauge and covered with old galvanized iron sheets. All to include excavations, earthworks, formworks and associated pipe works.	1	nr	1,539,066.03	1,539,066.03
1.35	**SITE WORKS**				
b.	Plain concrete (1:3:6 – 38mm aggregate) floor paving; finished fair and smooth.	5	m3	139,250.40	696,252.00
1.36	**FENCING**				
C.	Fencing comprising 230mm thick hollow sand-crete block work in cement and sand (1:6) mortar; filled solid with plain concrete (1:10 - all in aggregate) at substructure. All to include other concrete works and masonry, earthworks, finishing, security gadgets and electrical works; 3600mm overall height.	178	m	303,475.75	54,018,683.50
	Gate				
d.	38mm thick double leaf metal single swing gate fixed to concrete work and hinged to frames; with and including pedestrain door; overall size; 3600 x 2400mm high.	1	nr	1,457,426.25	1,457,426.25
	To Collection (EXTERNAL WORKS) - Page 8/2				**57,711,427.78**
	Collection				
	Page 8/1			-	4,307,185.05
	Page 8/2			-	57,711,427.78
	To Summary (EXTERNAL WORKS) Page 8			-	**62,018,612.83**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
8	**SERVICES**				
1.38	**MECHANICAL SERVICES**				
	Plumbing Installations				
	Sanitary Installations and Appliances				
	Supply, assemble and fix the following sanitary appliances and accessories including all joints to cold water supply and discharge pipes:				
a.	Low level Water Closet suite comprising pan with trap, plastic ring seat and cover, 9 litres cistern with plastic fittings and chromium plated flushing handle and Polyvinyl Chloride flush pipe with screwing coupling.	7	nr	87,116.71	609,816.97
b.	Wall mounted hand press type washdown ceramic urinals complete with necessary accessories; size; 457 x 324 x 32.4	0	nr	51,898.18	-
c.	Wash basin to BS 1188 complete with chromium plated hot and cold water mixer and taps, waste outlet, chain and plastic stay plug; 32mm bottle trap, with and including fixing to mild steel cantilever brackets screwed to block or concrete works including soap dispenser; size; 405 x 300mm	7	nr	35,683.36	249,783.52
d.	Bath tub to BS 1189 with 2nr chromium plated pillar taps, waste fittings, chain, stay and plug fixed in accordance to manufacturer's instruction	0	nr	74,995.72	-
e.	Wall mounted toilet roll holder with chromium plated frame and plastic roller.	7	nr	6,923.35	48,463.45
f.	600 x 450 x 6mm thick bevelled edge mirror drilled four times and fixed with chromium plated dome headed screws to block/concrete works	7	nr	7,235.02	50,645.14
g.	75 x 75 x 6mm thick PVC floor drain trap complete with necessary accessories embedded in ceramic tiled floor (measured separately).	9	nr	2,077.01	18,693.09
h.	107mm Inlet x 110mm x outlet 40mm offset flexible water closet connector	7	nr	7,327.01	51,289.07
	To Collection (SERVICES) Page 8/1				**1,028,691.24**

a.	Stainless steel kitchen drainer; double bowl, double drainer; size; 1067 x 467 and rectangular bowl 457 x 343 x 178 deep; with waste fittings, chain, stay and plug fixed in accordance to manufacturer's instruction.	2	nr	60,197.38	120,394.76
	Pipe Work				
b.	**Allow** Provisional Sum to be expended at the instruction of the Project Coordinator for duct and pipe work including supply and discharge network and connection to drainage.		sum		764,400.00
1.39	**ELECTRICAL SERVICES** **Electrical Installations**				
c.	**Allow** Prime Cost Sum to be expended at the instruction of the Project Coordinator for electrical installations comprising all supply equipment and control units; lighting and power points and fittings complete in conduit wiring system executed in compliance with the regulations of Institution of Electrical Engineers and Electricity Distribution Company		Sum		11,602,500.00
d.	Add Main Contractor's attendance and profit (5%)		Sum		580,125.00
	To Collection (SERVICES) Page 9/2				**13,067,419.76**
	Collection Page 9/1 Page 9/2				 1,028,691.24 13,067,419.76
	To Summary (SERVICES) Page 9				**14,096,111.00**

S/N	Description	Qty	Unit	Rate (Naira)	Amount (Naira)
A.	Preliminaries				20,116,110.50
B.	Substructure				33,021,609.36
C.	Ground Floor (Insitu Concrete Works and Masonry)				43,966,762.12
D.	First Floor (Insitu Concrete Works and Masonry)				18,744,234.45
E.	Roof				23,313,511.13
F.	Fenestration				26,512,844.76
G.	Finishings				28,586,683.56
H.	Decoration				19,249,428.22
J.	External Works				62,018,612.83
K.	Services				14,096,111.00
	Sub - Total				**289,625,907.93**
	Estimated Cost				**289,625,907.93**
	289,625,907.93				

APPENDIX II – WORKING DRAWINGS



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Sheet Title:
SITE PLAN

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Consultant	LANDMARK PROJECTS
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MARCH 2025

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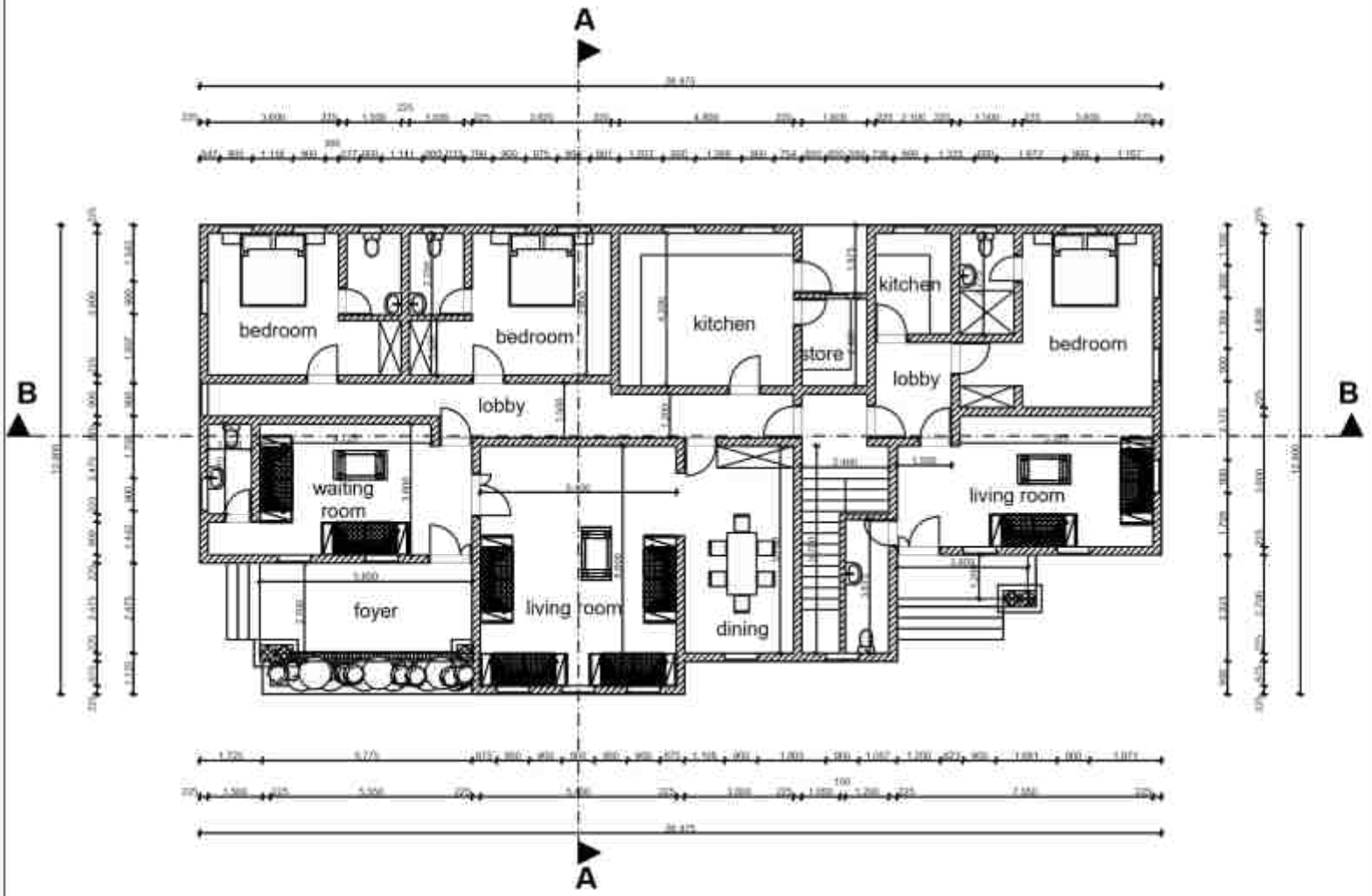

ground floor plan

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GROUND FLOOR PLAN

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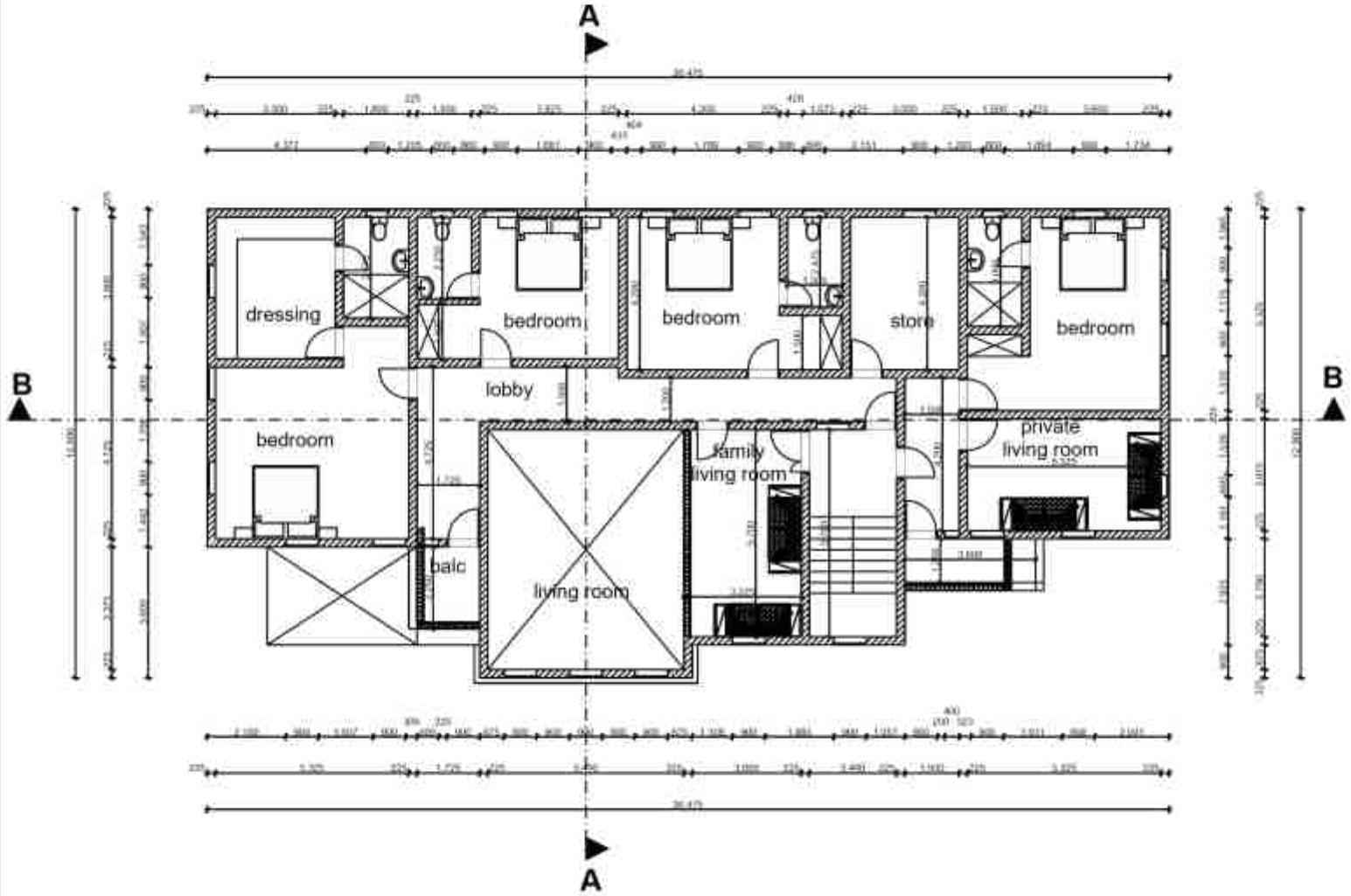

first floor plan

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FIRST FLOOR PLAN

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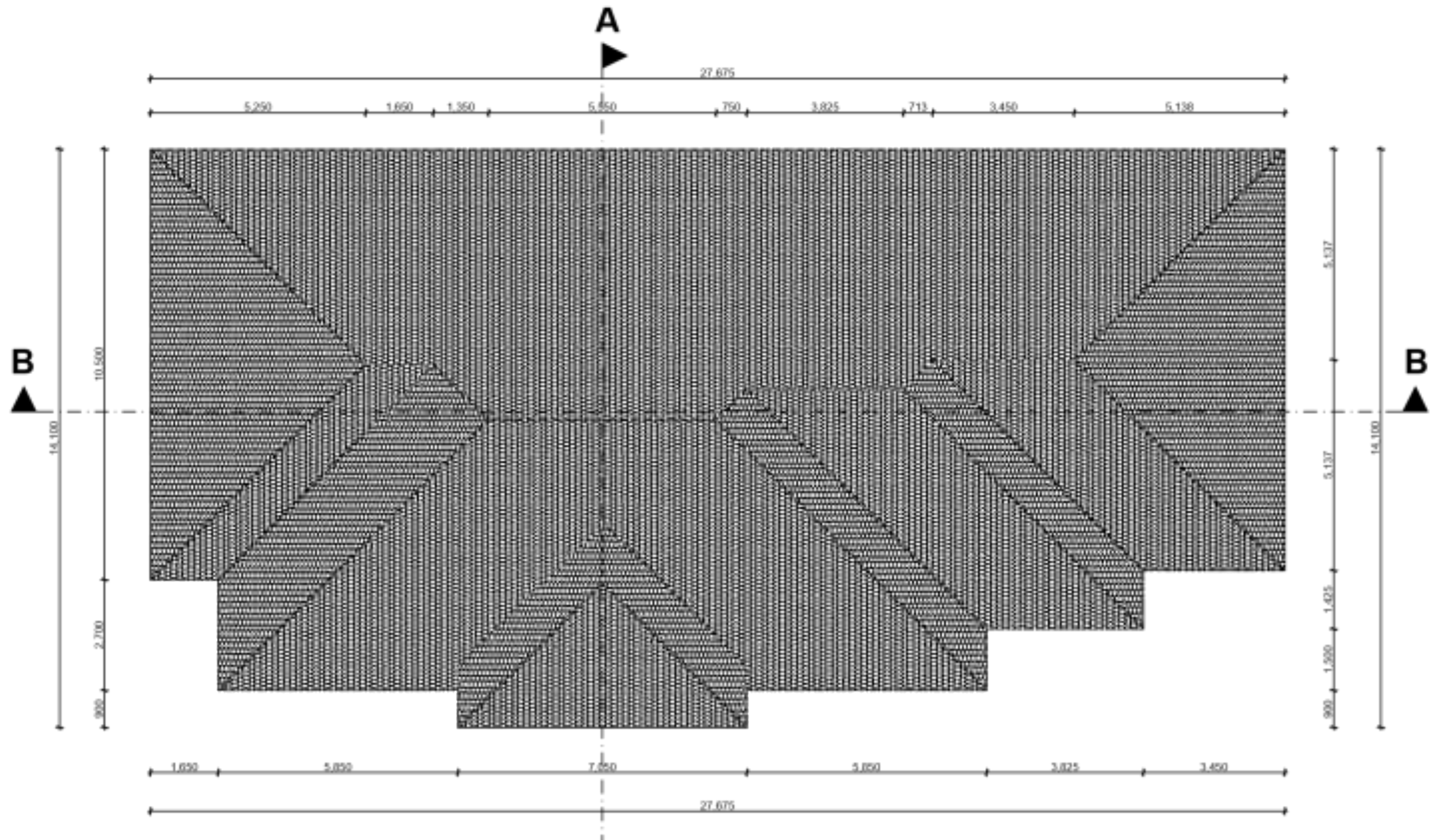

roof plan

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ROOF PLAN

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section A - A

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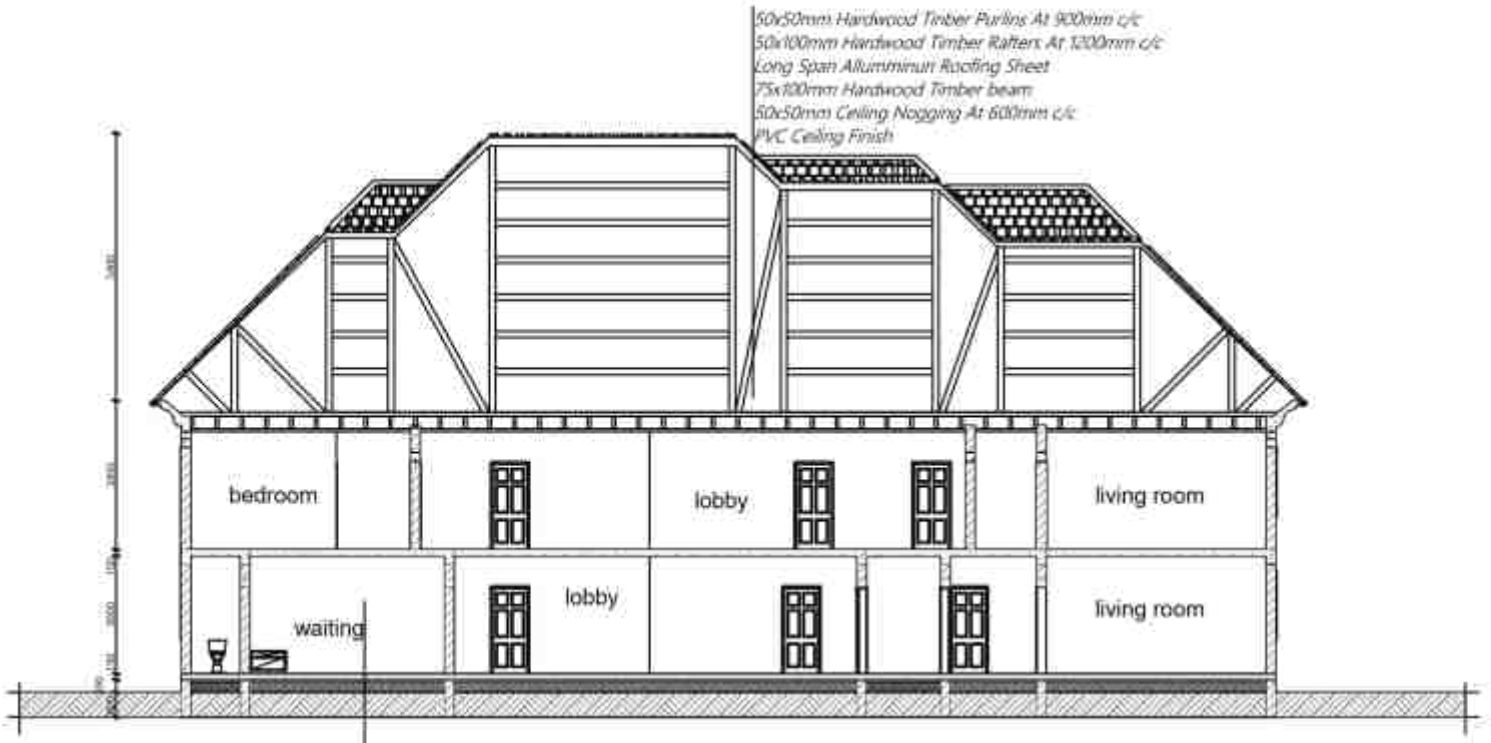

section B - B

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SECTION

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MARCH 2025

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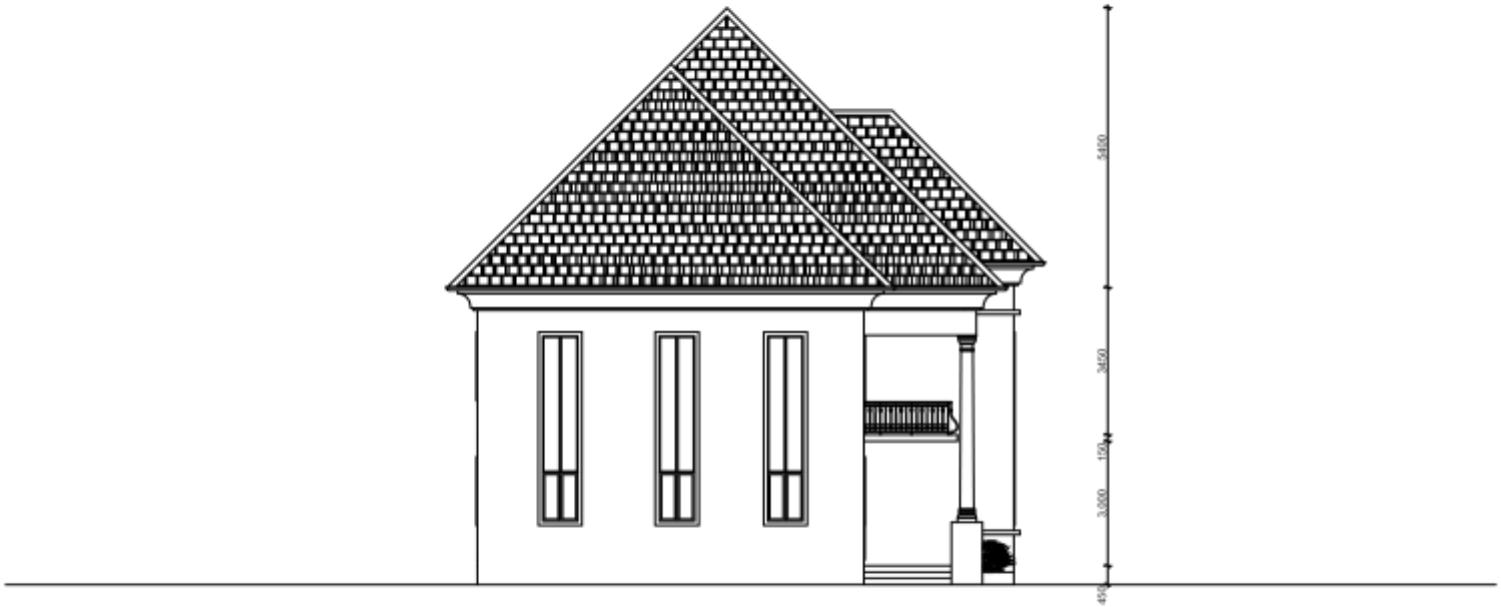

approach elevation

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Project:
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Sheet Title:
ELEVATION

Designed/CAD:	BEN IWUAGWU
Checked:	BEN IWUAGWU
Scale:	1:100
Consultant	LANDMARK PROJECTS *PROCUREMENT, *CONSTRUCTION, *CONSULTANCY, *REAL ESTATE.*
Contact:	NO 5 MARGARET BEN-IWUAGWU AVENUE OFF SECRETARIAT ROAD, UMUAHIA, ABIA STATE NIGERIA. Phone: +2348038437477 Email: landmarkprojects@yahoo.com

REV. NO	DATES	INITIALS	REVISION DETAILS

DATE :
MARCH 2025

Sheet No:
7

right side elevation

: All Dimension are in mm
: The Architect is not responsible for eventual complaints on the Job he did not supervise .
: Duplication for use of this piece other than that for only which it was certified without prior approval from the architect is a crime & attracts penalty as recommended by Law.

Client:
GRACE AGU ONWUKA

Project:

Proposed

RESIDENTIAL DEVELOPMENT
@
OKWUTA LAND, BEHIND SCHOOL OF DIVINITY,
OLD UMUAHIA, UMUAHIA SOUTH LGA.
ABIA STATE

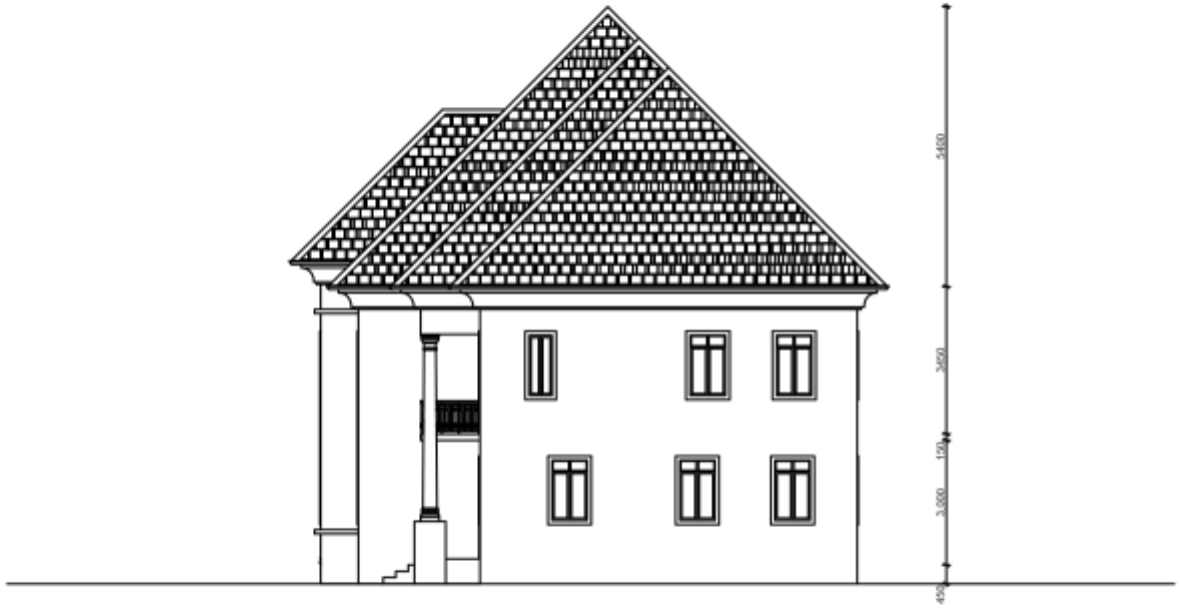
Sheet Title:
ELEVATION

Designed/CAD:	BEN IWUAGWU
Checked :	BEN IWUAGWU
Scale :	1:100
Consultant	LANDMARK PROJECTS *PROCUREMENT, *CONSTRUCTION, *CONSULTANCY, *REAL ESTATE.*
Contact:	NO 5 MARGARET BEN IWUAGWU AVENUE OFF SECRETARIAT ROAD, EMUAHIA, ABIA STATE NIGERIA. Phone: +2348036437477 Email: landmarkprojectsng@yahoo.com

NO	DATE	DETAILS	REVISION DETAILS

DATE :
MARCH 2025

Sheet No:
8



rear elevation

: All Dimension are in mm
: The Architect is not responsible for eventual complaints on the Job he did not supervise .
: Duplication for use of this piece other than that for only which it was certified without prior approval from the architect is a crime & attracts penalty as recommended by Law.

Client:
GRACE AGU ONWUKA

Project:
Proposed
RESIDENTIAL DEVELOPMENT
@
OKWUTA LAND, BEHIND SCHOOL OF DIVINITY, OLD UMUAHIA, UMUAHIA SOUTH LGA.
ABIA STATE

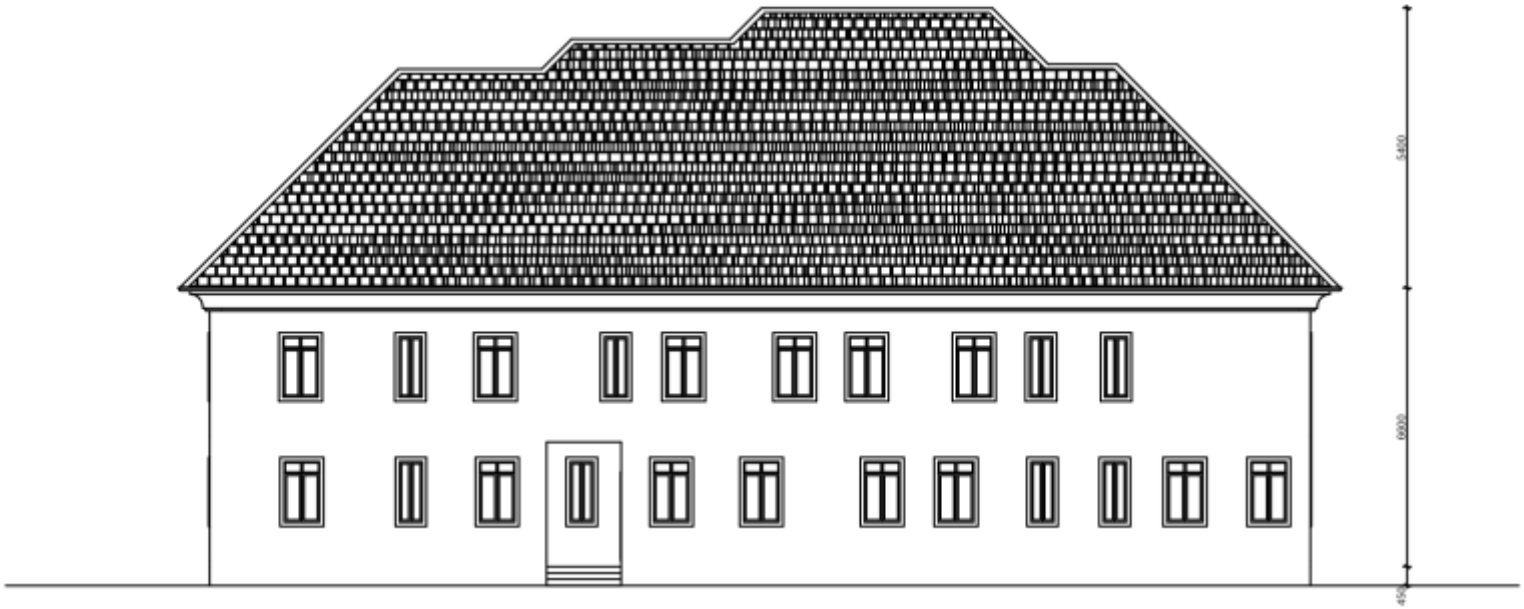
Sheet Title:
ELEVATION

Designed/CAD:	BEN IWUAGWU
Checked:	BEN IWUAGWU
Scale:	1:100
Consultant	LANDMARK PROJECTS *PROCUREMENT, *CONSTRUCTION, *CONSULTANCY, *REAL ESTATE.*
Contact:	NO 5 IWUAGWU BEN IWUAGWU AVENUE OFF SECRETARIAT ROAD, UMUAHIA, ABIA STATE NIGERIA. Phone: +2348035457477 Email: landmarkprojectsng@yahoo.com

NO	DATE	DETAILS	REVISION DETAILS

DATE :
MARCH 2025

Sheet No:
9



left side elevation

: All Dimension are in mm
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Client:
GRACE AGU ONWUKA

Project:
Proposed
RESIDENTIAL DEVELOPMENT
@
OKWUTA LAND, BEHIND SCHOOL OF DIVINITY, OLD UMUAHIA, UMUAHIA SOUTH LGA.
ABIA STATE

Sheet Title:
ELEVATION

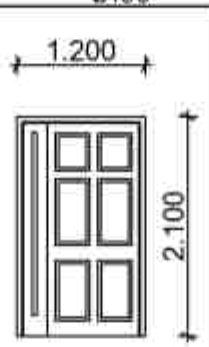
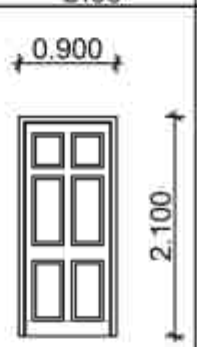
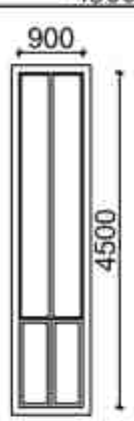
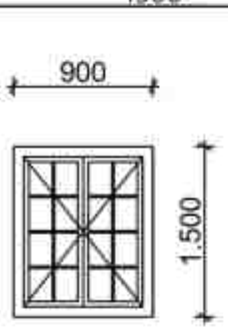
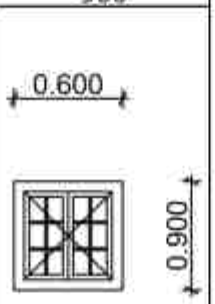
Designed/CAD:	BEN IWUAGWU
Checked:	BEN IWUAGWU
Scale:	1:100
Consultant	LANDMARK PROJECTS *PROCUREMENT, *CONSTRUCTION, *CONSULTANCY, *REAL ESTATE.*
Contact:	NO 5 MARGARET BEN IWUAGWU AVENUE OFF SECRETARIAT ROAD, UMUAHIA, ABIA STATE NIGERIA. Phone: +2348035037477 Email: landmarkprojectsng@yahoo.com

REV	QUI	DATES	DETAILS	REVISION DETAILS

DATE :
MARCH 2025

Sheet No:
10

DOORS/WINDOWS SCHEDULE

TYPE	D1	D2	W1	W2	W3
Quantity	4	33	7	31	7
W x H Size	1200 X 2100	900 X 2100	900 X 4500	900 X 1500	600 X 900
Door head height	2100	2100	4500	1500	900
					
DESCRIPTION	DOUBL LEAF WOODEN PANEL DOOR	SINGLE LEAF WOODEN PANEL DOOR	ALUMINUM SLIDING WINDOW	ALUMINUM SLIDING WINDOW	ALUMINUM SLIDING WINDOW

All Dimension are in mm

The Architect is not responsible for eventual complaints on the site he did not supervise.

Duplication for use of this plans other than that for only which it was certified without prior approval from the architect is a crime & attracts penalty as recommended by Law.

Client:
GRACE AGU ONWUKA

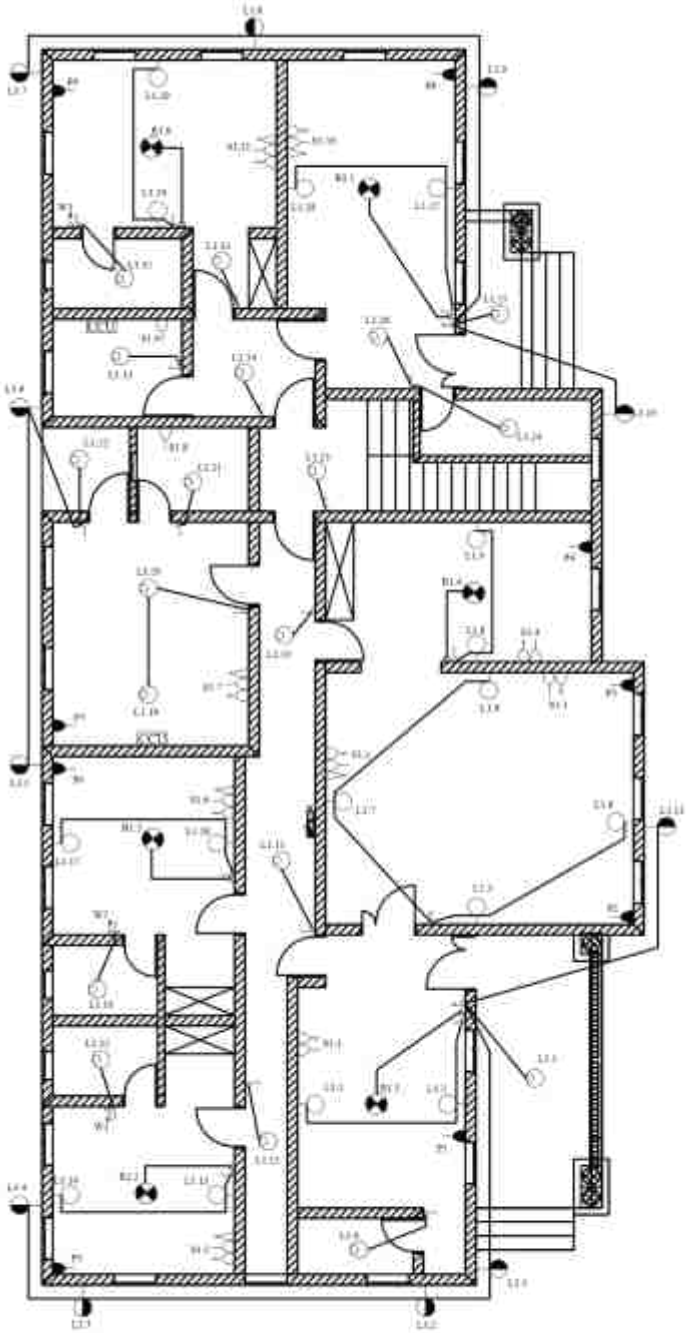
Project:
Proposed
RESIDENTIAL DEVELOPMENT
@
OKWUTA LAND, BEHIND SCHOOL OF DIVINITY, OLD UMUAHIA, UMUAHIA SOUTH LGA.
ABIA STATE

Sheet Title:
DOORS WINDOWS SCHEDULE

Designed/CAD:	BEN IWUAGWU
Checked:	BEN IWUAGWU
Scale:	1:100
Consultant:	LANDMARK PROJECTS *PROCUREMENT *CONSTRUCTION *CONSULTANCY *REAL ESTATE *
Contact:	

DATE :
MARCH 2025

Sheet No:
11



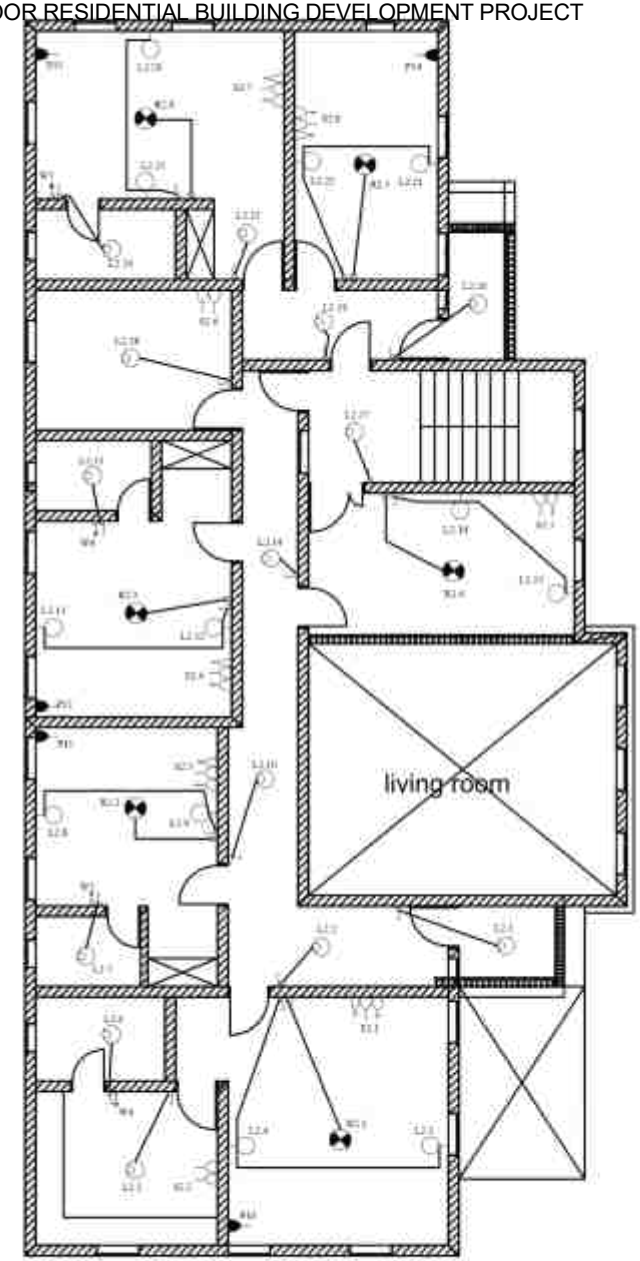
GROUND FLOOR ELECTRICAL INSTALLATIONS

NOTES:

PROPOSED DEVELOPMENT

ELECTRICAL DRAWING

	MARCH 2025		



FIRST FLOOR ELECTRICAL INSTALLATIONS

NOTES

PROPOSED DEVELOPMENT

ELECTRICAL DRAWING

NOTES:

client:

job title:

PROPOSED DEVELOPMENT

site:

SERVICE	LIGHTING				FAN	13A					15A A/C														W/H					CCU	SPARE
Load in watts	1500	1560	1100	1320	1320	3300	2400	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1200	1200	1200	1200	1200	1200	1200	3000	3000	
Cable size in mm²	3x1 c 1. 5 mm²					3x 1 c 2.5 mm²					3x1c 4m m²															3x1c4mm²				3 x1c 6 mm²	
MCB Rating in Amp	10	10	10	10	10	30	30	20	20	20	20	20	20	20	20	20	20	20	20	20	20	30	30	30	30	30	30	30	30	30	
Number of points	25	26	11	6	6	11	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Control terminal	L1	L2	L3	R1	R2	S1	S2	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	W1	W2	W3	W4	W5	W6	W7	C1	C2	
Out going numbers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33

10 WAYS 100AMP DISTRI BUTIO

N BOARD (DB)

16 mm² copper p.v.c cable

16 mm² p.v.c copper cable to earth

electrode covered by inspector

P/S upplˈy

Supply Cut-out fuse

drawing title:

ELECTRICAL DRAWING

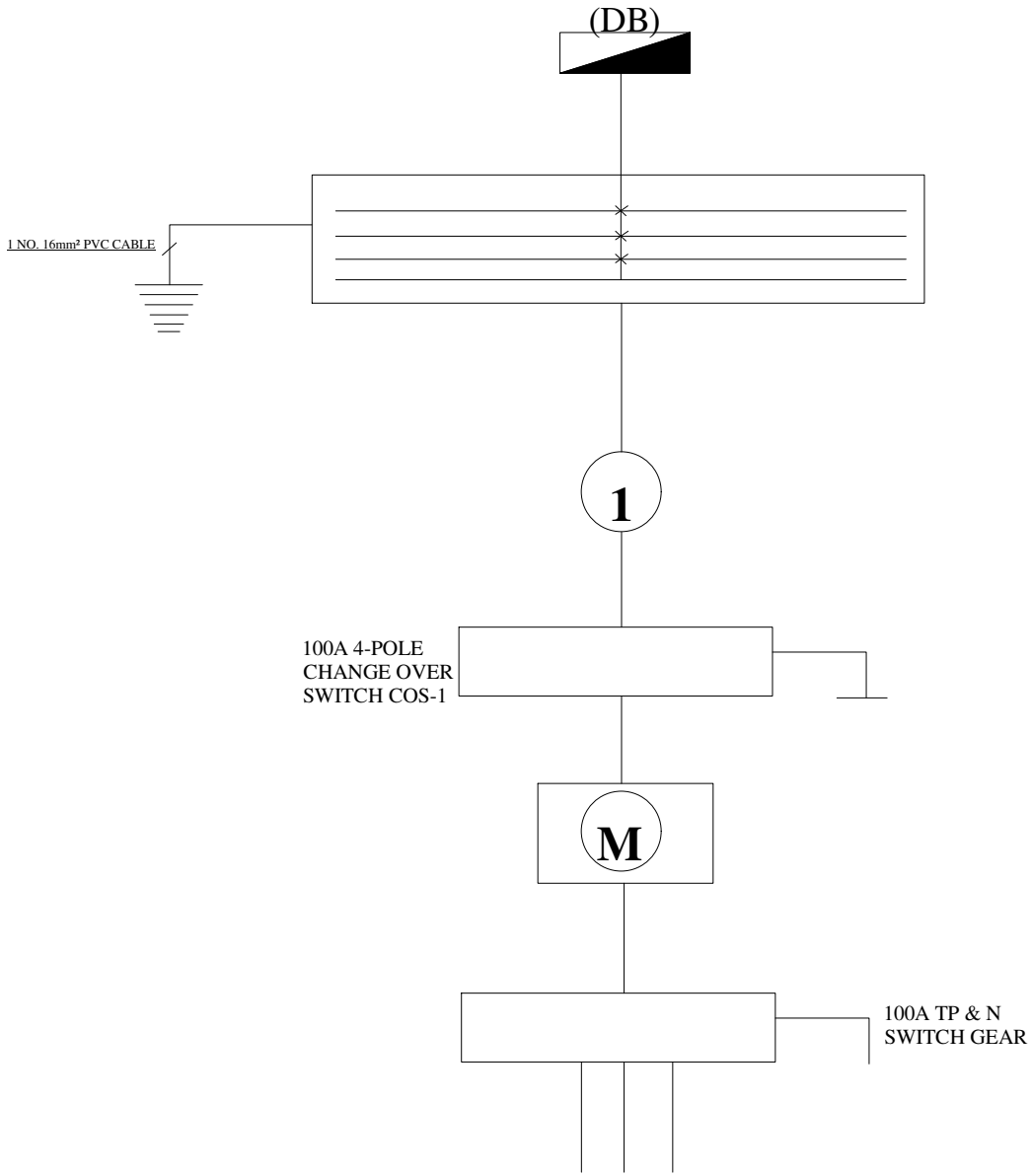
Firm

scale: n.t.s

date: MARCH 2025

drawn: UKA

checked:



3-PHASE LINE FROM SERVICE LINE

POWER SCHEDULE

NOTES:

client:

job title:

PROPOSED DEVELOPMENT

site:

drawing title:

ELECTRICAL DRAWING

Firm

scale:	date:	drawn:	checked:
n.t.s	MARCH 2025	UKA	

LEGEND

	200W DOUBLE FLUORESCENCE
	DECORATIVE S.WALL BRACKET
	CEILING MOUNTED 3. LUMINAIRE
	30 WALL FITTING LUMINAIRE
	CEILING FAN
R	CEILING FAN REGULATOR
	5A,1-GANG 1-WAY SWITCH
	5A, 2-GANG 1-WAY SWITCH
	13A SWITCH SOCKET OUTLET
	15A A/C SWITCH SOCKET OUTLET
CCU	COOKER CONTROL UNIT
	FLUSH TEL. EXT. CORD
	DISTRIBUTION BOARD

	SWITCH GEAR
	EARTHING
	WATER HEATER SWITCH
	DIPLEX TV FM SOCKET
	EMERGENCY LIGHT
	SECURITY WATER TIGHT

NOTES

client

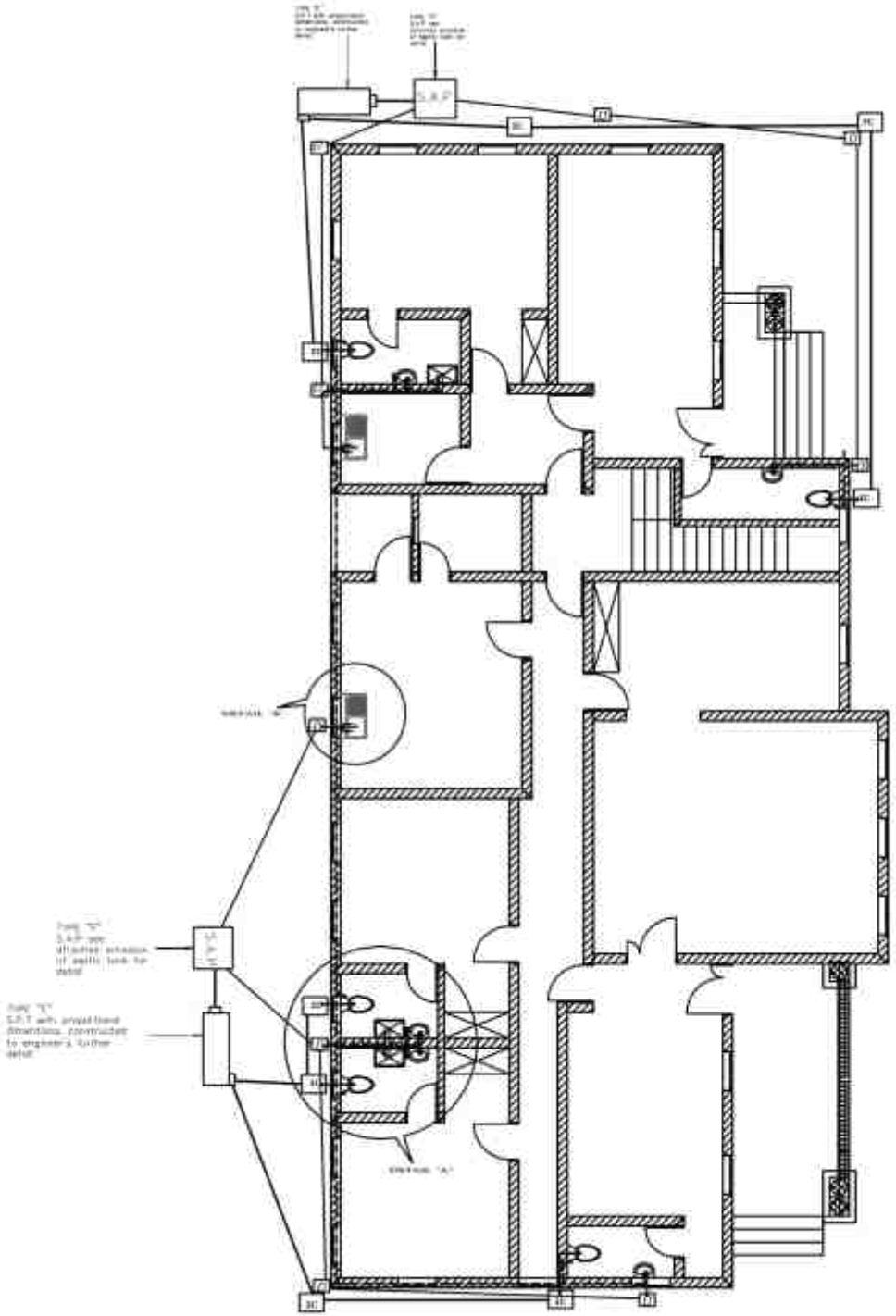
job title
PROPOSED DEVELOPMENT

site

drawing title
ELECTRICAL DRAWING

firm

scale	date	drawn	checked
N.T.S	MARCH 2025	GKA	



GROUND FLOOR SOIL AND WASTE WATER LAYOUT

NOTES:

client:

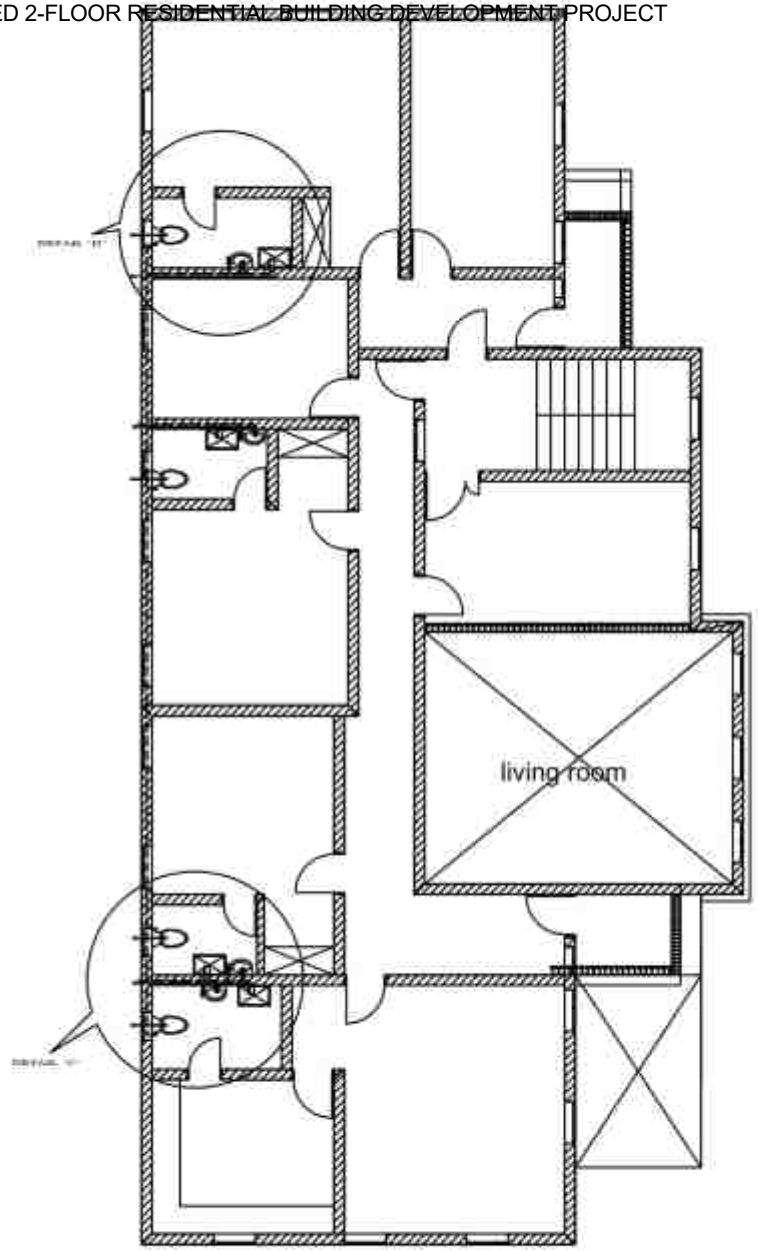
job title:
PROPOSED DEVELOPMENT

site:

drawing title:
MECHANICAL DRAWING

Firm:

scale:	date:	drawn:	checked:
N.T.S	MARCH 2025	GKA	



FIRST FLOOR SOIL AND WASTE WATER LAYOUT

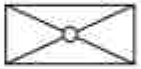
NOTES

PROPOSED DEVELOPMENT

MECHANICAL DRAWING

MARCH 2025

LEGEND AND NOTES

----------	25mm diameter cold water pvc presure pipe
————	50mm diameter waste water pvc pipe
————	15mm diameter hot water galvanised iron pipe
————	100mm diameter sanitary pvc pipe
	cold waterpipe with isolating valve suitably located
E.W.H	Electrical Water Heater
W.H.B	Wash Hand Basin
W/C	Water Closet
	50mm dia. F.D.O - floor drainage outlet
I.C	Inspection Chamber
	Shower Tray

NOTE

1. ALL COLD WATER PIPING SHALL BE CARIED OUT BY USING HIGH PRESURE UPVC PIPES TO BS EN 1452.

2. ALL WASTE, SOIL AND VENT PIPING SHALL BE CARRIED OUT USING UPVC PIPES TO BS 4514 (BS EN 1329)

3. ALL HOT WATER PIPING SHALL BE CARRIED OUT USING CORPER PIPES TO BS EN 1057

4. ALL SANITARY APPLIANCES SHALL BE SUPPLIED COMPLETE AND FITTED WITH APPROVED P-TRAPS.

5. ALL SINATRY APPLIANCES SHALL BE ISOLATED WITH GATE VALVE OF THE SAME DIAMETER AS THE PIPE.

6. FINAL COLD & HOT WATER CONNECTION TO SANITARY APPLIANCES SHALL BE CARRIED OUT USING FLEXIBLE CONNECTION.

7. ALL W.C, WHB, BELFAST SINK, SOAP DISPENCING, TOILET ROLL HOLDER, BATHS, SHOWERS, ETC, SHALL BE AS MANUFACTURED BY TWYFORD OR APPROVED QUALITY.

8. ALL WATER HEATER SHALL BE ARISTON WATER HEATER OR APPROVED QUALITY.

9. SLOPE OF WASTE AND SOIL PIPING WITHIN THE BUILDING SHALL BE 2% WHILE OUTSIDE BUILDING SHALL BE 1%

10. TOILET ROLL HOLDER SHALL BE FITTED BESIDE EACH W.C

11. POUSHED MIRROR (550mmx450mm & ABOVE) SHALL BE FITTED ON THE WALL ABOVE EACH WHB.

12. ALL COLD AND HOT WATER LINES RUNNING HORIZONTALLY SHALL BE AT 600mm FROM THE FINISHED FLOOR LEVEL.

NOTES

client:

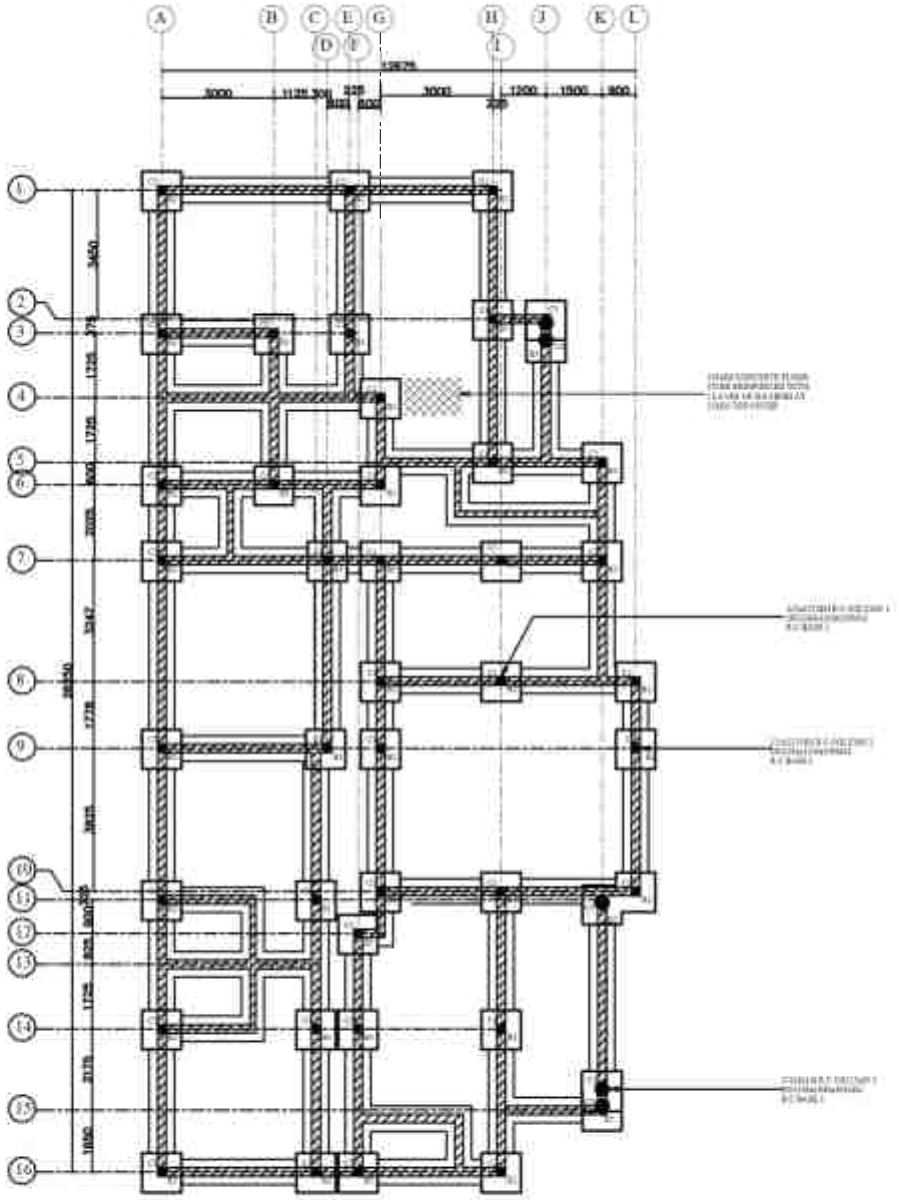
job title:
PROPOSED DEVELOPMENT

site:

drawing title:
MECHANICAL DRAWING

firm:

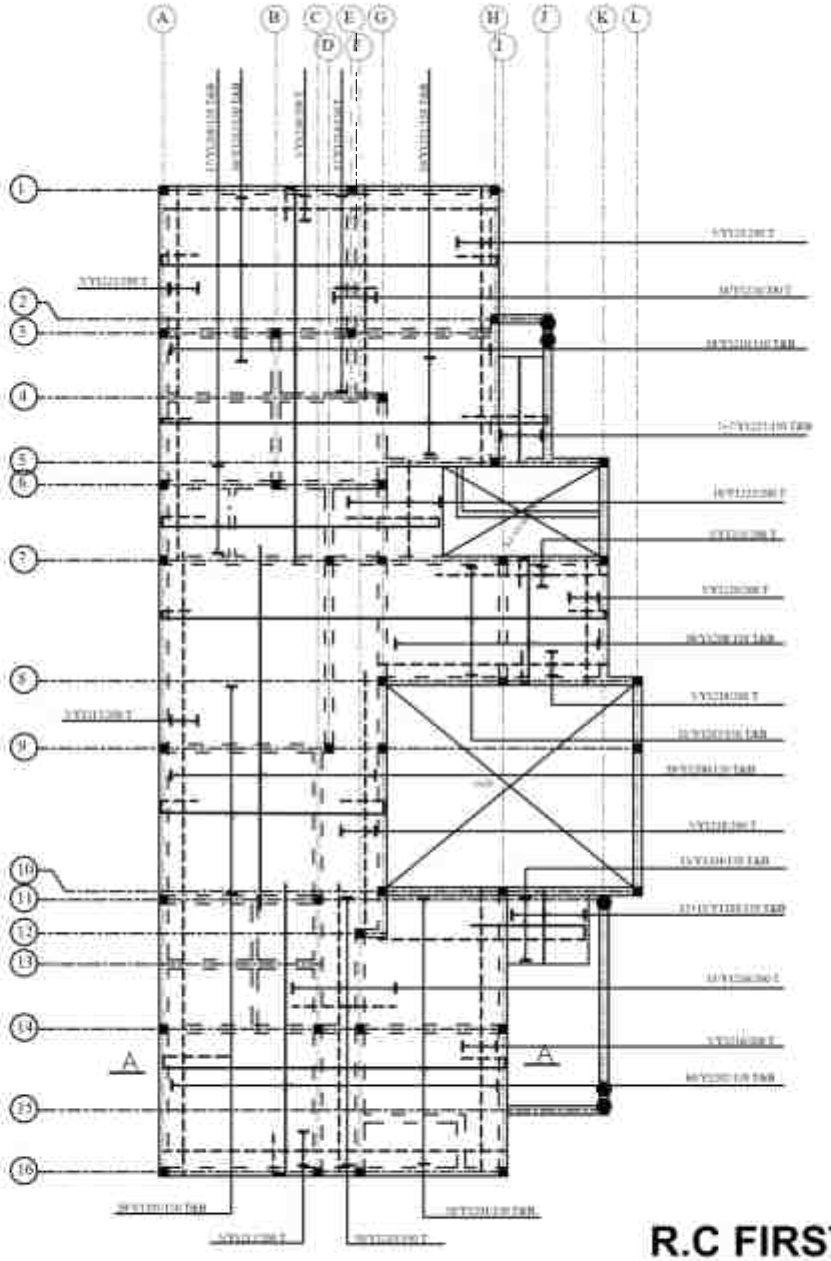
scale:	date:	drawn:	checked:
N.T.S	MARCH 2025	IDA	



FOUNDATION SETTINGOUT

SERETZ
Architects and Engineers
Email; serezdesigns@gmail.com

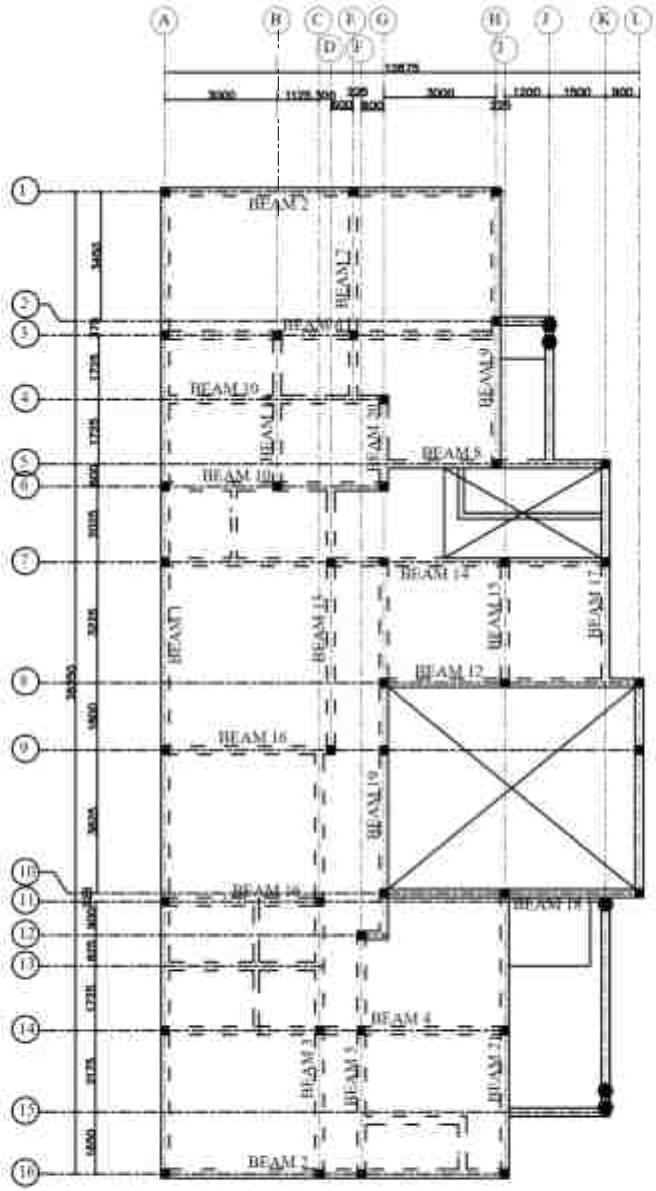
Client	
Project Location:	
Project Title:	PROPOSED RESIDENTIAL BUILDING
Drawing Title:	STRUCTURAL DRAWING
Design:	SEREZ
Draw:	UKACHUKWU
Checked:	ENGR. NWACHUKWU
Scale:	N.T.S
Date:	MARCH 2025
Seal:	



R.C FIRST FLOOR SLAB

SERETZ
Architects and Engineers
Email; serezdesigns@gmail.com

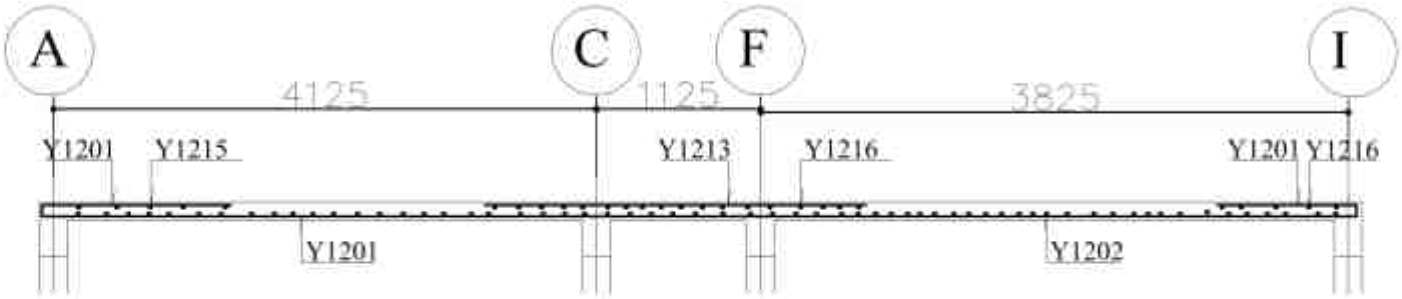
Client	
Project Location:	
Project Title:	PROPOSED RESIDENTIAL BUILDING
Drawing Title:	STRUCTURAL DRAWING
Design:	SEREZ
Draw:	UKACHUKWU
Checked:	ENGR. NWACHUKWU
Scale:	N.T.S
Date:	MARCH 2025
Seal:	

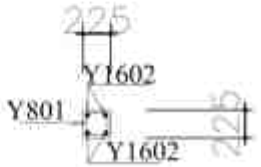


R.C BEAM LAYOUT

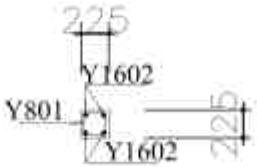
SERETZ
Architects and Engineers
Email; serezdesigns@gmail.com

Client	
Project Location:	
Project Title:	PROPOSED RESIDENTIAL BUILDING
Drawing Title:	STRUCTURAL DRAWING
Design:	SEREZ
Draw:	UKACHUKWU
Checked:	ENGR. NWACHUKWU
Scale:	N.T.S
Date:	MARCH 2025
Seal:	





SEC. 4 - 4



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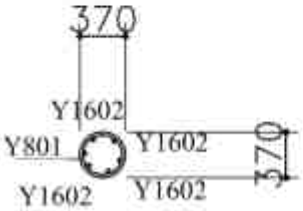

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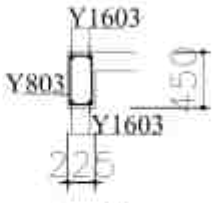
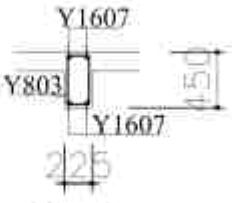


B - B

C - C



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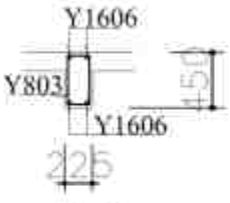

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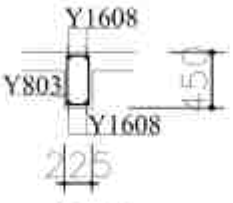


F - F

Firm/Address:

SERETZ
Architects and Engineers
Email; serezdesigns@gmail.com

Client:

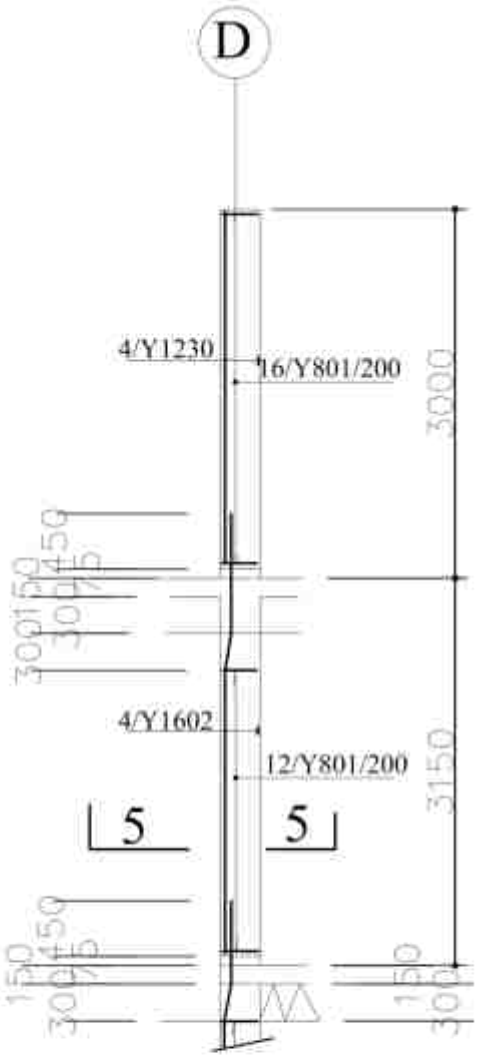
Project Location:

Project Title:
PROPOSED RESIDENTIAL BUILDING

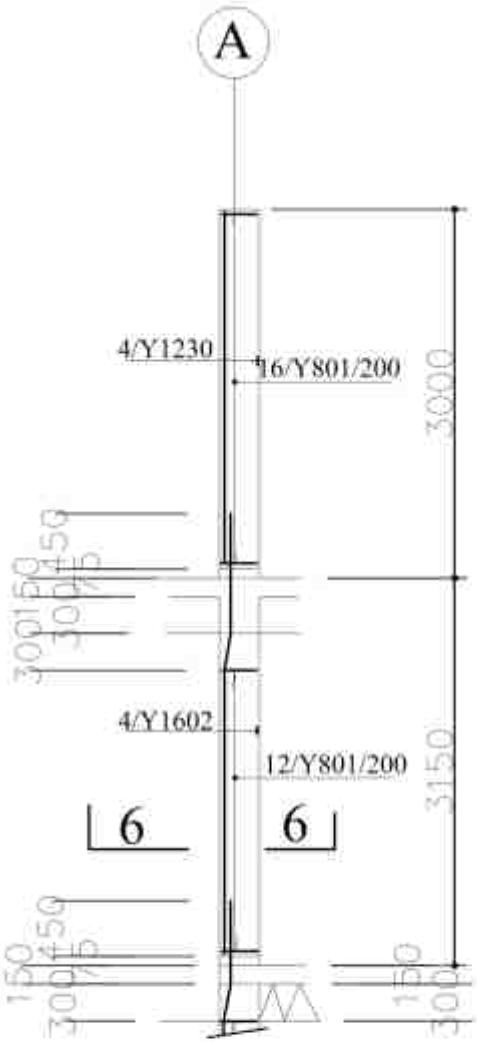
Drawing Title:
STRUCTURAL DRAWING

Design:	SERETZ
Draw:	UKACHUKWU
Checked:	ENGR. NWACHUKWU
Scale:	N.T.S
Date:	MARCH 2023

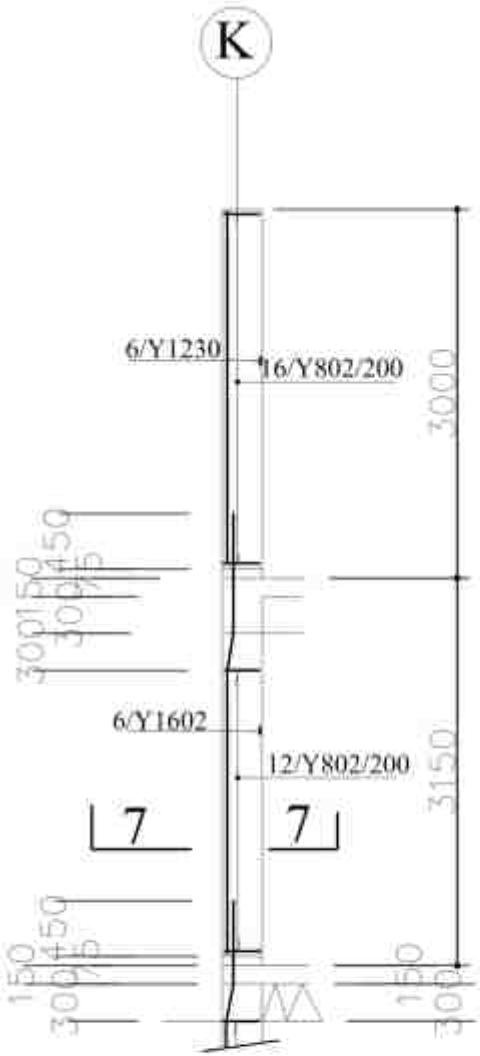
Seal:



R.C COLUMN 1

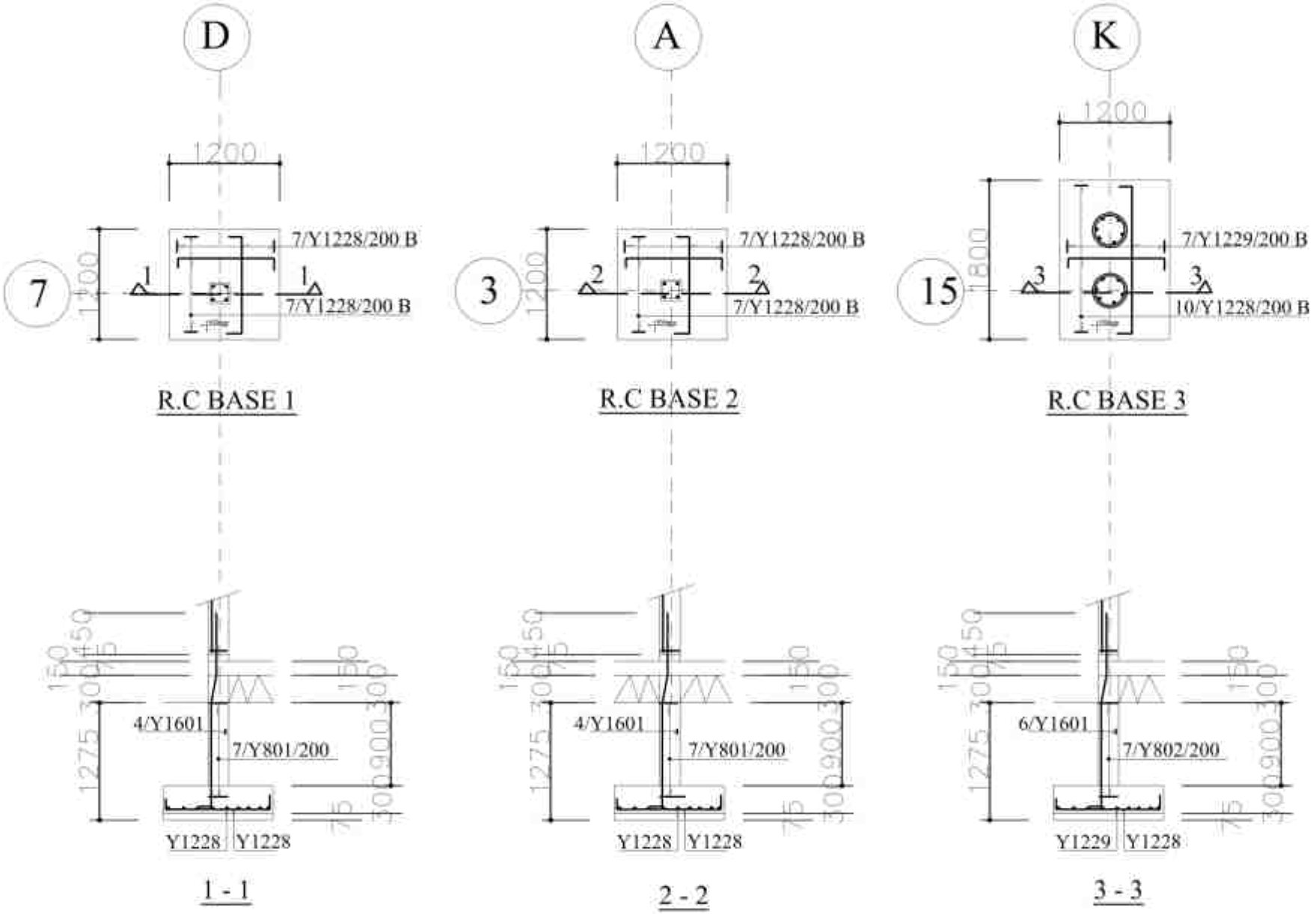


R.C COLUMN 2

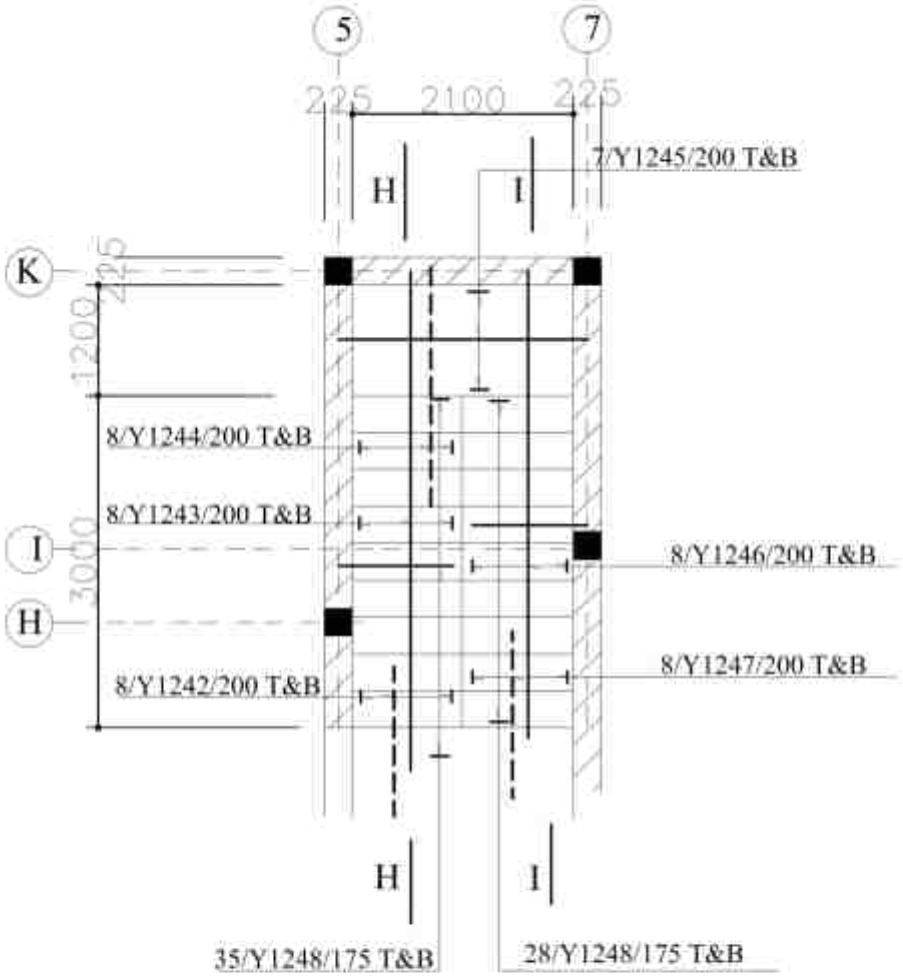


R.C COLUMN 3

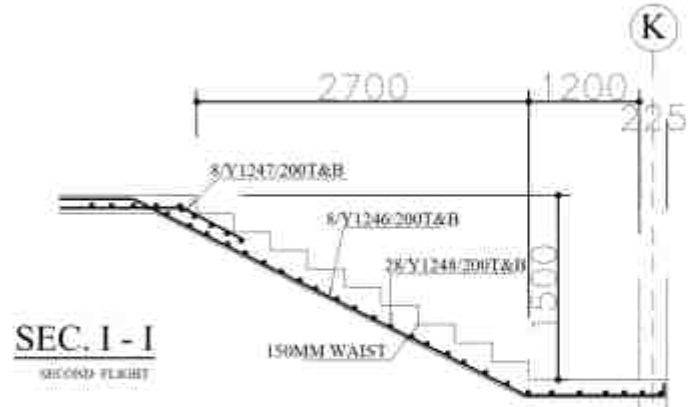
Firm/Address: SERETZ Architects and Engineers Email; serezdesigns@gmail.com	Client:	Project Title: PROPOSED RESIDENTIAL BUILDING	Drawing Title: STRUCTURAL DRAWING	Design: SERETZ	Seal:
	Project Location:			Draw: UKACHUKWU	
				Checked: ENGR. NWACHUKWU	
				Scale: N.T.S	
				Date: MARCH 2023	



Firm/Address: SERETZ Architects and Engineers Email; serezdesigns@gmail.com	Client:	Project Title: PROPOSED RESIDENTIAL BUILDING	Drawing Title: STRUCTURAL DRAWING	Design: SERETZ	Seal:
	Project Location:			Draw: UKACHUKWU	
				Checked: ENGR. NWACHUKWU	
				Scale: N.T.S	
				Date: MARCH 2023	

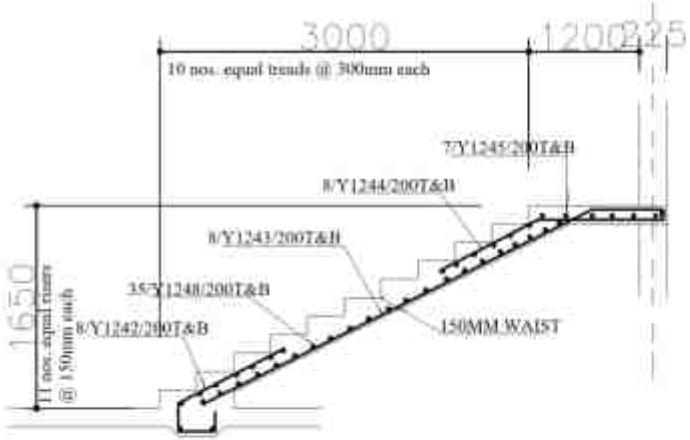


PLAN ON R.C STAIRCASE



SEC. I - I

SECOND FLIGHT



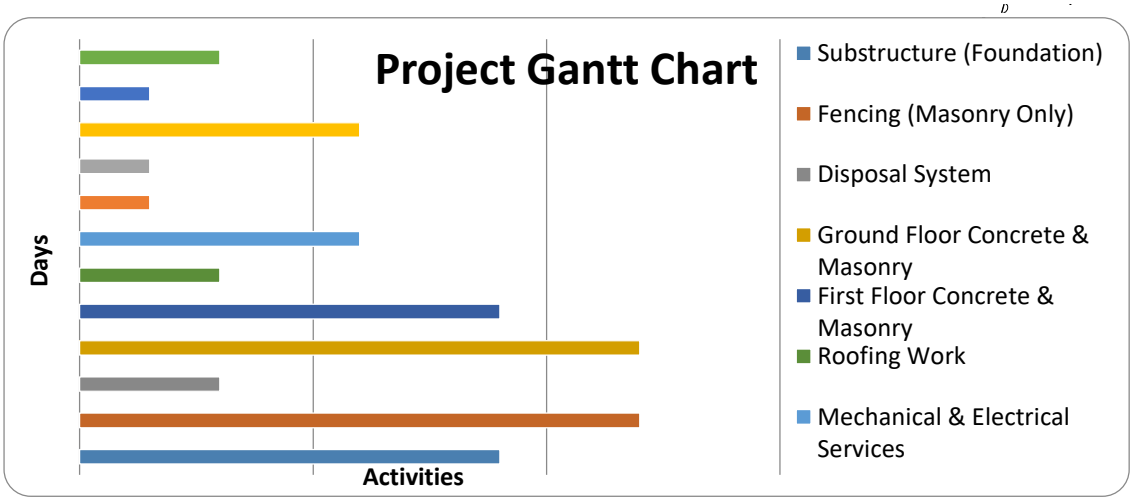
SEC. H - H

FIRST FLIGHT

Firm/Address: SERETZ Architects and Engineers Email; serezdesigns@gmail.com	Client:	Project Title: PROPOSED RESIDENTIAL BUILDING	Drawing Title: STRUCTURAL DRAWING	Design: SERETZ Draw: UKACHUKWU Checked: ENGR. NWACHUKWU Scale: N.T.S Date: MARCH 2023	Seal:
	Project Location:				

APPENDIX III – GANTT CHART FOR THE WORK PROGRAMME

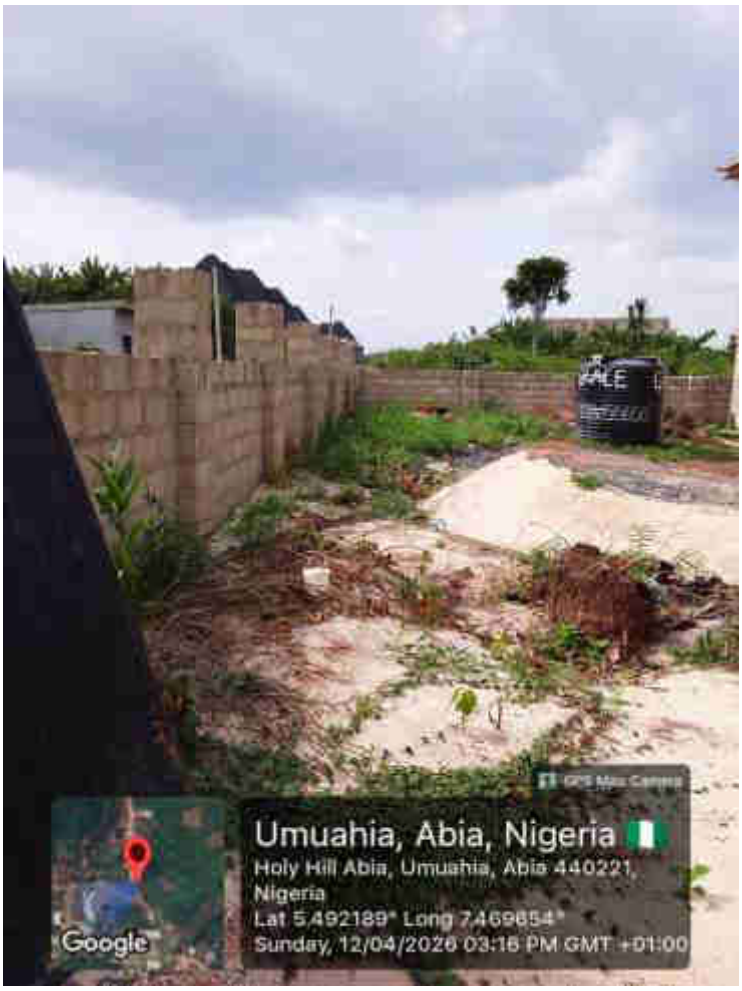
S/NO	Activity	Start Date	Duration (Days)
1.	Substructure (Foundation)	01/04/2025	90
2.	Fencing (Masonry Only)	01/04/2025	120
3.	Disposal System	01/05/2025	30
4.	Ground Floor Concrete & Masonry	01/07/2025	120
5.	First Floor Concrete & Masonry	01/11/2025	90
6.	Roofing Work	01/02/2026	30
7.	Mechanical & Electrical Services	01/03/2026	60
8.	External Floor Paving	01/04/2026	15
9.	Fence Gate + Columns	01/04/2026	15
10.	General Finishing	01/03/2026	60
11.	Decoration	01/05/2026	15
12.	Contingency Allowance	01/06/2026	30

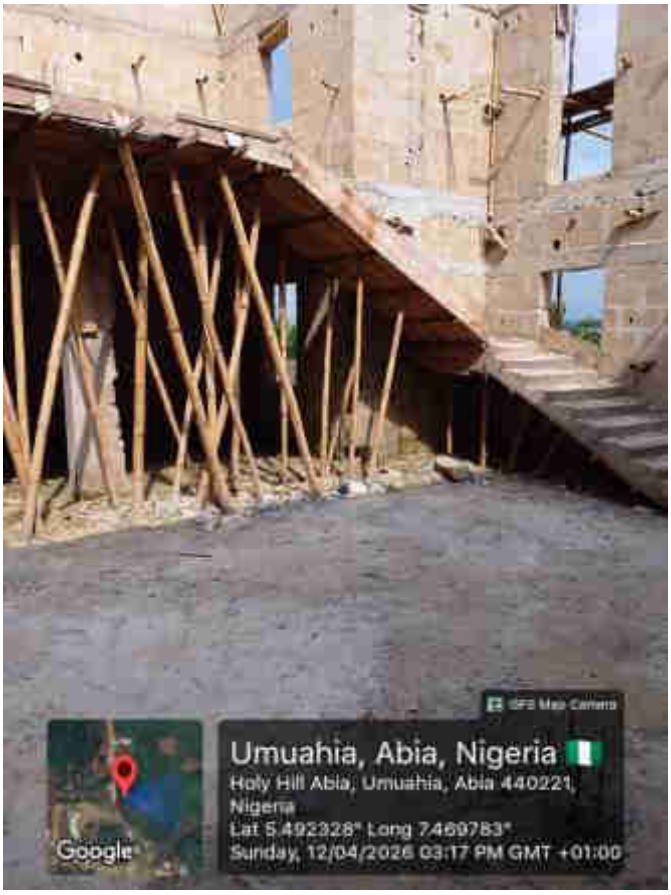


APPENDIX IV – PHOTOGRAPHS

(BEFORE CONCRETE FASCIA)

(AFTER CONCRETE FASCIA)

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Holy Hill Abia, Umuahia, Abia 440221, Nigeria
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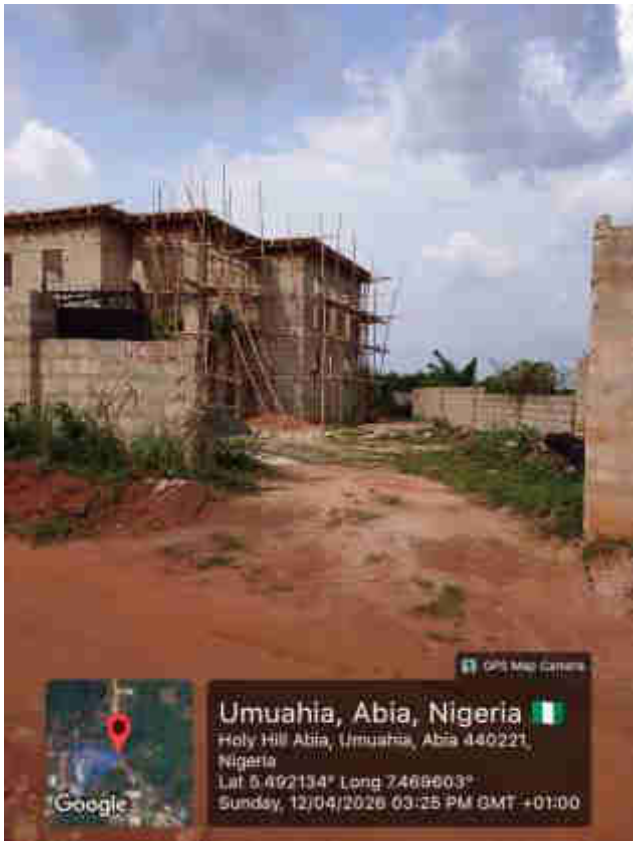
Google


GPS Map Camera
Umuahia, Abia, Nigeria
Holy Hill Abia, Umuahia, Abia 440221, Nigeria
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Google