KWARA STATE POLYTECHNIC, ILORIN

TECHNICAL REPORT ON:

STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME

(SIWES)

HELD AT:

MR. AJEE PLANNING TEAM

OPP. BOVAS FILLING STATTION, OYUN, ILORIN, KWARA STATE

BY:

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ND/23/ARC/PT/0039

SUBMITTED TO:

DEPARTMENT OF ARCHITECTURAL TECHNOLOGY, INSTITUTE OF ENVIRONMENTAL STUDIES (IES), KWARA STATE POLYTECHNIC, ILORIN.

IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE AWARD OF NATIONAL DIPLOMA (ND) IN ARCHITECTURAL TECHNOLOGY.

MARCH 2025

CERTIFICATION

I hereby certify that this report of Student Industrial Work Experience (SIWES) was prepared and compiled by Saheed Sodiq Olamilekan with the matriculation number ND/23/ARC/PT/0039 from the department of ARCHITECTURAL TECHNOLOGY, Kwara State Polytechnic, Ilorin, for the successful completion of SIWES undertaken at **MR. AJEE PLANNING TEAM**

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MR SADIQ OLAREWAJU
SIWES Supervisor

DEDICATION

This is dedicated to God Almighty, who has guided me through my industrial training, to my parents who has been there from the beginning of my education, also to everyone who has contributed to my upliftment till today.

ACKNOWLEDGEMENT

I thank God almighty, who has preserved my life to attain this greater height of education. Providing me a suitable and correlated placement to my course of study and for granting me enough wisdom, knowledge and understanding and also saw me through the period of the SIWES.

Alongside, I thank the Managing Director and the entire staffs of MR. AJEE PLANNING TEAM, who had made it possible for me to understand and learn.

I would like to highly appreciate my parents, and most especially grandma for their support throughout the whole period sponsoring me financially and materially to make this industrial training period a success.

Also to the SIWES coordinator, the Head of Department, and all the Architects who have made the gradual molding of young students into future architects their mandate, may God strengthen you all.

ABSTRACT

This technical report is a detailed write-up comprising of my4months' students' industrial work experience scheme undertaken at; MR. AJEE PLANNING TEAM situated at Opp BOVAS filling station, Oyun, Ilorin, Kwara State.

Experiences gained during the industrial training period were essential for the exposure of practical skills in the construction industry in Nigeria.

As an architect in training, a 4-year program of study without an industrial work experience would have been incomplete.

A personal assessment of knowledge prior to the commencement of my industrial work and after the three months showed a vivid difference as a result of being exposed to various aspects in the architectural profession.

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CHAPTER 1

1.1 INTRODUCTION TO SIWES

Students' Industrial Work Experience Scheme (SIWES) was designed with the responsibility of promoting and encouraging the acquisition of skills in industry and commerce with the view of generating a pool of trained indigenous man power sufficient to meet the needs of the economy. The most important asset of any industrial organization depends on the technical competence of its manpower for the operation and maintenance of its non-human assets and resources, hence, the need for SIWES.

SIWES was established by ITF in 1973 to solve the problem of lack of adequate practical skills preparatory for employment in industries by Nigerian graduates of tertiary institutions. The Scheme exposes students to industry based skills necessary for a smooth transition from the classroom to the world of work. It affords students of tertiary institutions the opportunity of being familiarized and exposed to the needed experience in handling machinery and equipment which are usually not available in the educational institutions.

Participation in SIWES has become a necessary pre- condition for the award of Diploma and Degree certificates in specific disciplines in most institutions of higher learning in the country, in accordance with the education policy of government. Operators – The ITF, the coordinating agencies (NUC, NCCE, NBTE), employers of labour and the institutions. Funding – The Federal Government of Nigeria.

Beneficiaries – Undergraduate students of the following: Agriculture, Engineering, Technology, Environmental, Science, Education, Medical Science and Pure and Applied Sciences.

1.2 AIM AND OBJECTIVES OF SIWES

The operational standards and guides for the program is such that students are posted to an organized establishment, either private or public, where activities of such organization are relevant to the student's course of study. At various levels, the students are meant to undergo this period of training to enable them relate the theoretical knowledge taught in school to the practicality outside there.

This report is aimed at providing detailed records of activities carried out during the industrial training with a view to assessing the relevance of SIWES tofield. The aim of SIWES is to expose student to the working environment that are peculiar to each of their different professions outside the lecture rooms in order that they may acquire practical experience that would be of immense benefit to them in the nearest future when they begin to practice these professions.

Objectives

- To examine the correlation between the theoretical and practical aspects of the profession.
- To provide the opportunities for students to apply their theoretical knowledge in real work practice
- To prepare students for industrial work situations after graduation.
- To expose students to work methods and techniques in handling equipment.
- To bridge the gap between the classroom work and the real world.
- To examine the contributions of the student to the development of the unit and the organization as a whole.

1.3 PREFACE

I was opportune to start my industrial attachment training in the month of March 2025 with MR. AJEE PLANNING TEAM. The firm works hand in hand with other construction and engineering bodies, an example of which is MR. AJEE PLANNING TEAM which deals with the labor force on site. The proposed project is awarded to the contractors of which the time frame to be met is also considered.

The firm is headed by the Arch. AJEE. MR. AJEE PLANNING TEAM is an architectural firm that is dedicated to design in excellence which integrates function, aesthetics, sustainability and affordability and also ensures every project comes out unique with exquisite designs features. We also carryout structural, mechanical, electrical and quantity survey at the cooperation. Our designs have exceptional attributes where every detail counts. Our Core values Integrity, Timeliness, Fairness, Competence, Openness, and Efficiency.

CHAPTER TWO

2.1 WORK EXPERIENCED DURING ATTACHMENT

I was introduced by my industrial based supervisor to the proposed university buildings and the ongoing maintenance works, which includes; the rehabilitations of some of the university buildings, raising of fallen fences, repair of roof leakages.

I was also introduced to the construction of a public toilet, a walkway and an ongoing construction of a new university hostel. My duties were to observe and report the weekly construction activities and work progress carried out on site, and also to execute a brief inspection of the complaint with respect to building, from each department of the university and report to office for further actions.

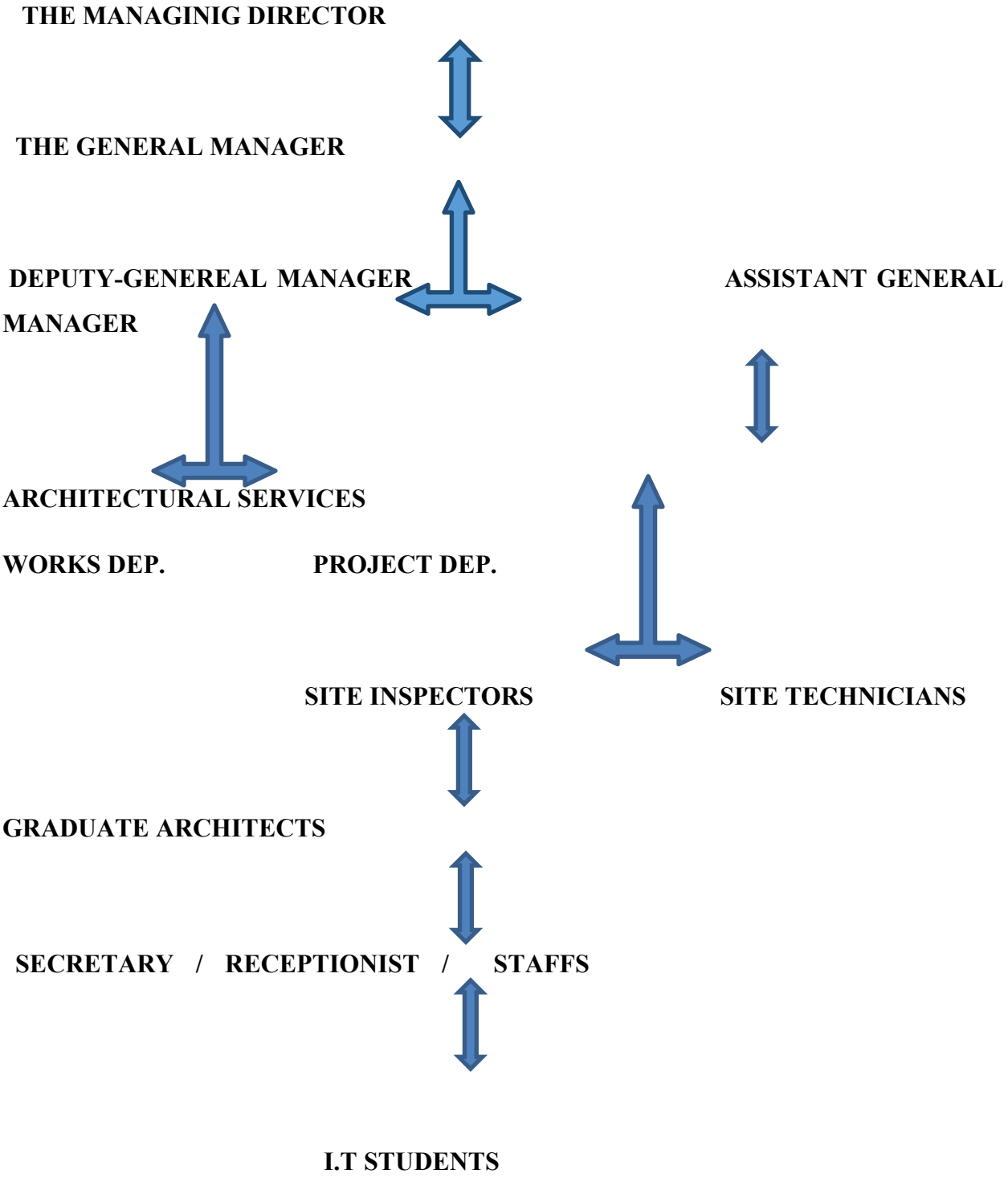
2.2 PAST WORKS

Here listed are some of the past projects executed by the organization with their visual descriptions:

- A. The blocks of flat at Offa, Ilorin

Features; Three bedroom flats, GRA, Ilorin

2.3 FLOW CHART



CHAPTER 3

3.1 SCOPE OF THE WORKDONE

This chapter is basically based on what I experienced and gained during my industrial training and it is divided into two parts:

- **OFFICE/ DESIGN EXPERIENCE**
- **SITE EXPERIENCE**

3.2 OFFICE EXPERIENCE

This part is a summary of *lessons learnt* in the office and on different projects carried out during my SIWES training.

In the office basically, I was able to work on different projects and designs that were *sketched by my Supervising Architects,* before being given to me to *draft on the computer*, while the ones revised are already on the system which had been previously worked on by a staff of the firm.

3.2.1 EXPOSURE TO AUTOCAD

My Student Industrial work experience scheme at MR. AJEE PLANNING TEAM. I learnt how to draft and model designs at a more advanced level considering cost, aesthetics and the clients brief. I learnt how to present a detailed working drawing on this software.

3.2.2 EXPOSURE TO REVIT SOFTWARE

My Student Industrial work experience scheme at MR. AJEE PLANNING TEAM. Architects exposed me to REVIT. REVIT provides a more accurate and detailed design thereby adding a variety of different tools and characters, to produce a self-explanatory plan, section, model and elevations.

3.2.3 ARCHITECTURAL WORKS

I discovered that there was *no room for mistakes* no matter the cost because a minor mistake in design stage could or would lead to a major *disaster during* or after the *construction stage* so all possible errors in the design stage must be eliminated. I also learnt that there were

regulations and laws guiding every aspect of a building design and its construction, which I summarized in the following:

- The minimum set back from the *road to the building line* is 6 meters; while from the center of the road to the building line is 9 meters.
- Architectural works must be interactive and necessary *specifications mustalso reflect* in the designs apart from the schedules.
- The *structural stability* of a design at the inception stage.

The architect must take into consideration the *structural aspect of the building,* which gives the structural engineer a framework to work with and at the end of the project.

Real life architectural works must be *self-explanatory* with all the *necessary dimensions* shown to precision in all the design stages which includes the following*:*

1. *The site plan*
2. *The floor plans*
3. *The roof plan*
4. *The sections*
5. *The elevation*
6. *The models*

3.2.4 PRODUCING A COMPLETE SET OF DRAWINGS FOR GOVERNMENT APPROVAL

As part of my Student Industrial Work Experience Scheme, I have been exposed to Producing a complete set of drawings for Government approval which follows a sequential order as:

- The location map
- The site plan
- The floor plans

- The roof plans
- The sections
- The elevations
- The septic tank details
- The windows and door schedule
- The Structural drawings and others specification

Structural drawings by the structural engineers are always required by the *town planning authority* along with the set of drawings listed above (4 copies); the moment a building design is having another *floor aside from the ground floor plan*.

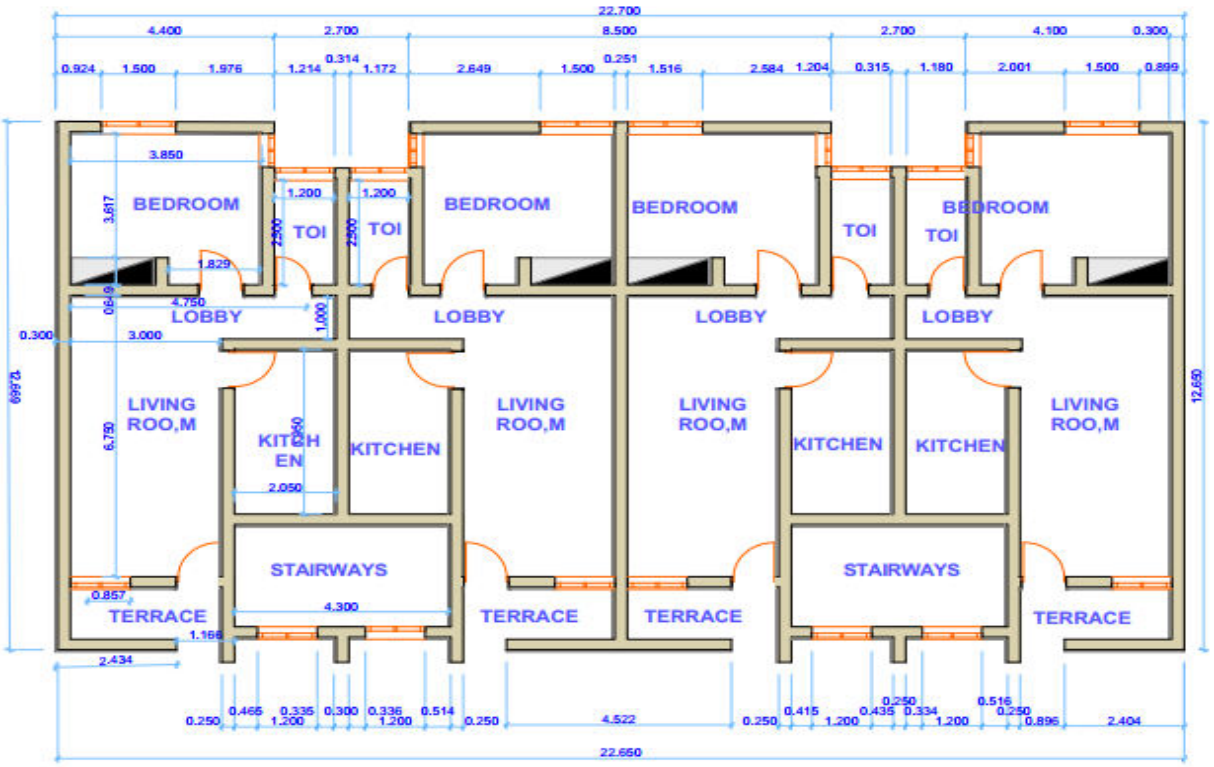
3.2.5 DESIGN EXPERIENCE

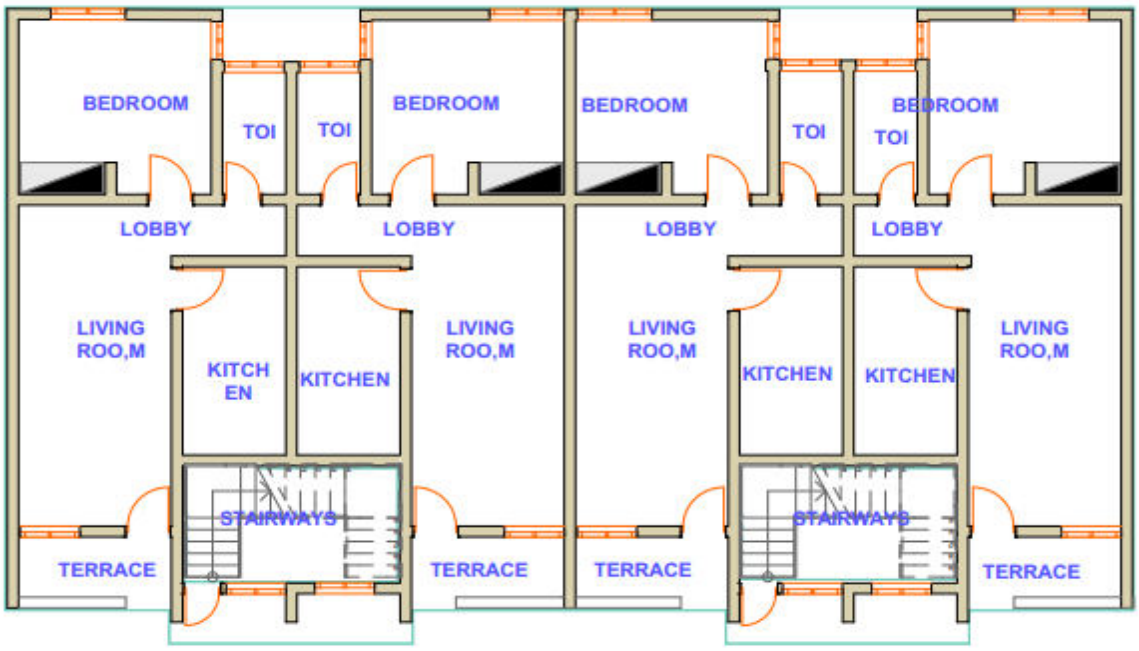
PROJECT.1

A ONE BEDROOM-QUIN SEMI-DETACHED

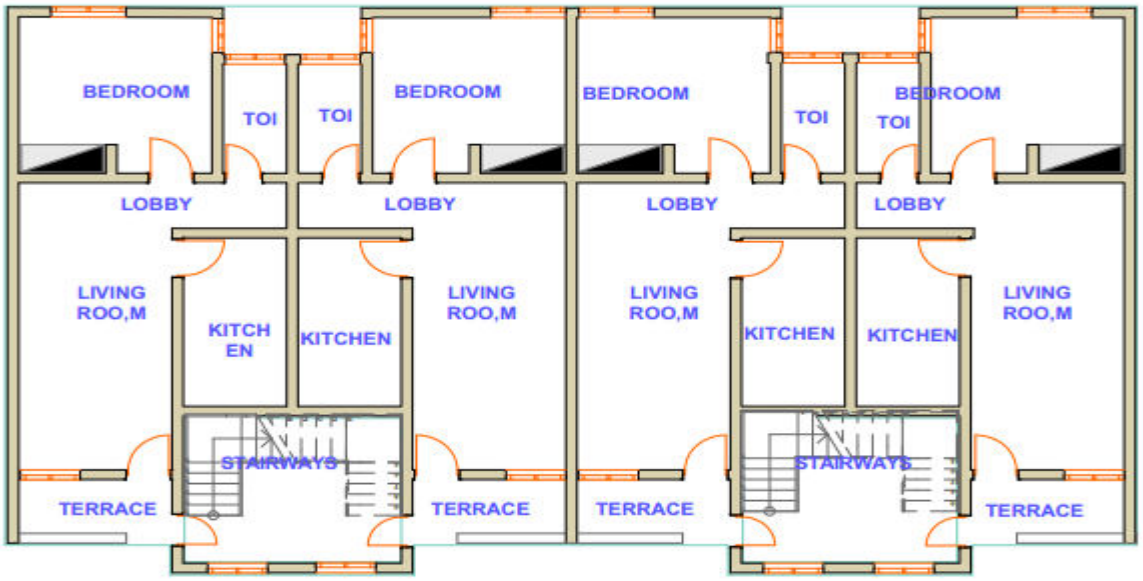
I was asked to design a one bedroom-quin semi-detached building containing sixteen units in total. The features of the design are terrace, living room, kitchen, lobby, bedroom, toilet and stairway.

GROUND FLOOR PLANS

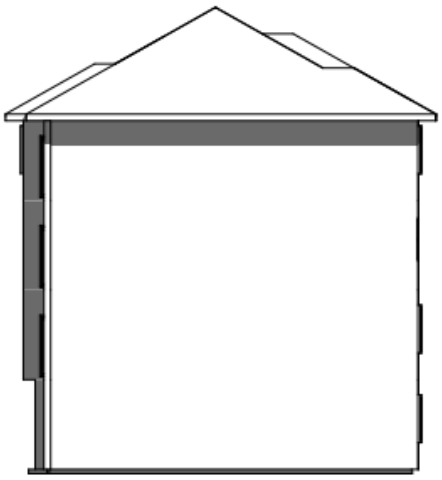




FIRST,SECOND AND THIRD FLOOR PLANS

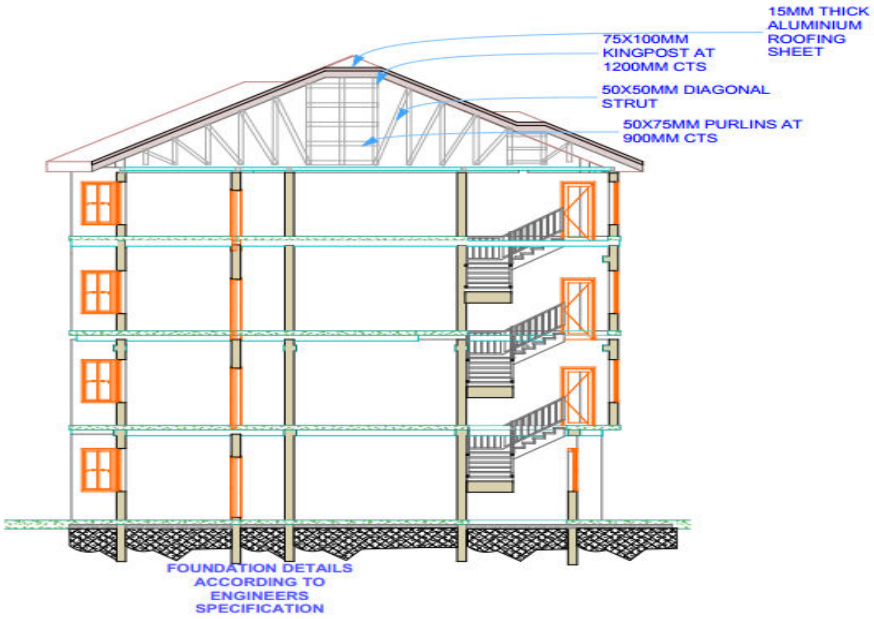


RIGHT SIDE ELEVATION



REAR ELEVATION

SECTIONS



Lesson Learnt: I was able to manage spaces due to the small portion of land, and made sure the spaces were well accessible and I made sure that the windows size was 1200x1500mm because of their orientation and ventilation.

3.2.6 ARCHICAD AND REVIT

Working thoughtfully on the elevations and sections to produce aesthetically pleasing views.

- Adequate ventilation and illumination.
- Foresight of elevation from the planning stage.
- The use of grid lines in the plans with respect to the alignment and positioning of structural elements like columns beams and walls etc.
- Placement of conveniences with an evenly distributed grid on the plans.
- The use of varying stepped levels in the section to achieve interesting effects for the intended users of the facility.
- Thoughtful arrangement of the plan to produce aesthetically pleasing elevations.
- The arrangement of the final site layout with respect of the individual buildings to another and the building to the boundaries in accordance to government rules and regulations

PROGRAMING AND CLIENT BRIEFINGPROGRAMMING

Programming is the process of understanding and setting forth in writing the client's requirements for a given project. Steps in this process includes:

- Establishing goals
- Considering a budget
- Collecting
- Organizing and analyzing data
- Identifying and developing concepts
- And determining particular needs.

WORKING DRAWINGS/CONSTRUCTION DOCUMENTS

The working drawings phases of construction documents describe in graphic form, all of the essentials of the work to be done: location, size, arrangement and details of the project. Since the successful and timely execution of these documents can be equated closely with an office's financial success, Architects constantly search for more efficient ways to produce construction documents. Regardless of the method of preparation, it is extremely important that the documents be accurate, consistent, complete and understandable. This requires thorough quality control including constant review and cross-checking of all documents. In addition, effective coordination of consultants' drawings is essential to avoid conflicts and interference in the construction of the Architect's designs and documents the integrated result.

3.3.1 PHYSICAL MEASUREMENT OF BUILDING COMPONENTS AND EXTERNAL WORKS

The major work I did during my industrial attachment was measurement of building works and external works. The building components can be found in the main building, generator house, gate posts, gate house, sewage treatment house, underground water tank, sewage lift pit etc. The external works can be found in driveways and parking lots, entrance culverts, retaining walls etc.

3.3.2OBSERVING AND NOTING LABOUR

I observed and noted labor outputs for different trades which include: painting; wall and floor tiling; interlocking pavement stone application; steel grill and plaster board ceiling and lifting and installation of steel roof trusses above the third floor painting application, sandtex trowel speckled-tan, I observed and noted the following parameters: name of paint; number of drum used; time of paint application; time at the end of paint application; numbers of painters and square meter covered. In tiles laying, i.e. ceramic floor and wall tiles, I observed and noted the following parameters: name of tiles, number of tillers and laborers and the square meter covered per day.

I also supervised cement and sand mix for floor screeding which is done to prepare the floor for receiving tiles and to get all parts of the floor on the same level. The difference between this mix and mortar is that it has a low water to cement ratio. It serves as backing for floor tiles. The mix ratio for cement and sand adopted for floor screeding was 1:6 i.e. 1 head pan of cement to six head pans of sharp sand or one bag of cement to 12 head pans of sharp sand.

CHAPTER FOUR

4.1 PROBLEMS, RECOMMENDATIONS AND CONCLUSION

4.1.1 PROBLEMS ENCOUNTERED

The problems or challenges encountered during my six (4) months' work experience which could be constraints to future students who may want to observe their SIWES in MR. AJEE PLANNING TEAM can be stated as follows.

4.1.2Rejection of Students

Some organizations reject students when approached for placement. This to a large extent discourages students and kills their enthusiasm towards the SIWES program. Also, the process of entering the Corporation was politicalized, as you had to know somebody working in the Corporation before you can be accepted to work, this routine of recruitment had discouraged students.

4.1.3 Financial Problem

This was a major constraint because the allowance given to trainee was not encouraging. Finance are meant to be considered as a motivating factor for any intending trainee student. Financial aid is very important to help the students cover up the expenses of feeding, transportation and wears (i.e., official wears) among others.

4.1.4 Transportation Problem

Though, transport services were provided for the staffs to various routes but it was amazing that I.T. Students were not liable to any seat until all the staffs had conveniently seated and most times, we were inconveniently packed and bullied when in the bus. This act of discrimination is really disgusting because it makes trainees to feel inferior.

4.2 RECOMMENDATION

This SIWES program has being of immense benefit to me while undergoing the training However, the identified problems are affecting the efficiency of the scheme and reducing the

level of its aimed potentiality. Thus to ameliorate the situations sprouting from the identified problems and make SIWES more beneficial, the following recommendations are suggested:

- The Federal Government should make it compulsory for all ministries, public parastatals and companies to offer placement to interested students as stated in the NUC job specification for SIWES.
- The payment of prompt ITF allowance in order to encourage them for efficient carriage of duties.
- Institutions that the students would be attached to should have the potentials of providing relevant information on planning activities, and possess sophisticated machinery so as to help the student to acquire the necessary skills that would be needed in the work.

In view of the earlier limitations/ challenges experienced by the firm, I recommend that the Federal Government of Nigeria should further intensify their effort in the area of funding of the **SIWES** program and enforcing students to participate actively in this program which will result to a future where Nigeria would be a better place.

4.3 CONCLUSION

In the past 4 months of my learning at **MR. AJEE PLANNING TEAM**, I learnt a crucial aspect of Architecture, not only did I learn about building construction, I also learnt about office etiquette and operations. My ability and knowledge on computer aided designs have been explored and thus have being enlightened. The **SIWES** program has contributed immensely to the acquisition of practical experience and knowledge which are of paramount importance to my field of study. Its relevance therefore can never be overestimated. This training section has broadened my level of knowledge and as well paved way for diverse future opportunities.

Consequently, the SIWES program has made me to understand that the profession Architecture is Multifaceted. In that, it does not solely rely on Site work and drawings but also encompasses various forms of administrative duties which make it more captivating. Thus, this report clearly indicates that the activities carried out during the period of my attachment have not only proved beneficial to me but also broadened my knowledge on professional ethics of Architecture.

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