A TECHNICAL REPORT

ON

STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)

UNDERTAKEN AT

BTI ARCHITECTURAL STUDIO

BY

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ND/23/ARC/PT/0009

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURAL TECHONOLOGY INSTITUTE OF ENVIRONMENT STUDIES, KWARA STATE POLYTECHNIC, ILORIN KWARA STATE IN PARTIAL FULFILMENT OF AWARD OF ORDINARY NATIONAL DIPLOMA IN THE DEPARTMENT OF ARCHITECTURAL TECHNOLOGY

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DECLERATION

I declare that this technical report of "student industrial work experience scheme (SIWES) is an original work by me under the supervision of Department of Architectural Technology Kwara State Polytechnic, Ilorin.

DEDICATION

This report is dedicated to God for His enabling strength he bestowed on me, giving me knowledge and understanding with the grace of getting through with the Four (4) months Student Industrial Work Experience Scheme (SIWES) training.

This is also dedicated to my parent Mr. and Mrs. JIMOH, siblings, friends, and BTI Architectural Studio.

CERTIFICATION

I certify that **JIMOH PETER IYIMIDE with Matric No: ND/23/ARC/PT/0009** of Institute of Environmental Studies, Department of Architectural Technology, Kwara State Polytechnic, Ilorin. Carried out is long essay under my supervision.

ACKNOWLEDGEMENT

I am grateful to God the sole provider of knowledge, Wisdom, Love, Mercy and Grace for his protections on embarking and completing the program.

I also appreciate space and form and their entire of the firm who offered me timely criticism and corrections that led me through the various steps and stages during the program.

I appreciate my parents, Mr. and Mrs. JIMOH, My siblings and friends for their unquantifiable love and financial assistance during this period. May God bless us and reap the fruit of our labor.

Moreover, I express my profound gratitude and immense thanks to all my lectures, who are worthy of emulation. I hereby pray to ALMIGHTY GOD to crown their effort with is abundant blessings and continue to elevate their status to the highest position both in like ten and hereafter

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CHAPTER ONE

1.0 INTRODUCTION:

1.1 BRIEF HISTORY OF SIWES

SIWES was established by Industrial Training Fund (ITF) in the year 1973 to serve the problem of lack of adequate practical skills preparatory for employment in Industries by Nigeria Tertiary Institutions graduates The scheme educates student on industrial based skill essential for a smooth transition from the classroom to the world of work. Students of tertiary institutions is given 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 parking in SIWES industrial training has become a crucial precondition for the award of diploma and degree certificates in specific disciplines in most institutions of higher learning in Nigeria in line with government education policies.

1.2 DEFINITION OF SIWES;

Student Industrial Work Experience scheme is a program organized by the federal government of the students to partake in two (2) months industrial training based on the course of study.

1.3 **OBJECTIVES OF SIWES**;

Expose student to work methods and techniques in handling equipment and machinery that may not be available in the institution.

Provided avenues for students to acquire industrial skills for experience during their course of study.

Provided student with the opportunities to apply their educational know in real work situation, thereby bringing the gaps between theories for practice.

1.4 Safety Rules and Regulations

Building Codes and Standards

1. International Building Code (IBC): A model code that sets minimum safety standards for building design and construction.
2. International Residential Code (IRC): A model code that sets minimum safety standards for one- and two-family dwellings.
3. Americans with Disabilities Act (ADA): A federal law that requires buildings to be accessible to people with disabilities.
4. National Fire Protection Association (NFPA): A non-profit organization that develops and publishes fire safety standards.

Fire Safety

1. Fire-Resistant Materials: Use of fire-resistant materials for building construction, such as fire-resistant wood and gypsum board.
2. Fire Suppression Systems: Installation of fire suppression systems, such as sprinkler systems and clean agent systems.
3. Fire Alarm Systems: Installation of fire alarm systems, including smoke detectors and pull stations.
4. Means of Egress: Provision of safe and accessible means of egress, including stairs, elevators, and exit doors.

Accessibility

1. Ramps: Provision of ramps for accessible entry and circulation.
2. Elevators: Installation of elevators that meet accessibility standards.
3. Accessible Restrooms: Provision of accessible restrooms with grab bars, lowered sinks, and emergency alarms.
4. Clear Floor Space: Provision of clear floor space for wheelchair maneuverability.

Structural Safety

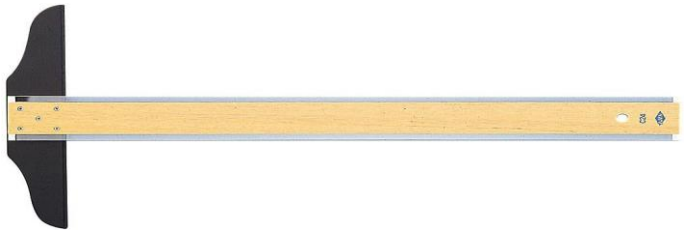
1. Load-Bearing Capacity: Design of buildings to withstand loads from gravity, wind, and seismic activity.
2. Foundation Design: Design of foundations to transfer loads to the ground safely.
3. Seismic Design: Design of buildings to resist seismic forces and minimize damage.
4. Wind-Resistant Design: Design of buildings to resist wind forces and minimize damage.

CHAPTER TWO

2.0 **DRAWING INSTRUMENT**

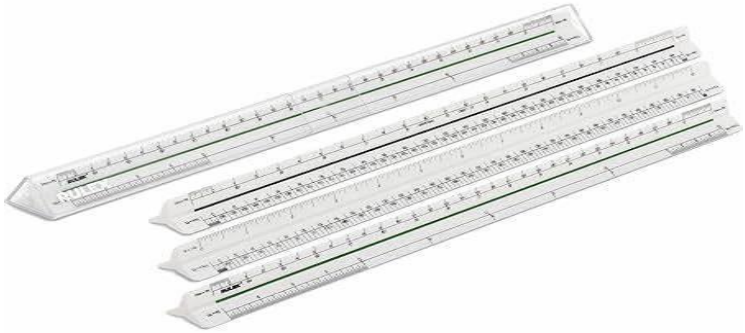
These are instrument used in drawing and construction of lines in architecture. Drawing are;

Tee-square



Adjustable set square

Scale rule



Mobile board or standing board

2.1 **HOW TO SET A PAPER**

Setting a paper is a step in drawing. Where a Tee square is to be used in conjunction with Set square and so much more either horizontal or vertical, the both side of the paper must aline with the tee square and adjustable set square.

2.2 **SCALE READING AND LINES**

A scale is use in measuring and knowing the exact dimensions of a drawing. In which the scale is numbered according to the size of the design you want

NOTE: The higher the scale the lower the plan and the lower the scale the larger plan.

LINES are a way of communication in architecture in such a way that it would represent a particular thing which will be interpreted by architects. Types of lines are

Broken or dotted line

Zig zag line

Mold or thick line

Light or faint line E.T.C

2.3 **DESIGN BRIEF AND DESIGN SCOPE**

Design brief these are scope brought by the client you are designing for.

Design scope these are what the architect and the client want to be on site but mostly it is provided by the architect.

2.4 **ARCHITECTURAL DRAWINGS AND TYPES OF DRAWINGS**

Architectural drawing these are drawings that are designed by Architect which are to be presented or erected on site.

TYPES OF DRAWINGS.

presentation drawings

Working drawings

Presentation drawing; are drawings that shows the furniture arrangements the landscape of the land is going to be the vegetation's and so on.

Working drawings; are drawings that shows the exact dimensions of the building and land and shows the details where needed.

2.5 THINGS TO BE CONSIDERED BEFORE DESIGNING

- Building orientation

- Functionality
- Cross ventilation
- Set back
- Aesthetics.

*__Building orientation;__ building is to be well and properly oriented on site considering the climatic effect on the building.

*__Functionality;__ the building must be easily accessible in such a way that it will be easy for the occupant to moves in easily and go out without distraction.

*__Cross ventilation;__ a building must be well cross ventilated most especially Rooms facing the north-east on a site.

CHAPTER THREE

3.0 **TYPES OF DOORS**

- Aluminum Door: Aluminum doors are a popular choice in architecture due to their durability, low maintenance, and aesthetic appeal. Here are some key aspects of aluminum doors in relation to architecture

- Sliding Door: Sliding doors are a popular architectural feature that offers numerous benefits in terms of functionality, aesthetics, and sustainability. Here are some key aspects of sliding doors in relation to architecture

- Wooden Door: Wooden doors are a popular choice in architecture due to their natural beauty, durability, and versatility. Here are some key aspects of wooden doors in relation to architecture

- Arch Head Window: An arch head window is a type of window that features an arched top, typically with a rounded or pointed shape. Here are some key aspects of arch head windows in relation to architecture.

- Triangle Head Window: A triangle head window, also known as a triangular window or a pointed window, is a type of window that features a triangular or pointed shape at the top. Here are some

key aspects of triangle head windows in relation to architecture:

3.1 **3 BEDROOM FLOOR PLAN**

A 3-bedroom floor plan is a common design in residential architecture, providing a comfortable living space for small to medium-sized families. Here's a general overview of a 3-bedroom floor plan:

Typical Components of a 3-Bedroom Floor Plan

1. Living Room: A spacious area for relaxation and entertainment, often featuring a fireplace or TV wall.
2. Kitchen: A functional space for food preparation and cooking, typically equipped with appliances, cabinets, and countertops.
3. Dining Area: A designated space for meals, often adjacent to the kitchen.
4. Three Bedrooms: Private sleeping quarters, each with a closet and window.

5. Two Bathrooms: One full bathroom and one half bathroom or powder room.
6. Laundry Room: A utility space for washing and drying clothes.

Architectural Considerations

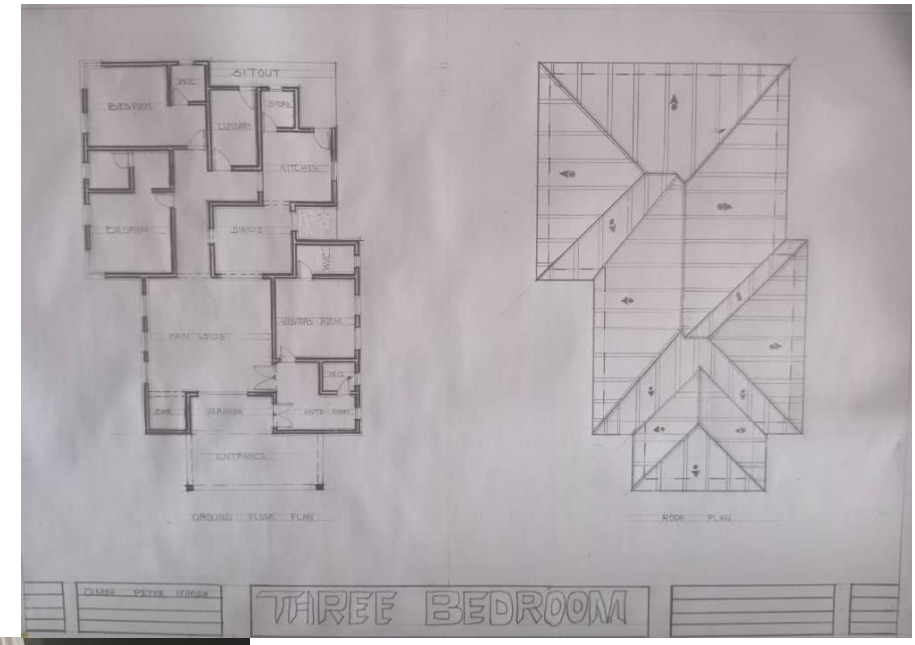
1. Space Efficiency: A well-designed 3-bedroom floor plan should optimize space usage, minimizing hallways and maximizing living areas.
2. Natural Light: Strategically placed windows and skylights can enhance natural light and ventilation throughout the home.
3. Circulation: A logical circulation path should connect all areas of the home, ensuring easy movement and minimal congestion.
4. Storage: Ample storage solutions, such as closets, cabinets, and shelving, should be incorporated to maintain a clutter-free living environment.

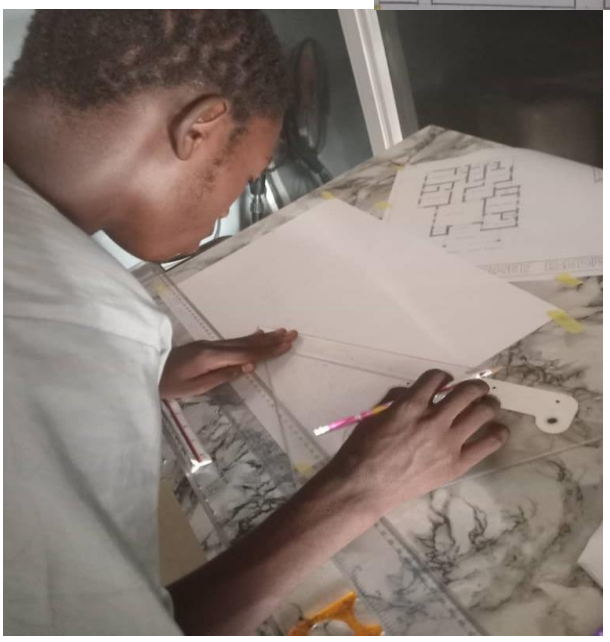
Design Variations

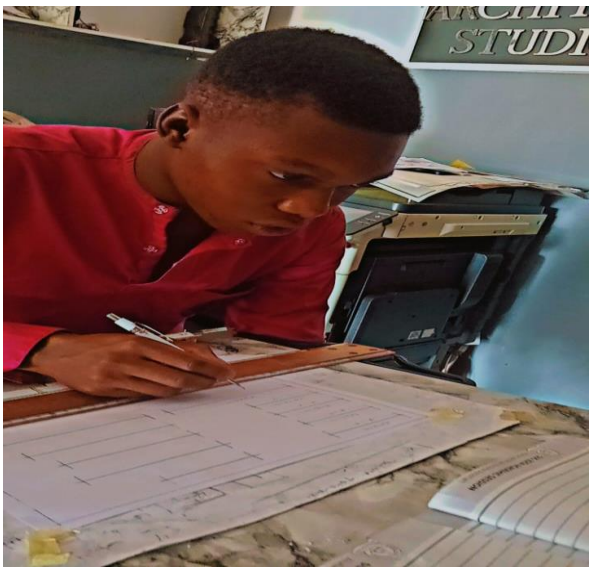
1. Open-Concept Living: Combining living, dining, and kitchen areas into a single, open space.
2. Split-Bedroom Layout: Separating the master bedroom from the other two bedrooms, often with a Jack-and-Jill bathroom.

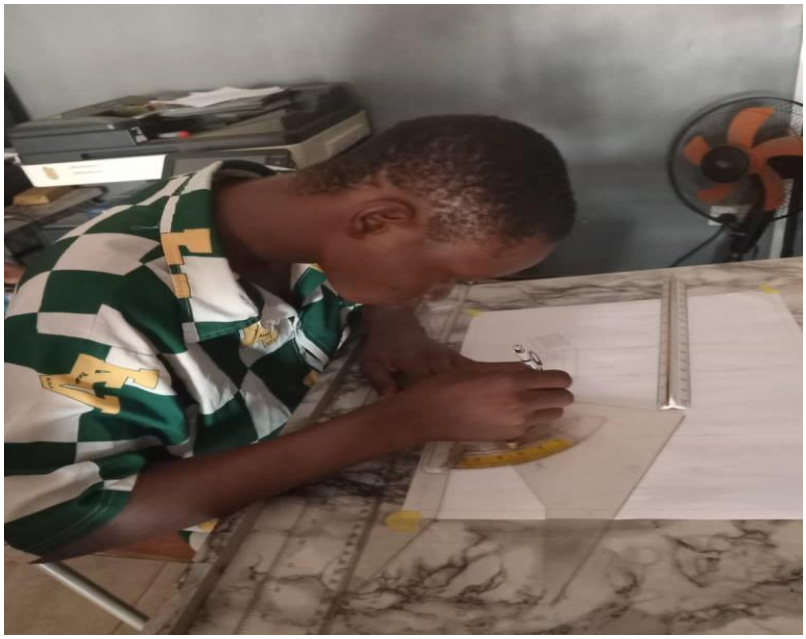
3. Multilevel Design: Featuring multiple levels, such as a raised living area or a lower-level bedroom suite.

4. Outdoor Living: Incorporating outdoor spaces, like patios, decks, or courtyards, to expand living areas.









PICTURES OF WORKDONE IN THE STUDIO

CHAPTER FOUR

4.1 SUMMARY

Student industrial training experiences scheme (SIWES) provide student with appreciable skill designed to expose or equip them with real life working experience. Student knowledge increase maturely and understanding of their own career goals and for the progress of the nation.

The report contains and gives a detailed explanation of all the activities carried out at BTI Architectural studio at Shop 56, Charis Shopping Complex, Beside Total Filling Station, Ilorin, Kwara State.

4.2CHALLENGES FACE DURING SIWES

1. Limited Practical Experience: Students may feel that they lack the necessary practical skills to perform tasks efficiently.
2. Time Management: Balancing work and academic responsibilities can be challenging.
3. Financial Constraints: Students may face financial difficulties, such as transportation costs or living expenses, during SIWES.
4. Safety Concerns: Students may be exposed to hazardous working conditions or equipment.
5. Supervision and Feedback: Inadequate supervision or feedback from

supervisors can hinder students' learning experience.

6. Technical Challenges: Difficulty in operating equipment or software due to lack of training or experience.
7. Self-Confidence: Students may struggle with self-doubt or low self-confidence, especially when faced with new challenges.

4.3RECOMMENDATION

I recommend that SIWES should provide places for industrial attachment for student, Industrial Training Fund (ITF) should pay some allowance to student and the company should provide safety equipment to prevent further environment and health hazards.

Institution should be encouraged to create financial autonomy for institution based SIWES unit directorate.

4.4CONCLUSION

In conclusion as a student of Architectural Technology, I have been able to obtain the relevant and effective practical training and experience in a duration of four months (4) have been to know what presentation and working drawing are meant to be and so much more.

Finally, I would like to state that the SIWES program is a relevant and necessary program for all students that must an advantage for each student's professional prior to graduation.