A PROJECT REPORT

ON

PROPOSED OFFICE COMPLEX FOR MR ALFRED

BY

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HND/23/ARC/FT/0082

SUBMITTED TO

DEPARTMENT OF ARCHITECTURAL TECHNOLOGY, INSTITUTE OF ENVIRONMENTAL STUDIES, KWARA STATE POLYTECHNICS, ILORIN

JULY, 2025

DECLARATION

I declare that this project work was written and composed by ALADE OLUWASEUN AKINKUNMI (HND/23/ARC/FT/0082), and this is also record of my research work and it has not been presented before in any precious polytechnic and all the sources of information are specifically acknowledge by means and reference under ARC. FAMILUA O.S

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Student Name	**Matric Number**

24/07/2025

SIGNATURE/DATE

CERTIFICATION

I certify that this research project has been approved as meeting part of the requirement for award of Higher Diploma in Architectural Technology, Institute Of Environmental Studies, Kwara State Polytechnics, Ilorin, Kwara State.

ARC. FAMILUA O.S
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Signature and Date

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Project coordinator

04/08/2025
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ARC. (MRS).TOMORI J.M
Head of Department

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Signature and Date

External Examiner

Signature and Date

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Signature and Date

DEDICATION

I dedicate this project to the almighty God, who gives knowledge, wisdom, strength and understanding.

ACKNOWLEDGEMENT

Everything that has beginning must have an end, therefore, all praises and adoration is unto God for the strength and courage he has accorded me in the process of this project.

Special thanks to my project supervisor ARC. FAMILUA O.S for taking his time to go through my research work, May almighty God bless you Abundantly.

My sincere appreciation also goes to my departmental lecturers and my able HOD in person of Arc. J.M. Tomori toward a successful completion of this programme (HND).

My sincere appreciation also goes to my project coodinator in person of Arc. Olarewaju F.A. toward a successful completion of this programme (HND).

My deepest appreciation goes to my parents Mr & Mrs Alade Mr. And Mrs. for their prayer and support both financially and morally, I pray God will grant them good health and long life to eat the fruit of their labour (Amen).

I extend my heartfelt thanks to my coursemates and friends for their unwavering support, collaborative spirit, and thoughtful contributions during this project. Their encouragement and shared insights greatly enriched my work.

ABSTRACT

The rapid growth of urban centers and the evolving dynamics of modern workplaces have driven the demand for innovative office complexes that blend functionality, sustainability, and aesthetics. This office complex project introduces a state-of-the-art workspace designed to meet the needs of contemporary businesses while fostering collaboration, productivity, and employee well being. This report provides a detailed analysis of the design and construction of an office complex, addressing overrunning cost and time allocation issues by identifying the most suitable construction methodology, emphasizing comfortable ambiance, energy conservation, and waste reduction, using agile methodology with phases like requirement identification, planning, design, execution, tracking and closure and concludes that feasibility studies and adapting agile methodology can mitigate factors negatively impacting project success, recommending through feasibility studies and adoption of agile methodology to successful project completion. It also emphasizes spatial flexibility, structural efficiency, and integration of essential building services such as HVAC, water supply, power systems, and vertical circulation. Site selection and planning are based on accessibility, proximity to business districts, and infrastructure availability. The methodology combines qualitative and quantitative research, including case studies and contextual analysis. Ultimately, the project contributes to the advancement of office architecture in Nigeria by setting a precedent for environmentally conscious and user-centered design.

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CHAPTER ONE

1.0 INTRODUCTION

An office complex is a structured cluster of office buildings designed to support professional, administrative, or business activities. These spaces are often tailored to accommodate a range of functions, including open-plan workspaces, private offices, meeting rooms, and shared amenities such as cafeterias and lounges. Office complexes play a critical role in urban development by providing centralized work environments that promote operational efficiency, collaboration, and productivity (Gensler, 2020).Modern office complexes are influenced by several factors including architectural design, energy efficiency, technological integration, and user-centric amenities. With the growing importance of sustainability and smart building technologies, contemporary office complexes are increasingly designed to meet green building standards such as LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method) (U.S. Green Building Council, 2021; BRE Global, 2022). These sustainable features contribute not only to environmental conservation but also to the long-term economic viability of the structure. Moreover, the design and functionality of office complexes are often guided by the needs of tenants and changing work patterns, especially in the post-pandemic era. For example, hybrid work models have necessitated more flexible and adaptive spaces, including co working areas and wellness-oriented features like natural lighting and ventilation (CBRE, 2023). These changes underscore a shift from static office environments to dynamic ecosystems that support diverse work styles. Ultimately, office complexes serve as essential infrastructure for economic activity and urban planning.

1.1 HISTORICAL BACKGROUND

The history of the office complex dates back to ancient Rome, where administrative spaces—known as officium—housed scribes and public officials in organized city forums. Following the Roman Empire's fall, dedicated office buildings vanished until the 18th century, when the growth of Britain's bureaucracy led to the construction of formal office buildings such as London's Old Admiralty Office (1726) and East India House (1729), built to manage escalating paper-based administration and trade logistics. In the late 19th century, technological breakthroughs—including the passenger elevator and metal framing—enabled the rise of the first skyscraper office buildings, like Chicago's 1884 Home Insurance Building, ushering in the vertical office model that maximized space in dense urban centers.

The early 20th century saw the emergence of Taylorism, a management doctrine advocating factory-like open-plan offices that grouped clerks in grids under the supervision of managers in overlook offices—a layout aimed at boosting efficiency but criticized for its impersonal nature

Post- World War II designs challenged that rigidity: in the 1950s, modernist glass-and-steel towers such as Lever House in New York embodied sleek corporate aesthetics and open floors illuminated by natural light, made possible by curtain-wall architecture and advanced HVAC systems

Around the same period, Germany's Bürolandschaft ("office landscape") introduced a human-centric alternative, replacing grid rows with organic layouts, plants, curved screens, and zones adapted to specific team functions

In 1968, Herman Miller's Action Office system introduced modular, flexible furniture—later evolving into the ubiquitous cubicle system—that prioritized user

mobility and adaptability, though mass adoption led to dense, impersonal "cube farms" in the 1980s and ’90s

The late 20th and early 21st centuries ushered in open-plan, activity-based, and coworking models, fueled by the internet, laptops, and rising demand for flexibility. Since the COVID‑ 19 era, hybrid work models and health-conscious design have prompted reevaluation of traditional office complexes, with renewed emphasis on well-being, sustainability, and the social functions of physical workplaces

Thus, the evolution of the office complex reflects changing economic structures, management philosophies, technology shifts, and cultural values—from Roman bureaucracy and 18th-century centralized offices, through industrial-age high-rises, to today’s flexible, amenity-rich, and hybrid-capable commercial environments.

1.2 STATEMENT OF PROBLEM

Despite their potential as efficient, multi-tenant hubs, modern office complexes frequently encounter major design, operational, and market challenges that hinder their long-term viability. These include:

Underutilized or inefficient layouts: Buildings designed with rigid, inflexible interior partitions struggle to adapt to evolving tenant needs; this leads to high costs for reconfiguration and low attractiveness for changing occupiers.

High vacancy and tenant turnover risks: Shifts in work behaviors—especially widespread remote and hybrid models—drive down occupancy levels, causing inconsistent revenues and rising vacancy rates in many complexes.

Insufficient amenity integration: As workforce expectations rise, office complexes that lack wellness zones, social spaces, modern connectivity, and green design fall behind in attracting and retaining tenants.

Escalating operational and energy costs: Older building stock, inefficient HVAC systems, outdated lighting, and lack of smart controls contribute to unsustainable energy consumption and rising maintenance budgets.

Parking, circulation and accessibility constraints: Poorly planned vehicular access, insufficient parking, limited handicap access, or disconnected pedestrian pathways can frustrate tenants and reduce building functionality.

1.3 AIM

The aim of this project is to design a functional and aesthetically pleasing office complex that prioritize occupant well - being.

OBJECTIVES

- To propose a design that provide efficient circulation
- To propose a aesthetically pleasing design
- To propose a design that encourages natural light & ventilation

1.4 JUSTIFICATION

The justification lies in the accessibility, visibility and potential for ecoonomic growth, making the site an ideal spot for a thriving business community

1.5 CLIENT BACKGROUND, PHILOSPHY,

OPERATIONAL STRUCTURE AND GOAL OF THE PROPOSAL

Mr. Alfred is a successful entrepreneur and business leader with a passion of innovation and sustainability. As the founder and CEO of Alfred Enterprises, he has built a reputation for fostering a culture of creativity, collaboration, and community engagement, Mr Alfred aims to create office spaces that not only support the growth

of his business but also contribute to the well being of employees and the surrounding community

Philosophy: Mr Alfred's philosphy is centered around the idea that "workspaces should inspire greatness." He believes that the physical environment plays a critical role in shaping company culture, employee productivity, and overall business success. By designing office spaces that are both functional and beautiful, Mr Alfred aims to create an ecosystem that supports innovation, creativity and collaboration.

Operational Structure: Alfred Enterprises is a diversified company with interests in technology, real estate, and sustainable development. The company's operational structure is designed to foster cross-functional collaboration and innovation.

Goal of the Proposal: The goal of the office complex proposal is to create a flagship workspace that embodies Mr. Alfred's vision for a sustainable, innovative, and community - driven work environment. The proposed office complex will serve as a hub for Alfred Enterprises' operations, while also providing flexible and inspiring workspaces for other like-minded business and organization

1.6 LIMITATIONS

- The research might not address all aspect of the building including user experience and environmental impact
- Access to several local case studies to source detailed information was quite security tight
- Time constraint

1.7 SCOPE OF STUDY

Functional layout-Designing efficient floor plan, meeting spaces and amenities to enhance productivity and employee well being.

User experience: considering the need of occupant, including natural light and ventilation.

Aesthetics: creating a visually appealing design that reflect the company identity.

1.8 RESEARCH METHODOLOGY

The methodology employed in the course of gathering information involved the use of primary data. This consist of data gathered directly from the study area via oral interview conducted with the resident, secondary data comprises of related material used to augment the primary data gathered.

Here's a deep dive into the research methodology for office complex, covering key aspects and detailed steps.

OFFICE COMPLEX BACKGROUND: Familiarize yourself with the office complexes context, including it mission, services, user demographics and challenges.

SCOPE AND OBJECTIVES: Defines the specific area of focus(e.g user satisfaction, resources usage, digital integration.

- Case Study
- Oral Interview
- Literature Review

CHAPTER TWO

INTRODUCTION

2.1 LITERATURE REVIEW

In this chapter, Definition of an office complex, history, benefit of an office complex and other related literatures are discussed. This Literatures were studied in order to know the trend and scope for research in the chosen field. Many doctoral thesis, reports and articles published in leading journals were subjected to analysis.

2.2 DEFINITION OF OFFICE COMPLEX

An office complex is a purpose-built single building or a cluster of connected buildings designed specifically to accommodate multiple tenants—such as companies, government agencies, or professional service firms—within a shared environment. These complexes may range from high-rise towers in central business districts to low-rise office parks or campus-style layouts, often linked by atriums, walkways, or shared outdoor spaces. They typically include common facilities like reception areas, meeting rooms, support amenities (cafés, lounges, fitness centres), and infrastructure systems optimized for multi-tenant use.

2.3 HISTORICAL DEVELOPMENT OF OFFICE COMPLEX

1. Early Administrative Origins: In ancient and medieval societies, administrative work happened within informal spaces including government chambers and guild halls, but dedicated office buildings didn't emerge until centralized bureaucracies became established.

2. 18th–19th Century Origins: As colonial governance, trade enterprises, and modern states grew, purpose- built administrative buildings began to appear. British examples include London's Admiralty Office and East India Company headquarters, constructed to centralize clerical and managerial tasks.

3. Late 19th Century: Vertical Urbanism Emerges: Technological innovations—such as elevators, steel frames, and electric lighting—enabled the first skyscrapers in dense urban cores. The Home Insurance Building in Chicago (1884) is widely considered the first steel‐frame "office tower," marking the start of high‐rise office complexes.

4. Early 20th Century: Taylorism & Rigid Layouts

The rise of industrial efficiency ideologies led to clerical spaces laid out in regimented grids overseen by middle management—resembling factory floors for office labor. This model spread across new office blocks in growing cities.

5. Post‐World War II: Human‐Centered Design

Movements such as Bürolandschaft (Germany's "office landscape") rejected rigidity in favor of organically arranged work zones, softer partitions, greenery, and improved human ergonomics.

Mid-century modernist towers like New York's Lever House embraced glass‐curtain facades, open floor plates, and integration of building systems (HVAC, lighting), shifting the aesthetic of corporate office developments.

6. Late 20th Century: Modular Offices & Cubicle Farms

Herman Miller's Action Office system (introduced in 1968) pioneered flexible modular furniture. Yet its mass adoption in the 1980s–90s led to dense cubicle farms—functional but often soulless environments.

7. 2000s Onward: Open Plan & Service Models

The proliferation of personal computers, Wi- Fi, and digital communication enabled more open- plan spaces, co- working arrangements, and serviced offices. Amenity- rich complexes offering cafes, lounges, tech hubs, and wellness areas became common.

8. 2020s: Hybrid, Wellness & Sustainability

The COVID- 19 pandemic accelerated hybrid work models, prompting designers and landlords to rethink office complexes. Hybrid- ready layouts, health- conscious systems (air quality, touch-less tech), flexible leasing, and sustainability certifications are now central to new developments.

TYPE OF OFFICE COMPLEX

- Traditional Office: Features private office for managers,cubicles for employees and a relatively structured layout with limited collaboration spaces.
- Open plan office: Characterized by open space with fewer physical barriers, encouragement collaboration and communication.
- Hybrid Office:Combines element of both traditional and open plan office,offering a variety of work space options to suit different needs and preferences.
- Co-working Space: A shaped workspace where individual from different companies can work together, often offering amenities like desks, meeting room and communal area.
- Flex Office: Provides flexible and customize office spaces often with administrative support, IT infrastructure and reception services

- Creative Office: design to foster creativity and collaboration often featuring open space, flexible furniture and informal meeting areas.

- Executive Office: Private, high- end office designed for executives, often with amenities like conference rooms and dedicated reception areas.

Function and Relationship between Spaces Common in the Building

Common Areas:

Reception Areas: Greets visitors, provides information, and direct them to meeting rooms or offices.

Meeting Rooms: Hosts Conferences, presentations and team meetings

Break Room/Kitchen: Provides a spaces for employees to take breaks, eat and socialize

Collaboration Spaces: Fosters teamwork, innovation, and creativity through open work area, brainstorming rooms or innovation labs

Parking Areas: Provides designated spaces for employees and visitors.

Relationship between spaces:

Reception Area & Meeting rooms: Receptions often directs visitors to meeting rooms.

Meeting room and collaboration spaces: Meeting rooms can transition into collaboration space for brainstorming or team work.

CHAPTER THREE

3.0 CASE STUDY:

According to JSTOR (January 2019), a case study is about a person, group, or situation that has been studied over time. It can be defined as an intensive, systematic investigation about a person, group of people, or a unit in which the researcher examines in depth data relating to several variables. Case studies can be produced by following a formal research method. These case studies are likely to appear in formal research venues, as journals and professional conferences, rather than popular works.

Outline Of Case Studied

- Bay Atlantic Office Complex, Lagos
- Fusion Point, Osogbo
- Tdl Building Ososami Rd New Gra Ibadan
- Vip.com Office Complex Guangzhou, China
- Stockholmshem Hq, Stockholm, Sweden

3.1 Case Study 1: Bay Atlantic Office Complex, Lekki, Lagos

Brief Description: Bay Atlantic is an office development located in Lekki Phase 1, Lagos. It is developed by Delta Afrik Engineering Limited and will join other developments in the area including 1 Wole Ariyo, Plot 12B Admiralty Way and The Quad (Formerly 5LY).Built on a site of about 9130sqm, The Bay Atlantic Building delivered 10,200sqm of lettable commercial space on 9 floors. The building which adjoins the busy Lekki-Epe Expressway has a double glazed envelope as the preferred 'skin' requiring extensive shading for its South and North facades to reduce solar gain and glare

The project team members include Consultants Collaborative Partnership (CCP) as the Architect and Dori Construction And Engineering as the Main Contractor.

Merits

i. Aesthetically appealing

ii. Good circulation

iii. Well define parking space

iv. Demerit

i. Absent of soft landscape

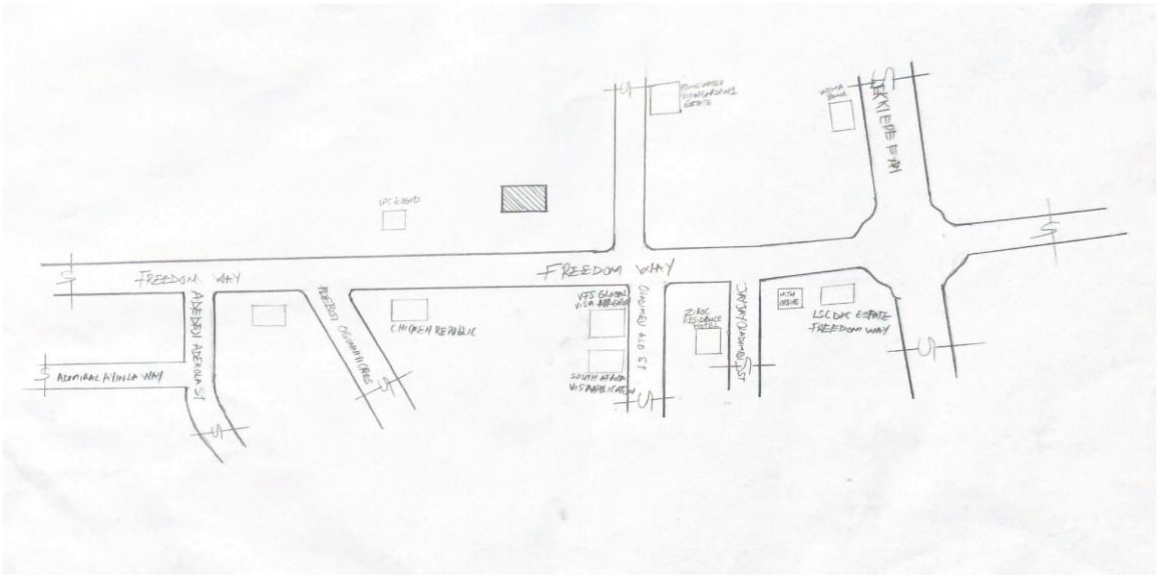

FIG 3.1 LOCATIONAL PLAN

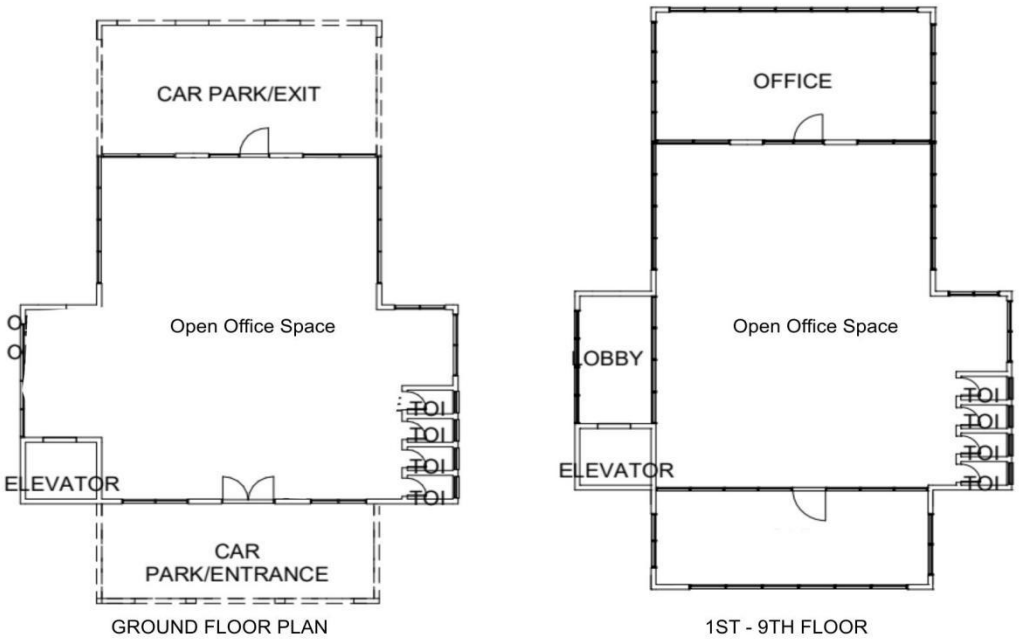

FIG 3.2 FLOOR PLAN

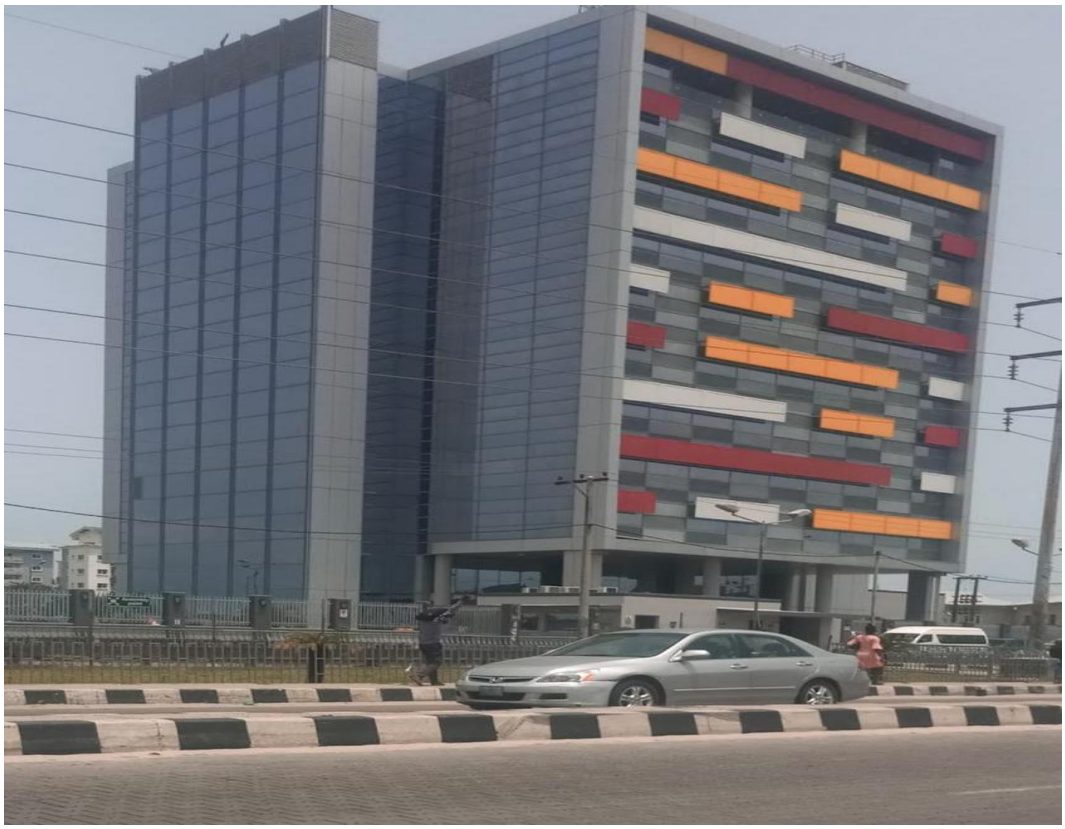

PLATE 3.1 SHOWING THE EXTERIOR VIEW OF THE BUILDING

PLATE 3.2 SHOWING THE EXTERIOR VIEW OF THE BUILDING

3.2 Case Study 2: Fusion Point Osogbo, Osun State

Brief Description: The building fronts onto busy Ring Road, implying exposure to direct sunlight and vehicle-generated urban heat. Though glazing details are not specified, similar complexes typically feature large glass façades to maximize light and visibility. Such design likely requires external or internal shading solutions (e.g. louvers, blinds, canopies) to minimize solar gain and glare on exposed facades facing south or west wind direction. Built on an urban-infill parcel along Osogbo's Ring Road, Fusion Point delivers a compact yet functional office complex embedded within a small‑ scale commercial building. The development provides furnished virtual office suites, hot‑ desk zones, and meeting room facilities, arranged over two or more levels to serve flexible daily-users. Its glazed façade, ensuring street visibility and natural daylight, likely necessitates shading mechanisms to mitigate solar gain and minimize glare—especially on south- or west-facing exposures.

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Merits

1. Aesthetically appealing
2. Good circulation
3. Well Organised

Demerit

I. Not easily accessible by individual with disabilities

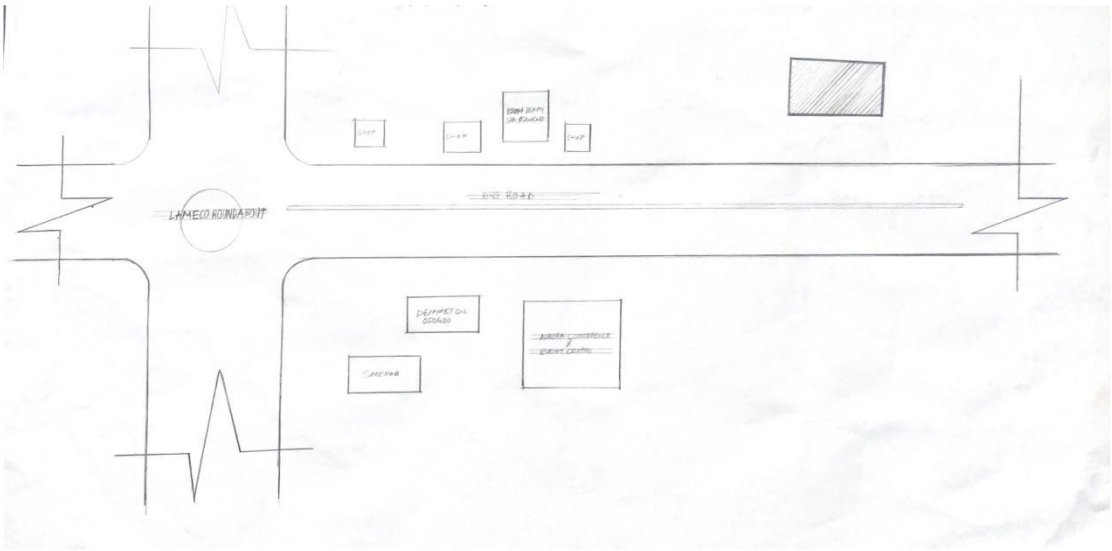

FIG 3.3 LOCATION PLAN

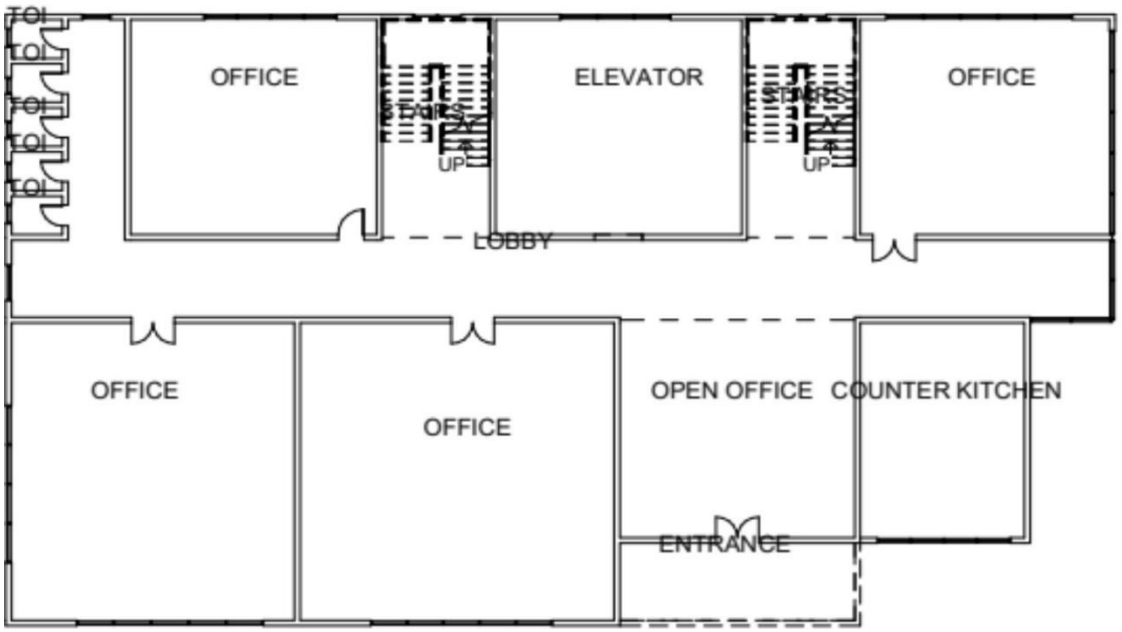

FIG 3.4 GROUND FLOOR TO THE 3RD FLOOR OF CASE STUDY TWO

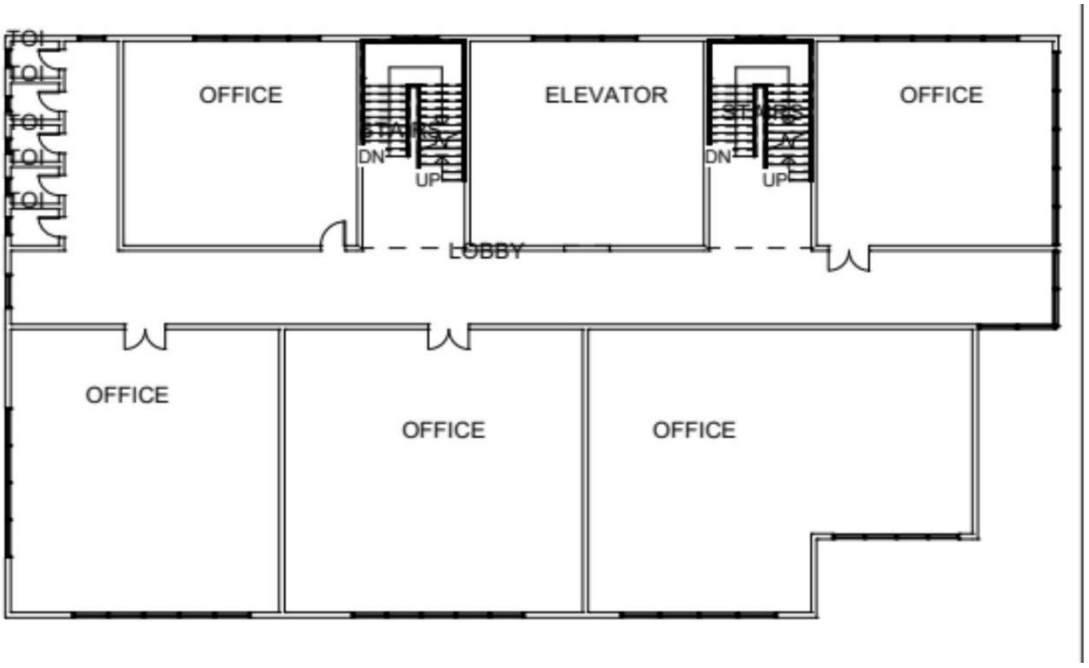

FIG 3.5 FIRST FLOOR TO 3RD FLOOR OF CASE STUDY TWO

PLATE 3.3 SHOWING THE EXTERIOR VIEW OF THE BUILDING OF CASE STUDY TWO

PLATE 3.4 SHOWING THE EXTERIOR VIEW OF THE BUILDING OF CASE STUDY TWO

3.3 Case Study 3: TDL BUILDING OSOSAMI RD NEW GRA IBADAN

Brief Description:TDL building at 4 Ososami Road, New Garden City, Ibadan is situated within a commercial building that opens onto a busy arterial road (Ibadan- Abeokuta/Lekki- Epe–equivalent traffic context).. While exact site acreage isn't publicly disclosed, the hub offers around 800–1,000 m² of lettable workspace across its floor layout (estimated from available facility descriptions) The space is distributed across a single or dual-floor layout within the commercial building not a separate multi- story building featuring open-plan and partitioned office areas, communal lounge spaces, private meeting room.

Merits

- Proper ventilation and lightning
- Well Organised

Demerits

- Absent Of Soft Landscapes
- Parking Space Not Define

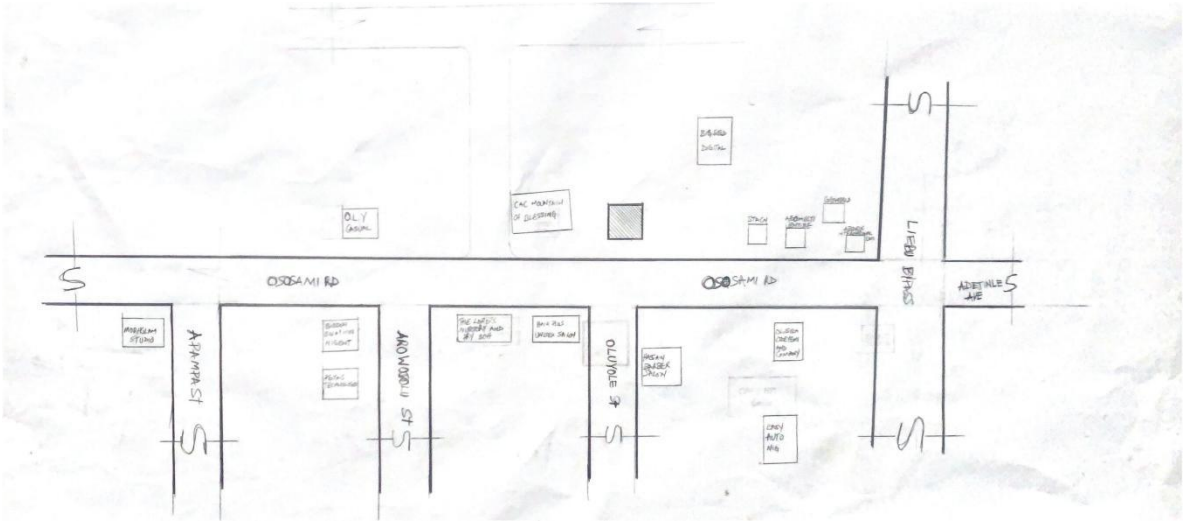

FIG 3.5 Locational Plan

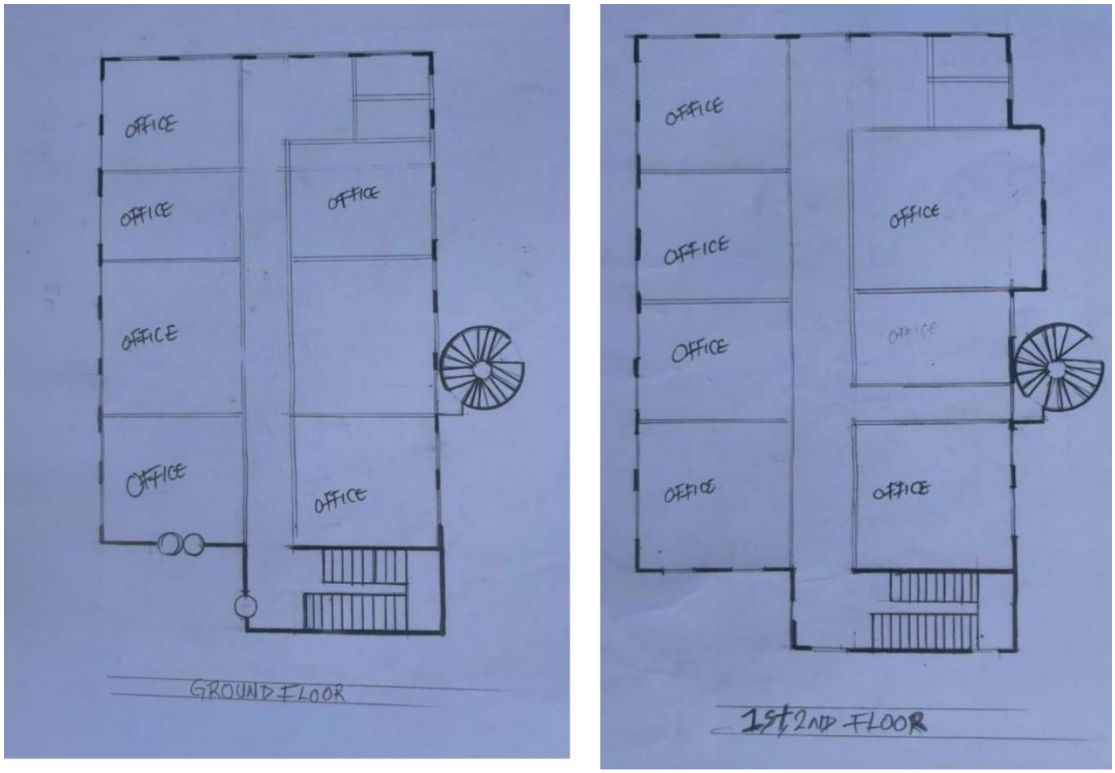

FIG 3.6 FLOOR PLAN OF CASE STUDY THREE

PLATE 3.4 SHOWING THE EXTERIOR VIEW OF THE BUILDING OF CASE STUDY THREE

PLATE 3.5 SHOWING THE EXTERIOR VIEW OF THE BUILDING OF CASE STUDY THREE

ONLINE CASE STUDY

3.4 Online Case Study 1: VIP.COM OFFICE COMPLEX GUANGZHOU, CHINA

Brief Description: The complex, designed by gmp Architects, sits in Guangzhou's Pazhou Internet Innovation Cluster, an island district in Haizhu along the Pearl River, adjacent to the Canton Fair site. Completed in 2020 after about four years of construction, the project spans approximately 112,800 m² across two slender towers (about 135.5 m and 172.5 m tall) rising from a shared 10- storey plinth that links three separate lots interrupted by roads. Rather than separate standalone towers, the design emphasizes a horizontally layered office landscape. The connecting plinth serves as a flexible workspace base, promoting a unified campus feel with open views of the city and river A special fourth- floor "seam" layer includes public and

semi- public facilities such as a conference centre, exhibition space, restaurants, and a platform that leads via wide stairs to the riverbank and nearby park

Merits

- Flexibility and Adaptability
- Unified Aesthetic
- Integration of Public and Private Spaces

Demerits

- High cost in Maintenance of Extensive Facades
- Limited Vertical Land Use

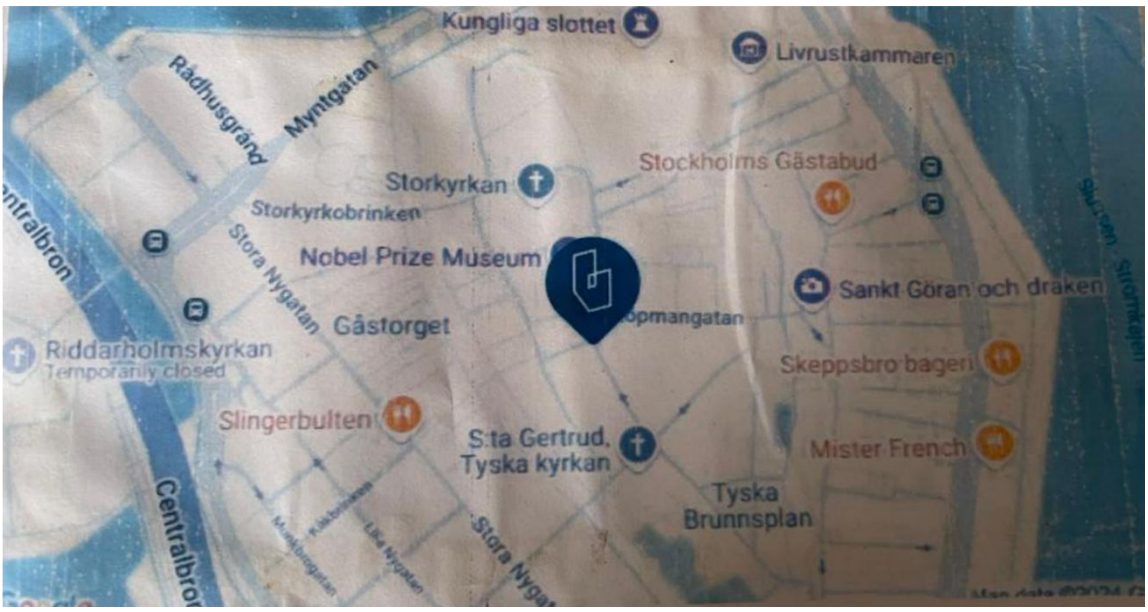

PLATE 3.6 LOCATION OF ONLINE CASE STUDY 1

Source: www.archdaily.com

PLATE 3.7 THE EXTERIOR VIEW OF ONLINE CASE STUDY 1

Source: www.archdaily.com

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LATE 3.8 THE EXTERIOR VIEW OF ONLINE CASE STUDY 1

Source: www.archdaily.com

3.5 Online Case Study 2: STOCKHOLMSHEM HQ, STOCKHOLM, SWEDEN

Brief Description: The Stockholmshem Headquarters in Skärholmen, Stockholm, is a contemporary high-rise designed by the architectural firm Söderberg Söderberg. Completed in 2024, this 23-storey mixed-use development integrates office spaces, residential units, and a youth centre, reflecting Stockholmshem's mission to decentralize municipal administration and engage more directly with local communities. Strategically located in one of Sweden's first 'million program' suburbs, the building aims to revitalize the Skärholmen Centre by increasing foot traffic and fostering a vibrant, mixed-use environment. Its design draws inspiration from ancient Roman urban planning, incorporating elements like terraces, public squares, and monumental forms to enhance the area's identity.

Merits

- Modular and Flexible Design
- Sustainable Features

Demerits

- The extensive glass façade, while enhancing natural light, may lead to thermal discomfort in colder climates, potentially resulting in heat loss and increased energy consumption.
- While the modular design offers flexibility, it may lead to a lack of architectural uniqueness. The standardized approach could result in a building that feels generic and lacks distinctive character

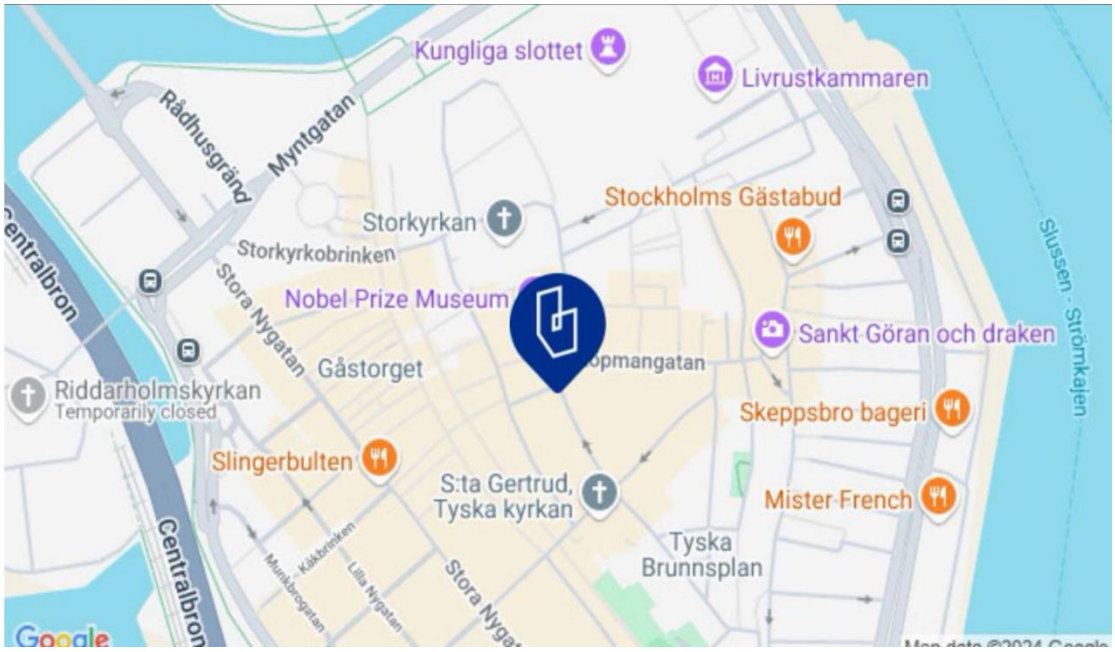

PLATE 3.9 THE LOCATION OF ONLINE CASE STUDY 2

Source: www.archdaily.com (2021)

PLATE 4.0 THE EXTERIOR OF ONLINE CASE STUDY 2

Source: www.archdaily.com (2021)

PLATE 4.0 THE EXTERIOR OF ONLINE CASE STUDY 2

Source: www.archdaily.com (2021)

CHAPTER FOUR

DESIGN PROPOSAL

4.0 INTRODUCTION OF STUDY AREA/SITE SELECTION

4.1 HISTORY OF OSOGBO

Osogbo, a city in Osun State, Nigeria, has a rich history dating back to the 15th century. Founded by hunter Larooye, it grew into a major trade center and sacred city for Oya and Osun worship. The city flourished during the colonial era as a hub for cash crops and continued to develop after independence. Today, Oosogbo is known for its cultural heritage, including the osun osogbo sacred groove and the annual Osun Festival.

4.2 SITE LOCATION

The site is located at Abeere, Along State Secretariat, Osogbo, Osun State

PLATE 4:1 Map of Nigeria showing location of osun state

Source: Google images

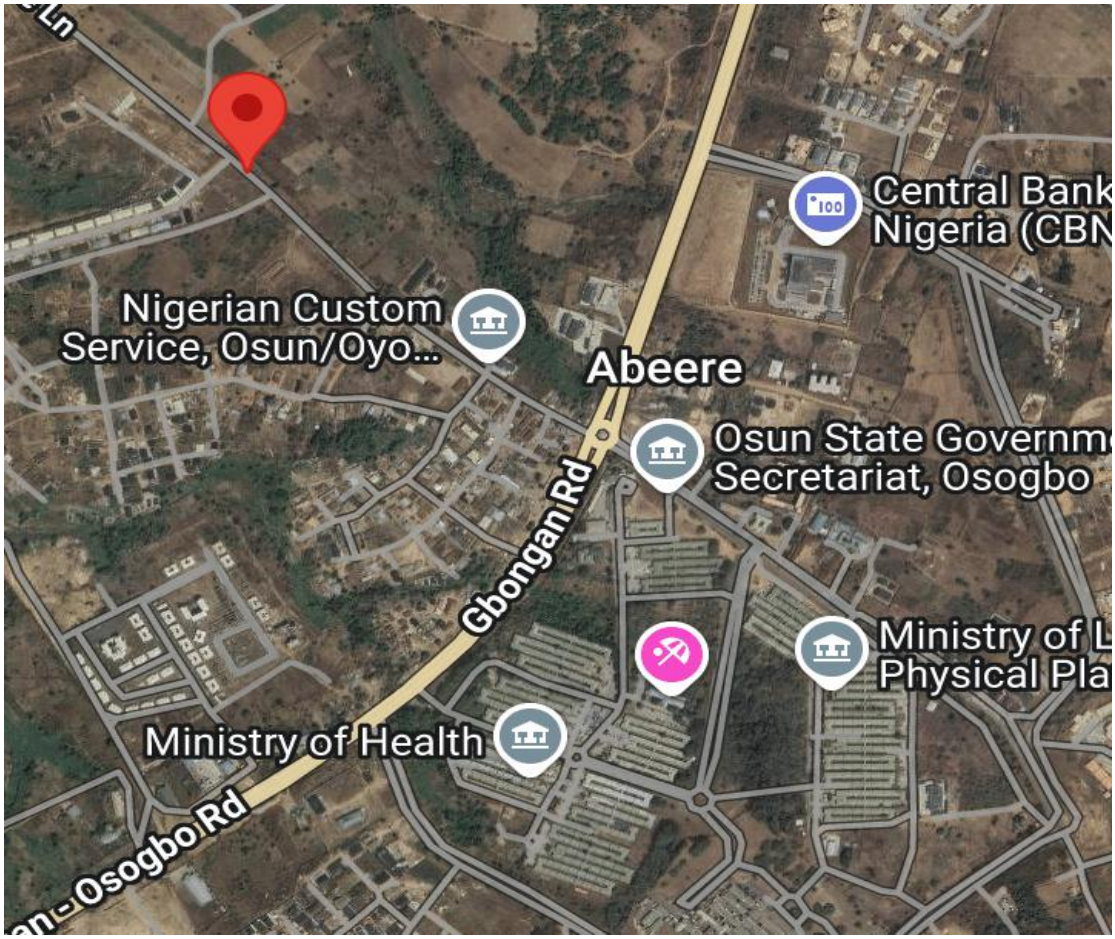

PLATE 4:2: Aerial View of Site.

Source: Google earth

4.3 SITE SELECTION CRITERIA

- Ease of access
- Security
- Availability of enough land
- Nature of site and Vegetation

- **Ease of Access:** The site can be accessed easily as there is an existing road that lead to it

- **Security:** The site is located close to the state secretariat thereby covered with government security ensuring the safety of staff. But also additional security would be provided on site.
- **Availability of enough land:** To adequately provide for various facility in the building and on site, the site was selected because it was wide enough to accommodate the proposed design.
- **Nature of soil and vegetation:** The topography of the site is fairly levelled and the slightly unlevelled part can be adequately levelled. The site also contain few trees and shrubs, which can help enhance the landscape of the site and also act as wind breaker during the harmattan.

4:4 SITE CHARACTERISTICS

Soil Type: The sub soil is mainly red laterictic soil, with barches of sandy soil. it is a high load bearing capacity soil.

Vegetation: The vegetation on the site consist of few trees of different species and shrubs, some trees and shrubs will be retained to enhance the landscape of the site, and also act as wind breakers during the harmattan.

Topography: The topography of the site is fairly levelled and the slightly unlevelled part can be adequately levelled

Accessibility: The site is accessible by an existing road along the adjoinging buildings which leads to the site.

4.5 SITE ANALYSIS

A site analysis involving a study of the site is carried out, it takes into consideration natural and man - made components present in and around the site as well as climatic

conditions of osun state. The picture below shows a schematic summary of the analysis of the proposed site.

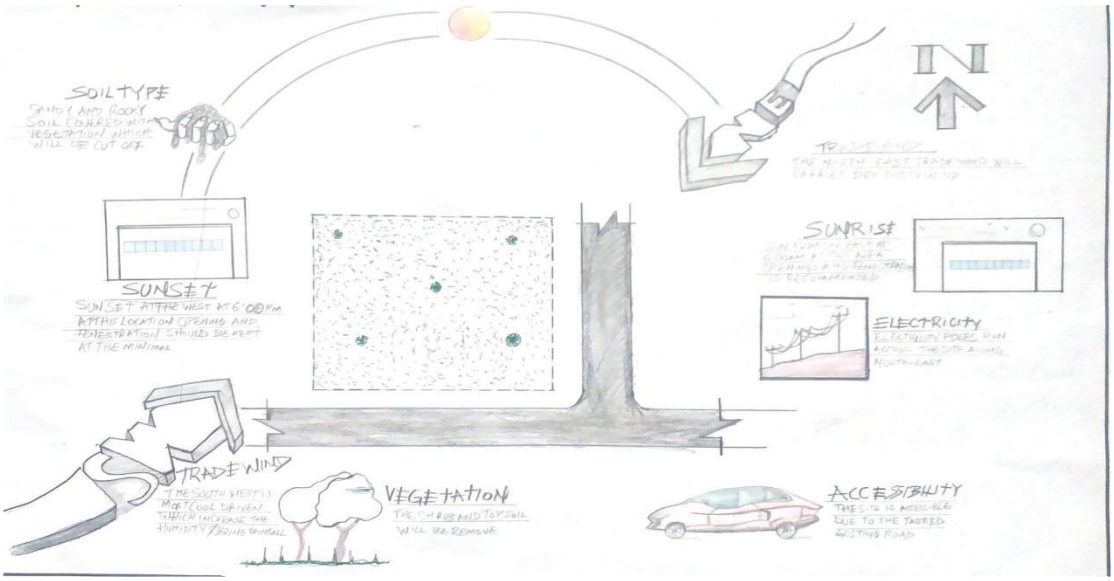

FIG 3.6 SITE ANALYSIS

Source; Authors fieldwork

GEOGRAPHICAL/CLIMATIC DATA

Osun state, located in southwestern Nigeria, has a tropical savanna climate characterized by warm temperatures and distinct wet and dry seasons. Here's a breakdown of its geographical and climatic data:

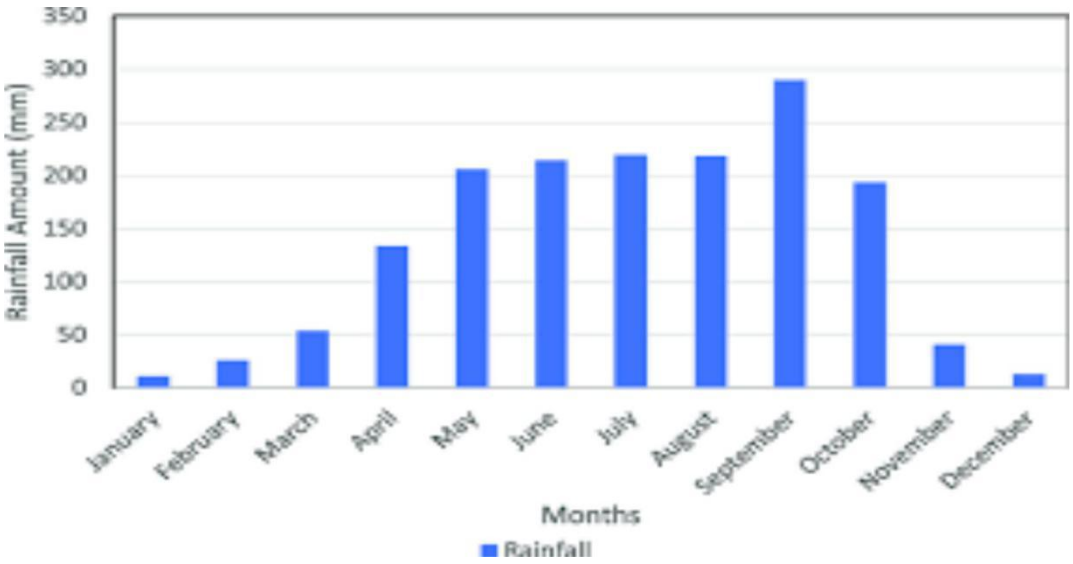

PLATE 4:3: AMOUNT OF RAINFALL.

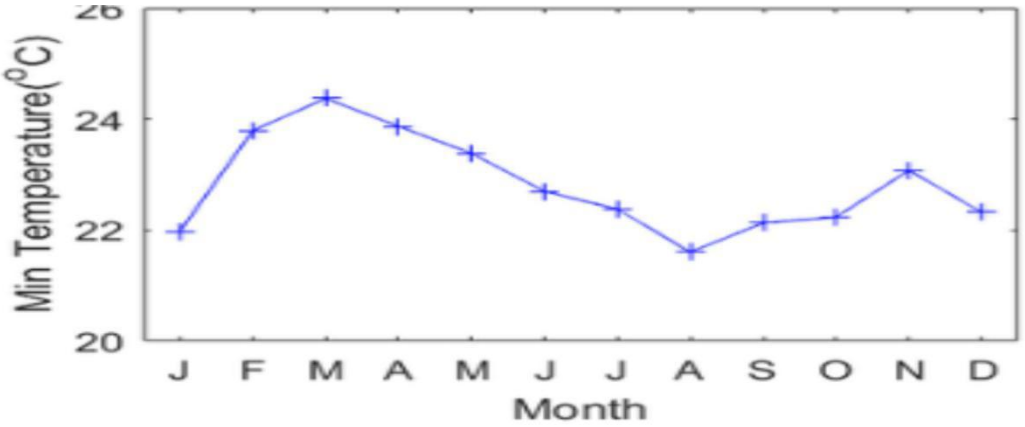

PLATE 4:4: MINIMUM TEMPERATURE

Source; researchgate

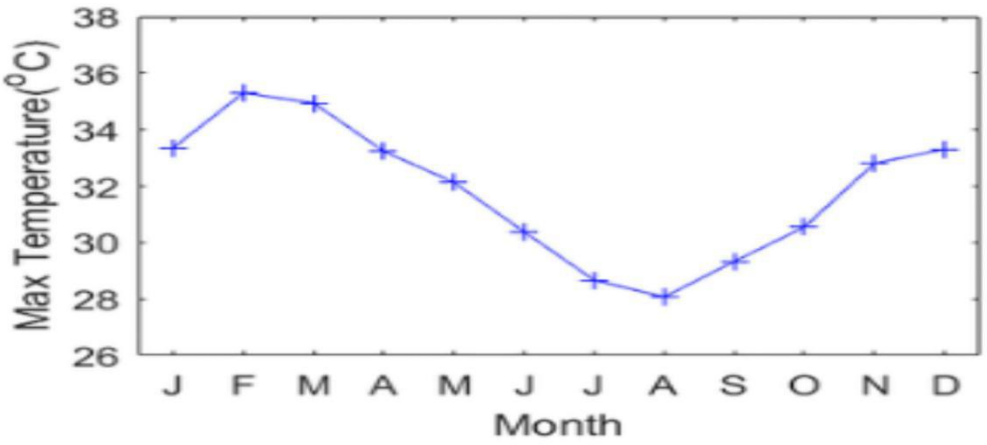

PLATE 4:5: MAXIMUM TEMPERATURE

Source; researchgate

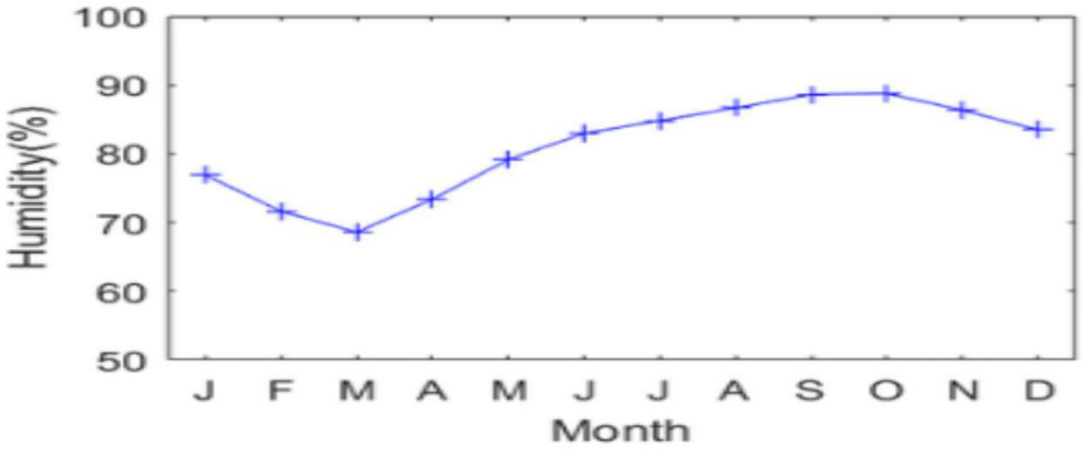

PLATE 4:5: HUMIDITY

Source;reaserchgate

4.6 ANALYSIS OF THE IMMEDIATE ENVIRONMENTAL CONDITIONS OF THE SITE

- Site features and infrastructure: The site features electrical lines which proposes that open power supply is promptly accessible inside the site.
- Perfectly drained soil: Soil water moves through easily to allow good soil aeration and at the same time sufficient amount is retained for plant growth. other features are water supply and an access road.
- Noise Sources: There are no much noises on the site but few noises that can be heard from surrounding structures.
- Vegetation: The vegetation on the site consists of few trees of different species and few shrubs. The site is relatively gentle sloping and has a high bearing capacity soil.

Prevailing wind direction & sun - path analysis

The two predominant winds blowing across this area are the south west trade wind and the north east trade wind. The former, which blow across the atlantic ocean, is characteristically cold and result in the wet season. Being a cold wind, it is capable of holding much moisture contents across the ocean, and hence an increase in relative humidity of the area affected. However, the north east trade wind, which blows across the sahara desert, is dusty and dry wind. consequently, the two predominant seasons experienced in this area are characteristically marked by two wind types. The summer (the season between spring autumn when the sun is hot and there are many flowers) is experienced between April and September, when the south west trade wind is more predominant, while the winter season is shortly marked between November and march, when the north east trade wind is more predominant. This later

season(winter) is however characterised by cool and hazy mornings, couple with dusty afternoons, because of the dust particles it bring forth the desert. to reduce the effects of wind driven, trees were planted.

Sunrise and sunset

The sun rises from the east in the aerly hours of the morning at about 6:30am -7:00am and sets in the west at about 6:45pm in the evening daily.

Accessibility

The site is accessible by an existing road along the state secretariat which leads to the site

Man made features

- Electricity
- Footpath
- Noises

4.7 PROPOSED DESIGN

The proposed design is the design of an office complex which is rooted in the core objectives of sustainability, flexibility, functionality, and aesthetic excellence, while also responding sensitively to the environmental, infrastructural, and socio-economic context of the selected site.

DESIGN CONSIDERATION

The following are the factors considered when designing the building:

1. **Aesthetics**: In any architectural design, aesthetic is most common factor to consider which shall be achieved by the use of attractive and lively finishing materials

2. **Ventilation**: This includes the orientation of the building, sizes and location of fenestration, vegetation.
3. **Circulation**: Appropriate and well-articulated pattern of circulation in a building alleviates confusion and at the same time tailor the movement of workers to their respective destination
4. **Security**: The provision of security in the office complex involves the protection of workers, the building and its contents.
5. **Accessibility**

4.8 DESIGN CONCEPT

The design approach was based on functionalism, aesthetics, which is an architectural principle that says that building should be designed base solely on purpose and function of the building.

PROJECT GOAL

The proposed design is the design of an office complex which emphasis on the safety of workers and business partners.

The office complex provides worker with facilities and other functional spaces, these include:

Reception & waiting area

Cafeteria

Car Park

APPRAISAL OF PROPOSED SCHEMES

An appraisal of a proposed scheme for office complex involves evaluating the plans feasibility, effectiveness, and potential impact, which includes:

I. LOCATION AND ACCESSIBILITY

- Safety and security
- Accessibility for workers with disabilities

II. CAPACITY AND ACCOMODATIONS

- Numbers of workers and clients to be accomodated
- office types(open, co working space) and amenities (e.g desk,tables etc
- common areas(e.g cafetaria)

III. INFRASTRUCTURES AND AMENITIES

- Water and electricity supply
- sanitation and waste management
- internet and wifi connectivity

IV. MANAGEMENT AND SUPERVISION

- Rules and regulations
- Maintenance and repair procedures

V. COST AND FUNDING

- Construction and operational costs
- funding sources(e.g private investment, government)

VI. SUSTAIN ABILITY AND ENVIRONMENTAL IMPACT

- Energy efficiency and renewable energy sources
- water conservation measures

VII. FUTURE EXPANSION AND FLEXIBILITY

- Potential for expansion and renovation

VIII. COMPLIANCE WITH REGULATIONS

- Adherence to local building codes and regulations
- Compliance with accessibility and safety standard

EQUIPMENT AND OPERATIONAL AND PERFOMANCE REQUIREMENT

Designing an Office Complex involves considering various equipment, operational, and performance requirements to ensure the facility meets the needs of its residents effectively and efficiently, which includes:

FURNITURES

Desk & chairs

storage box

common area furnitures

KITCHEN APPLIANCES

Refrigerators

cooker/oven

microwaves and toaster

dishwasher

CLEANING EQUIPMENT

vacuum cleaner, mops and brooms

trash bins and recycling containers

SAFETY EQUIPMENT

fire extinguishers

smoke detector and alarm systems

first aid kits

TECHNOLOGICAL EQUIPMENT

wifi and networking

television and entertainment system

OPERATIONAL REQUIREMENT

FACILITY MANAGEMENT

MAINTENANCE SCHEDULE

CLEANING PROTOCOL

SECURITY MEASURES

RECEPTION AND CHECK IN/OUT PROCEDURES

SUPPORT SERVICE

EMERGENCY PROCEDURE

PERFORMANCE REQUIREMENT

Comfort And Usability

Space Planning

Noise Control

Lightning And Ventilation

SAFETY AND COMPLIANCE

Building Code And Regulations

Accessibility

EFFICIENCY

Energy Efficiency

Water Efficiency

USER SATISFACTION

Quality Of Amenities

The design of an office complex requires a comprehensive approach to equipment, operations, and performance addressing these requirement effectively ensures that the office complex provides a safe, comfortable and functional living environment for its residents.

4.9 SCHEDUELE OF ACOMMODATION

S/N	REQUIRED UNIT	LENGTH	WIDTH	AREA	NO. REQ.
1	Entrance	9200	4100	3772000	1
2	Reception & Waiting Area	15600	9000	140400000	1
3	Cafetaria	16000	8000	12800000	1
4	Kitchen	1100	4500	49500000	1
5	Store	4500	2500	11250000	1
6	Toilet	1300	1000	1300000	38
7	Open Office 1	13000	13500	175500000	16
8	Open Office 2	13000	16200	210600000	14
9	Open Office 1	12000	14500	174000000	1
10	Exit 1	27000	1700	4590000	1
11	Exit 2	12800	4500	57600000	1

Source: Author's fieldwork

FUNCTIONAL RELATIONSHIP

Functional relations in architectural design refer to the way in which different spaces, elements, and components of a building interact and support each other to achieve the intended purpose of the structure. These relations are crucial for creating efficient,practical, and aesthetically pleasing environments.

CHAPTER FIVE

5.0 PROJECT APPRAISAL

5.1 DESIGN CONCEPT

To achieve a spatial configuration in the design of an office complex that facilitates user orientation, way finding and efficient office usage by the application of the findings in this study, certain design guidelines and recommendations studied are adopted as the basis for evolving a conceptual framework on which the design is built.

Building Form and Floor Plan: Equally, functionally related activity areas form zones consciously planned to preserve the sense of place' and connectivity between spaces. This entails creating clear, logical hierarchies of such other architectural way finding elements as markers, edges and paths to facilitate user cognitive perception and orientation in space.

Graphic Information Way finding Design: A clear, organized set of sign elements are potential elements in any good way finding design scheme. In this process, therefore, related graphic devices such as wall and Floor graphics, strategic placement of sculpture, and art programs form directional components of the way finding plan.

Design Concept Synthesis: Researching case studies helped to give direction in determining best practices in solving the wayfinding and orientation design issues in office complex. Thus, this informs the following configuration of spaces to achieve legibility in the design:

- Simple floor layout with immediate visual physical access to various designated offices destinations.
- Visual perception of major circulation pathways and systems, especially vertical transport systems to ease orientation and locomotion.
- Visual prominence and definition of major entry points to facilitate access to designated office destinations.
- Design Philosophy To achieve a successful architectural wayfinding in the design of the office complex the author takes on the universal design approach which seeks to design environments that are specifically inclusive and equal for all users, the key idea being the creation of spaces or features that do not treat some people differently.

CONSTRUCTION METHODS

The soil type of the proposed site will highly be instrumental to the construction considerations to be explored in order to bring about the structure build ability. However, the proposed site is a gently sloped site with good draining capacity and a good safe load bearing capacity and as such the need for additional strengthening and treatment of soil before construction may not be needed unless the geological experts requests so. Subsoil water drainage is necessary to improve the run-off of ground water to maintain the water table at some depth below the surface with a purpose of;

1. Improving the soil stability.

2 Prevent surface flooding.

3. Avoiding dampness in underground occupation such as basement or the ground floor.

4. Reducing the humidity in the immediate environment of the building structure.The building lines are taken into consideration at the inception of this design,

so with the building lines and the existing access road other wall flanks can be set out at right angles to the building line:

1. By using a large builders square placed against the building line and sideline produced to length required.

2. By using the proprietary optical square which comprises two small sighting telescopes permanently set at precise sight angles to one another

3. By using an optical instrument with a base ring graduated to degrees and sighting along angles required.The method of construction is as follows

- Digging of trenches
- Filling of hardcore
- Block laying
- Filling of hollow blocks with hardcore
- Filling of laterite into foundation
- Casting of mass oversite slab Laying of block wall
- Casting of column and lintel Roof construction
- Plastering Fixing of window frame Finishing

SUB-STRUCTURE

This is the part of the building that has direct contact with the ground and carries the majority of the building load. The stability of the proposed structure depends to a large extent on the type and load which the proposed design will exert on the ground. The strip foundation is to be adopted as the foundation type for this project and its depth is to be determined by a combined effort of the geological experts and structural engineers. Recommendations on the depth and foundation type proposed will be subjected to the architect's approval so as to get a unified approach which will in every possible means align with the proposed design. All other details as regards the

material type, configurations, spacing to be used during the construction of the substructure will be to the structural engineer's specification and design.

SUPER STRUCTURE

The super structure comprises different components and because of the complexity of the proposed structure, explicit care and consideration needed to be explored all in a bid to recommend the best forms of materials to be used to achieve the concept taking into consideration cost, structural stability, maintenance and buildability.

1 The Walls: The internal walls basically serving as party walls were constructed entirely of sandcrete block walls with reinforced concrete columns at the end to keep the structure firm. The structure is to be constructed with 150mm sandcrete hollow blocks and reinforced concrete for the floors. However, Expansion joint will be introduced at intervals of 25-30m to prevent buckling or cracking which may occur due to temperature change and other factors.

2 Floor: Floor slab of 150mm reinforced concrete is to be used for the project.

3 Roof: Steel trusses are to be used for the roof carcass and long span aluminum roofing sheets are to be used. Adequate care needs to be taken during installation so as to achieve first and foremost the building plan and reduce the amount of wasted sheets to be placed while coupling the roof members. The roof slab incorporated mostly at the gutter of the auditorium section is to be covered with 3 layers of bituminous felt with sawdust and sand to reduce the heat radiation from the slab.

CONSTRUCTION MATERIALS

The choice of materials to be used is influenced by several factors, some of these factors include;

1 The availability of materials

2 The durability and suitability of such materials

3 The climatic situation/condition

4 The cost of material, etc.

SERVICES/ INFRASTRUCTURE

All necessary infrastructures ranging from access roads to power supply to mains water supply and drainage facilities are already existing on the proposed site. This will be needed to ensure that the centre is functional and self-sustaining. Electricity is to be tapped from the nearest electric pole at the side of the site to power activities within the centre. All roof drains runs to the underground drains which passes on to the main public drainage. Light fixtures and electrical wiring are to be concealed in the various ducts provided.

FIRE PROTECTION

Proper installation of cables and adequate power rating by the use of excessive current circuit breakers will help in minimizing the risk of fire outbreak especially through electrical fault. However, in the probable case of fire outbreak, the following shall help in quick quenching of the outbreak;

1. Adoption of the sprinkler system in every unit,

2. Installation of smoke/fire detecting alarms in all units,

3. Fire extinguishers are to be placed at strategic locations, and

4. Employment of the fire brigade services in the event of an outbreak.

VENTILATION

As much as possible, every space provided will be ventilated naturally but for efficiency sake, the auditorium section shall be serviced by split unit air conditioning system.

LIGHTING AND GLARE

The windows and courtyards provided will ensure that the centre is well lit. Glare which may result from natural lighting or the artificial one used in complementing It shall be hugely reduced by the use of shading devices and suitable building exterior colours that will significantly reduce or eliminate the glare. In order to reduce glare and contrast, bench tops and furniture generally will be of high reflectance i.e. light colours, likewise for the walls and ceiling.

NOISE CONTROL

In achieving noise level reduction, adequate setback from the main access road is provided. Buffer zones are provided also. Catering for the noise generated within the building, an internal buffer has been introduced by separating the noisy areas from the quiet areas

ACOUSTICS

Several spaces within the auditorium will require different acoustic considerations. The amount and location of acoustically absorptive finishes within a space dictates and helps to achieve comfort in such spaces. Partitions (walls, floors and ceiling) should maintain privacy and limit the transmission of noises that could cause distractions. Sound absorptive finishes are considered for the auditorium, the performance theatre and the exhibition spaces. Full height partitions with adequate sound isolation are provided also. External Works The walkways will be finished with interlocking paving stones to enhance the aesthetics of the surroundings. The vehicular access will be finished with asphalt for durability. Trees and shrubs will be planted at regular intervals in the car parks to serve as shades for the cars. All other spaces are landscaped with carpet-grass and randomly with trees and shrubs to absorb noise from surroundings and to reduce glare.

RECOMMENDATIONS AND CONCLUSION

Introduction

This section presents the general conclusion for the study, recommendations observed in the course of study and the areas identified in which further investigations can be carried out which were not treated in this research.

RECOMMENDATIONS

1. Conduct thorough feasibility studies: To ensure the project's success, it is essential to conduct thorough feasibility studies to identify potential risks and opportunities.

2. Incorporate sustainable design elements: The office complex should incorporate sustainable design elements, such as energy-efficient systems, green roofs, and recycled materials, to minimize its environmental impact.

3. Implement advanced technology: The office complex should implement advanced technology, such as building management systems and high-speed internet, to support the needs of businesses and employees.

CONCLUSION

The proposed office complex project aims to provide a modern, sustainable, and functional workspace that meets the needs of businesses and employees. Through careful planning, design, and construction, the project seeks to create a vibrant and productive environment that fosters collaboration, creativity, and well-being. By incorporating sustainable features, advanced technology, and innovative design elements, the office complex will set a new standard for office spaces in the area.

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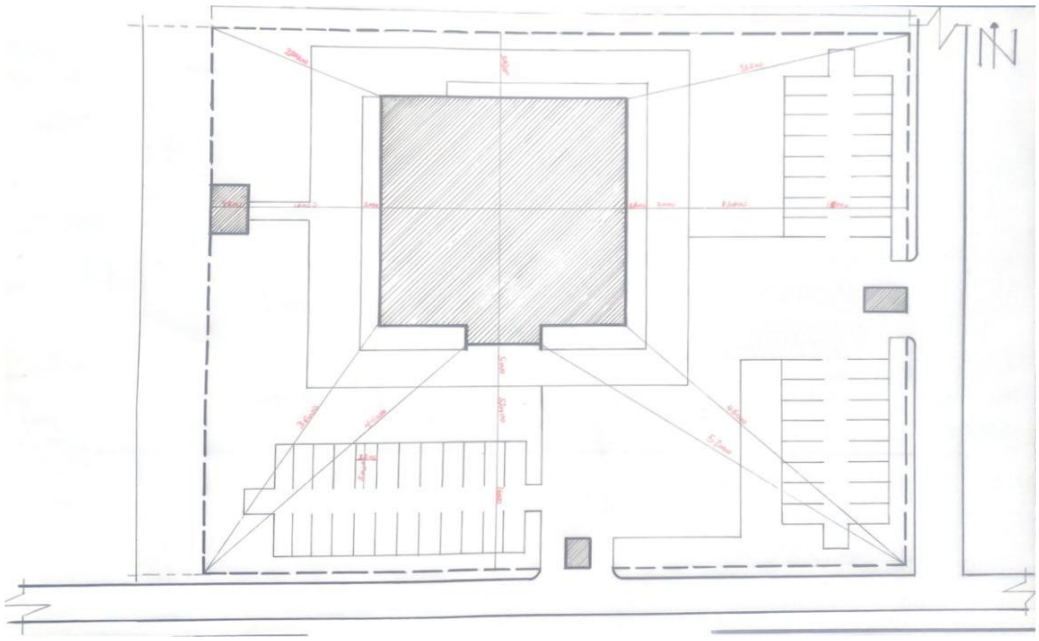
APPENDIX



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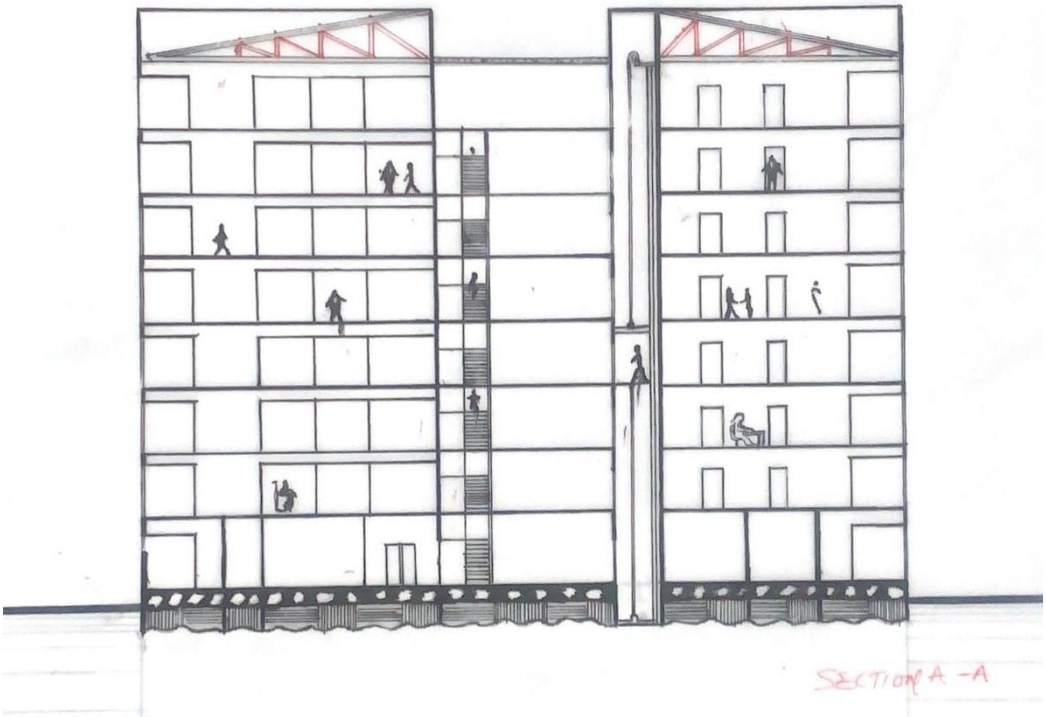

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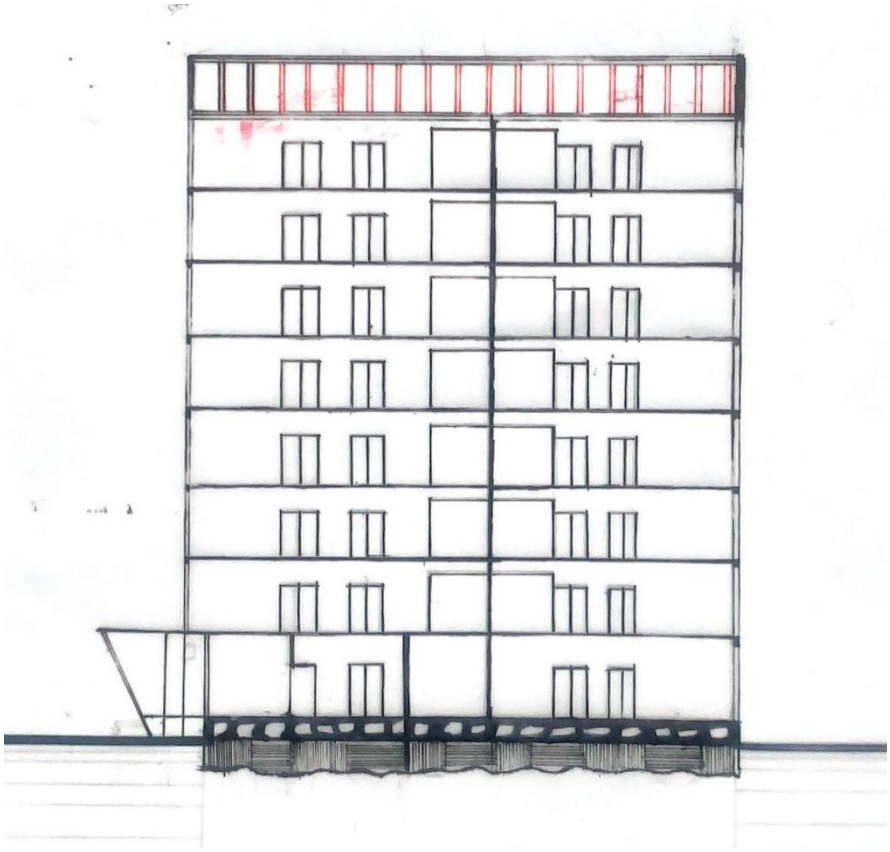

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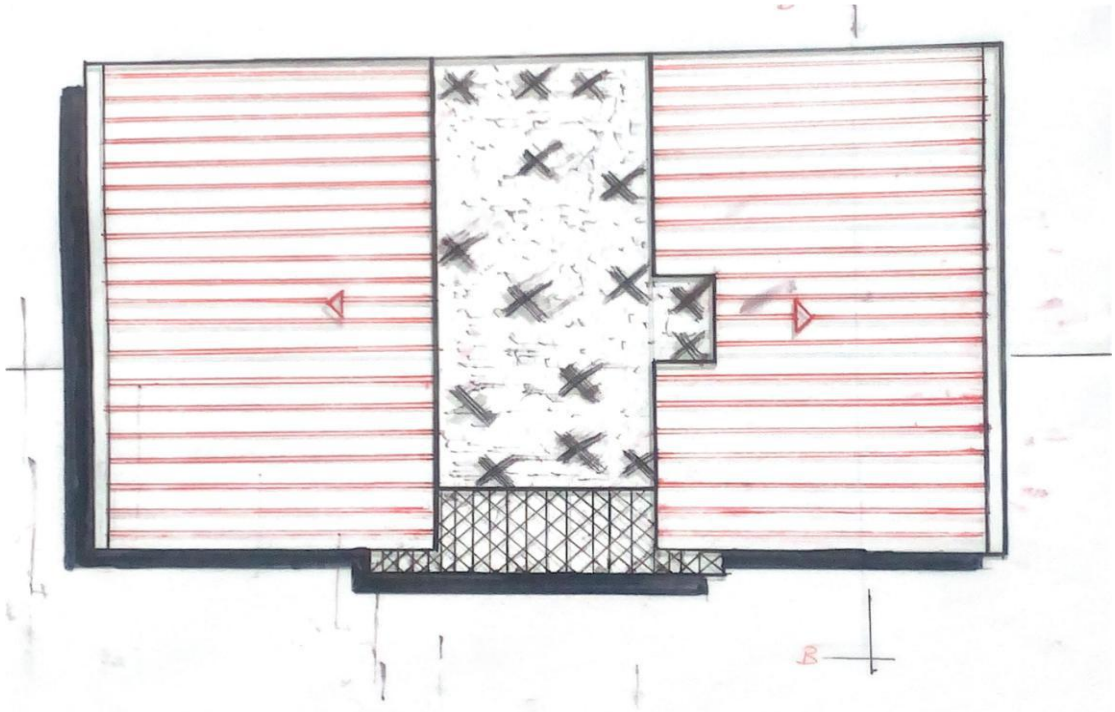

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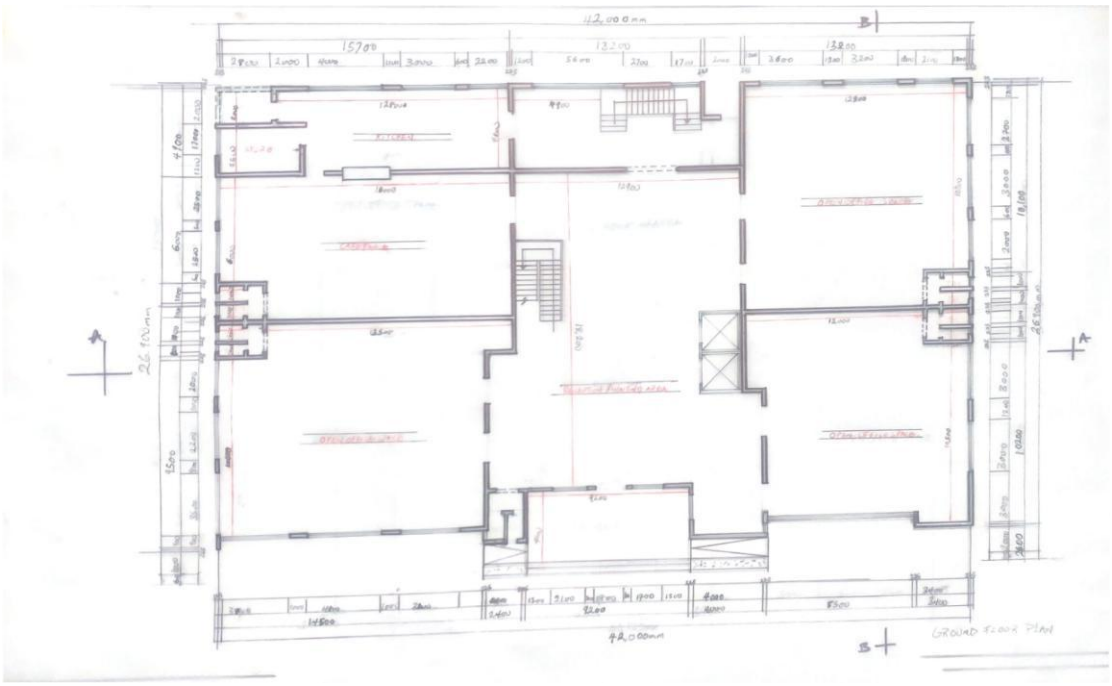

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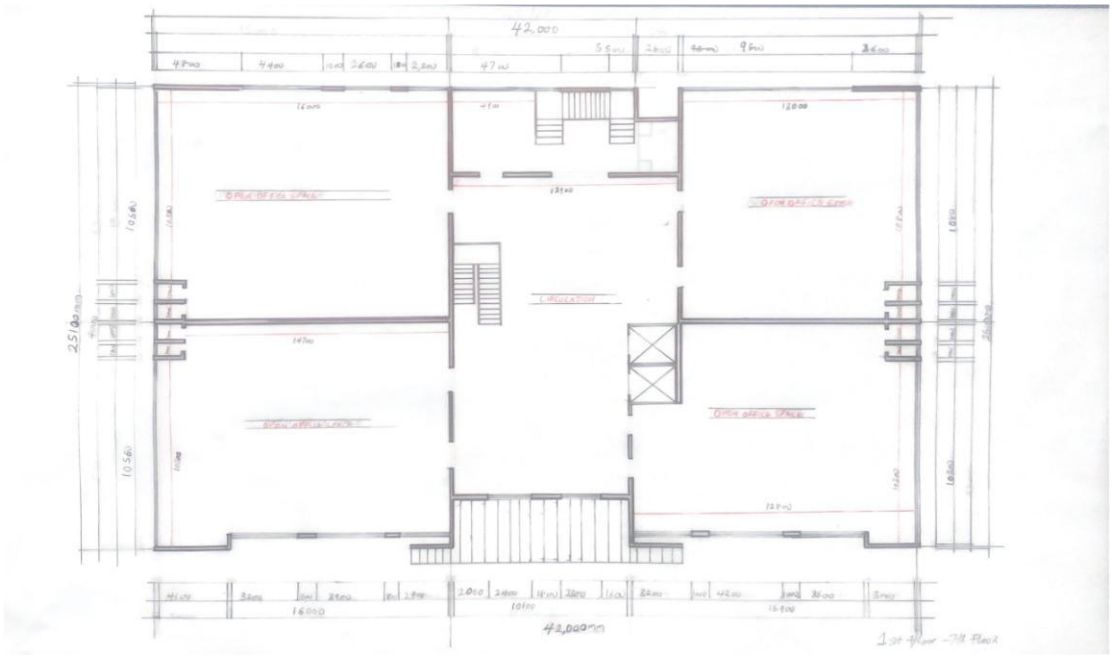

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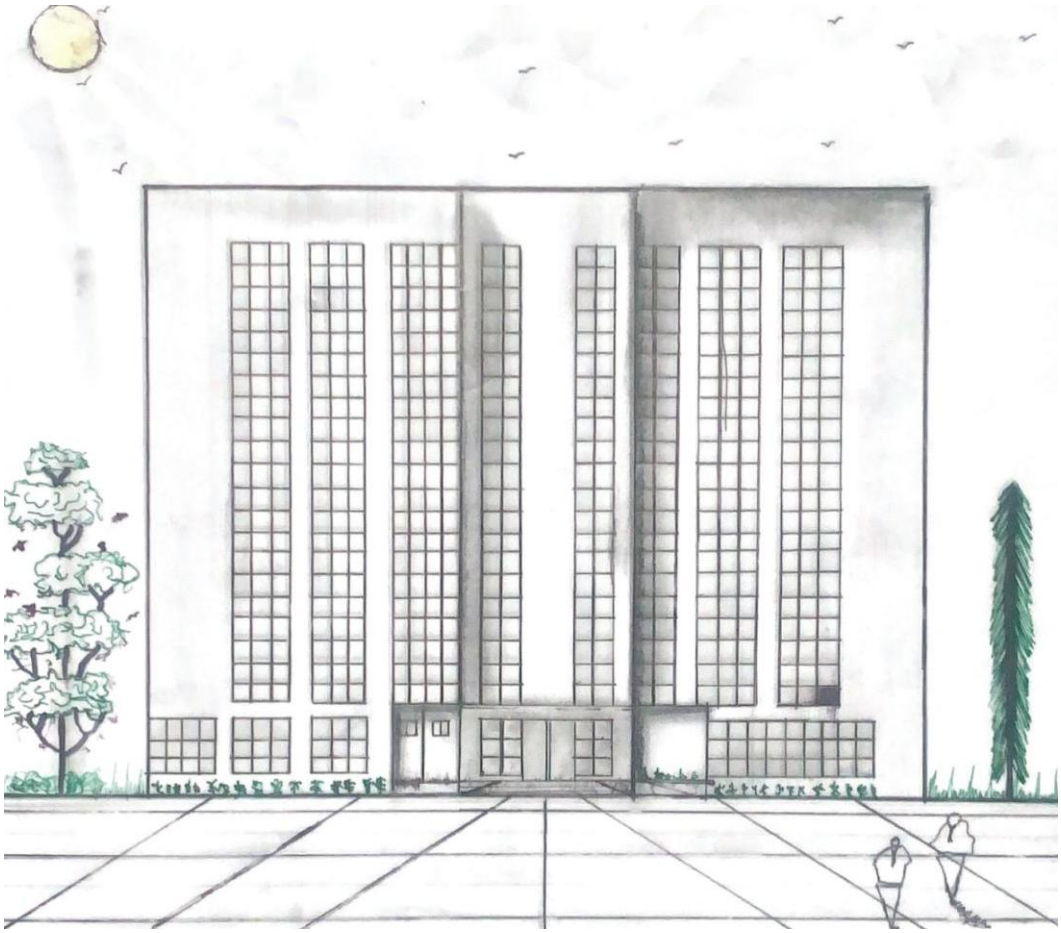

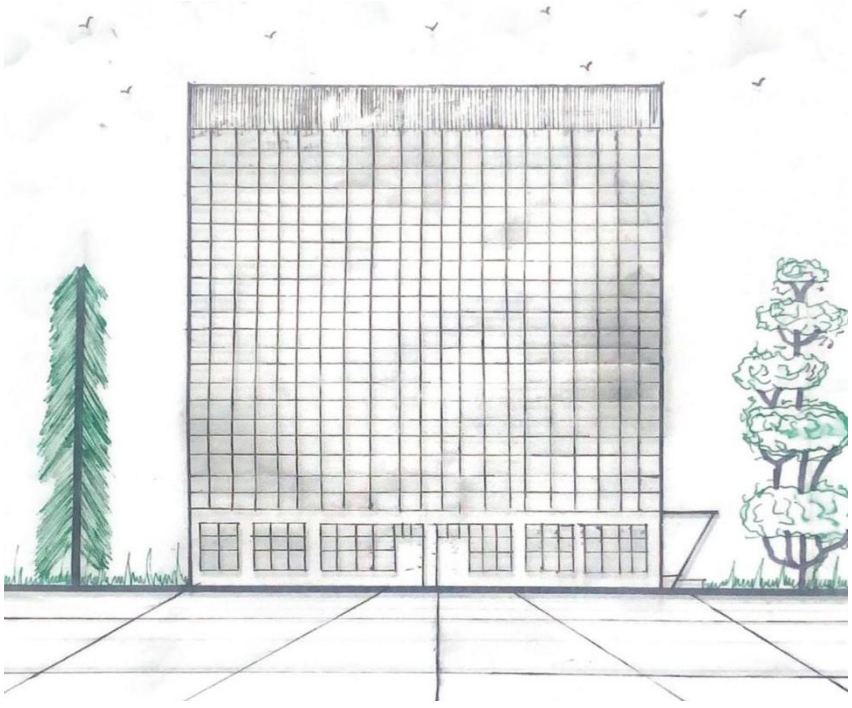

APPENDIX 7