

## **CHAPTER FOUR**

### **4.0. DESIGN PROPOSAL**

#### **4.1. INTRODUCTION**

The proposed Christ Apostolic Church Area Headquarters in Ilorin West Local Government is designed to serve as a vibrant hub for worship, fellowship, and community service. The project aims to create a functional, sustainable, and spiritually uplifting environment that reflects the church's values and mission.

The design concept revolves around the themes of light, community, and growth, incorporating modern architectural elements while minimizing environmental impact. The building's layout will maximize natural light and ventilation, fostering a sense of community through open spaces and gathering areas. Symbolic elements will be incorporated to reflect the church's values and mission.

The worship center will be a spacious and well-lit auditorium with seating capacity for 1,000 people, featuring a stage for worship and performances. The administration block will house offices for church administrators, meeting rooms, and storage facilities. The education block will comprise classrooms, libraries, and resource centers for Sunday school, Bible study, and other educational programs. Fellowship areas will include designated spaces for socialization, recreation, and community activities.

Sustainability features will be integrated into the design, including energy-efficient lighting and HVAC systems, rainwater harvesting and greywater reuse, solar panels for electricity generation, and landscaping with native plants and trees. Ample parking spaces and accessible pathways will be provided for members and visitors.

The project will be implemented in phases, with the construction of the worship center and administration block as the first phase. The development of the education block and fellowship areas will follow, with the installation of sustainability features and landscaping as the final phase. The estimated budget for the project is ₦500 million, with a projected timeline of 24 months for completion.

The proposed design for the Christ Apostolic Church Area Headquarters In Ilorin West Local Government will create a vibrant and sustainable community hub that reflects the church's values and mission. With careful planning, execution, and community engagement, this project will become a beacon of hope and spiritual growth for the community.

## 4.2 SITE LOCATION, DESCRIPTION, AND CRITERIA

### 4.2.1 SITE LOCATION MAP



#### **4.2.2. SITE SELECTION CRITERIA**

- LOCATION
- EASE OF ACCESS
- NATURE OF SITE AND VEGETATION
- SECURITY
- VEGETATION

#### **4.3. SITE CHARACTERISTICS**

##### **4.3 1. SOIL TYPE**

The soil type in Ilorin West Local Government, Kingstep Area, plays a significant role in informing architectural design. By understanding the soil conditions, architects can create buildings that are tailored to the site's specific needs. One of the primary benefits of knowing the soil type is that it allows architects to design foundations that are suitable for the soil conditions, ensuring the stability and safety of the building.

##### **4.3.2. VEGETATION**

The vegetation in Ilorin West Local Government, Kingstep Area, provides numerous benefits to the environment, wildlife, and human populations. One of the primary benefits is that it helps to maintain soil quality and prevent erosion. The roots of plants hold the soil in place, reducing the risk of landslides and soil degradation.

##### **Climate Regulation**

The vegetation in Kingstep Area also plays a crucial role in regulating the local climate. Trees and other plants provide shade, cool the air through evapotranspiration, and block winds,

reducing the impact of extreme weather conditions. This can help to mitigate the effects of climate change and create a more comfortable living environment for residents.

#### Aesthetic and Recreational Value

The vegetation in Kingstep Area also has aesthetic and recreational value. Green spaces and parks can provide opportunities for recreation, relaxation, and socialization, improving the overall quality of life for residents. Additionally, the natural beauty of the vegetation can attract tourists and support local economic development.

#### Air and Water Quality

Finally, the vegetation in Kingstep Area helps to maintain good air and water quality. Plants absorb pollutants and particulate matter, improving air quality and reducing the negative impacts of air pollution on human health. Vegetation also helps to filter rainwater, reducing the amount of pollutants that enter waterways and improving water quality.

### **4.3.3 TOPOGRAPHY**

The topography of Ilorin West Local Government, Kingstep Area, plays a significant role in architectural construction. One of the primary benefits is that it allows architects to design buildings that are tailored to the site's unique characteristics. By understanding the topography, architects can create buildings that work with the natural landscape, reducing the need for extensive excavation or grading.

#### **Natural Drainage**

The topography of Kingstep Area can also inform the design of natural drainage systems. By understanding the slope and elevation of the land, architects can design buildings and landscapes that direct water flow in a way that reduces the risk of flooding and erosion. This can help to protect the building and surrounding environment from water damage.

## **Building Orientation**

The topography of the area can also influence the orientation of buildings. By understanding the slope and aspect of the land, architects can design buildings that maximize natural light and ventilation, reducing the need for artificial lighting and heating. This can help to create more energy-efficient and sustainable buildings.

## **Site Planning**

The topography of Kingstep Area can also inform site planning decisions. By understanding the natural features of the land, architects can design buildings and landscapes that work with the existing topography, rather than trying to alter it. This can help to reduce construction costs and minimize the environmental impact of the building.

## **Aesthetic Appeal**

Finally, the topography of Kingstep Area can also contribute to the aesthetic appeal of buildings and landscapes. By incorporating natural features into the design, architects can create buildings that are visually striking and responsive to the surrounding environment. This can help to create a sense of place and connection to the natural world.

### **4.3.4. DRAINAGE**

The drainage system in Ilorin West Local Government, Kingstep Area, plays a crucial role in informing architectural design. One of the primary benefits is that it helps to prevent water accumulation and flooding, which can damage buildings and pose health risks to occupants. By understanding the drainage patterns in the area, architects can design buildings and landscapes that direct water flow in a way that reduces the risk of flooding and erosion.

## **Site Planning**

The drainage system in Kingstep Area can also inform site planning decisions. By understanding the natural drainage patterns, architects can design buildings and landscapes that work with the existing drainage system, rather than trying to alter it. This can help to reduce construction costs and minimize the environmental impact of the building.

## **Building Design**

The drainage system can also influence building design. For example, architects can design buildings with sloping roofs or surfaces that direct water flow towards drainage channels, reducing the risk of water accumulation. Additionally, buildings can be designed with waterproofing measures to prevent water damage.

## **Stormwater Management**

The drainage system in Kingstep Area can also inform stormwater management strategies. By understanding the drainage patterns, architects can design buildings and landscapes that incorporate stormwater management features, such as rain gardens or green roofs, which can help to reduce stormwater runoff and alleviate pressure on drainage systems.

## **Sustainability**

Finally, understanding the drainage system in Kingstep Area can also contribute to sustainable design. By designing buildings and landscapes that work with natural drainage patterns, architects can reduce the need for artificial drainage systems, which can be energy-intensive and contribute to environmental degradation. This can help to create more sustainable and environmentally friendly buildings.

#### **4.3.5. ACCESSIBILITY**

The Christ Apostolic Church Area Headquarters situated in Ilorin West Local Government, Kingstep Area, offers several benefits in terms of accessibility. One of the primary advantages is that it provides easy access to church members and visitors, facilitating attendance at worship services, meetings, and other events.

##### **Convenience for Members**

The accessibility of the church headquarters is particularly beneficial for members who live in or near Kingstep Area. The proximity of the church to residential areas makes it convenient for members to attend services and participate in church activities without having to travel long distances.

##### **Community Outreach**

The accessibility of the church headquarters also facilitates community outreach and evangelism. The church's location in a residential area makes it easily accessible to potential visitors, allowing the church to reach out to the community and share its message with a wider audience.

##### **Economic Benefits**

The accessibility of the church headquarters can also have economic benefits for the local community. By attracting visitors and members to the area, the church can contribute to the local economy through increased foot traffic and spending at local businesses.

#### **4.4. GEOGRAPHICAL AND CLIMATIC DATA**

Geographical and Climatic Data of Ilorin West Local Government, Kingstep Area Ilorin West Local Government, Kingstep Area, is located in Kwara State, Nigeria. Geographically, the area

is characterized by a tropical savanna climate, with distinct wet and dry seasons. The region's topography is generally flat, with some areas featuring gentle slopes.

### **Climate**

The climate in Kingstep Area is marked by high temperatures throughout the year, with average temperatures ranging from 25°C to 35°C. The wet season typically lasts from May to October, with the most significant rainfall occurring in July and August. The dry season, which lasts from November to April, is characterized by low humidity and minimal rainfall.

### **Rainfall**

The rainfall pattern in Kingstep Area is typical of the tropical savanna climate, with most of the rainfall occurring during the wet season. The area receives an average annual rainfall of around 1,000 mm, with the rainfall being essential for agriculture and other water-dependent activities.

### **Vegetation**

The vegetation in Kingstep Area is characterized by a mix of grasses, shrubs, and trees, with the dominant vegetation type being the Guinea savanna. The area's vegetation is influenced by the climate and soil type, with many plant species adapting to the region's distinct wet and dry seasons.

### **Geographical Features**

The geographical features of Kingstep Area include its proximity to the River Niger, which provides opportunities for water-based activities and supports the local ecosystem. The area's flat topography and fertile soil make it suitable for agriculture, with many residents engaging in farming and other agricultural activities.



#### **4.5. ANALYSIS OF IMMEDIATE ENVIRONMENTAL CONDITIONS**

The immediate environmental conditions of Ilorin West Local Government in Kingstep Area are shaped by its geographical location and human activities. The area experiences a tropical savanna climate with distinct wet and dry seasons, which influences the vegetation and land use patterns. The region's topography is generally flat, with some areas featuring gentle slopes, making it suitable for agriculture and urban development.

##### **Environmental Features:**

- Vegetation: The area's vegetation is characterized by a mix of grasses, shrubs, and trees, with the dominant vegetation type being the Guinea savanna.
- Water Resources: The proximity to River Niger provides opportunities for water-based activities and supports the local ecosystem.
- Land Use: The area's flat topography and fertile soil make it suitable for agriculture, with many residents engaging in farming and other agricultural activities.

##### **Environmental Challenges:**

- Urbanization and Waste Management: The area faces challenges related to urbanization, including inadequate waste management and environmental degradation.
- Water Scarcity: Access to public pipe-borne water is a significant issue in the area, with many residents relying on alternative sources of water.
- Crime and Safety: Some areas in Ilorin West experience high crime rates, with certain neighborhoods being considered crime hotspots.

### **Sustainable Development:**

- Urban Planning: Effective urban planning is crucial to address the environmental challenges facing the area, including waste management and crime prevention.
- Sustainable Agriculture: Promoting sustainable agricultural practices can help maintain soil fertility and reduce environmental degradation.

## **4.6. PROJECT ANALYSIS AND DESIGN CRITERIA**

### **4.6.1. PROJECT GOALS**

The proposed Christ Apostolic Church Area Headquarters in Kingstep Area, Ilorin West Local Government, aims to provide a central hub for worship, fellowship, and community service. The project goals are multifaceted and include:

#### **Spiritual Growth and Development**

The primary goal of the project is to provide a sacred space for spiritual growth and development. The church headquarters will serve as a hub for worship, prayer, and Bible study, providing opportunities for members to deepen their faith and relationship with God.

#### **Community Building and Fellowship**

Another key goal of the project is to foster community building and fellowship among church members. The church headquarters will provide a welcoming space for members to gather, and its programs will promote unity, cooperation, and mutual support.

#### **Education and Training**

The project also aims to provide education and training programs for church members and the wider community. These programs will focus on spiritual development, leadership training, and community service.

## **Community Outreach and Service**

The Christ Apostolic Church Area Headquarters will also prioritize community outreach and service. The church will engage in various outreach programs, including evangelism, community development, and social service, to serve the needs of the local community.

## **Sustainable and Functional Design**

The project will prioritize sustainable and functional design, incorporating energy-efficient systems, natural light, and ventilation. The building's design will also reflect the values and mission of the church, providing a welcoming and inclusive space for all users.

### **4.6.2. FUNCTIONAL AND SPATIAL CRITERIA**

The Christ Apostolic Church Area Headquarters requires a functional and spatial design that meets the needs of its users. The functional criteria will prioritize spaces that facilitate worship, fellowship, and service, while the spatial criteria will consider the site's unique characteristics and the church's values.

## **Worship Spaces**

The worship spaces should be designed to accommodate large congregations, with adequate seating, lighting, and sound systems. The design should also prioritize acoustics, ensuring that the spoken word and music are clearly audible to all. The worship spaces should be flexible and adaptable to accommodate different types of services and events.

## **Administrative Offices**

The administrative offices should be designed to provide a functional and efficient workspace for church staff. The offices should be equipped with necessary amenities, including meeting rooms, storage spaces, and technology infrastructure. The design should prioritize privacy and confidentiality, ensuring that sensitive information is protected.

## **Community Facilities**

The community facilities should be designed to promote fellowship and socialization among church members. The facilities should include spaces for social gatherings, meetings, and events, as well as amenities such as kitchens and restrooms. The design should prioritize accessibility and flexibility, ensuring that the facilities can be used for a variety of purposes.

## **Sustainable Design**

The design of the Christ Apostolic Church Area Headquarters should prioritize sustainability, incorporating energy-efficient systems, natural light, and ventilation. The building's design should also consider the use of sustainable materials and minimize waste during construction. By prioritizing sustainability, the church can reduce its environmental impact and promote eco-friendly practices.

## **Accessibility and Safety**

The design of the Christ Apostolic Church Area Headquarters should also prioritize accessibility and safety. The building should be designed to be accessible to all users, including those with disabilities, and should incorporate safety features such as emergency exits and fire suppression systems. By prioritizing accessibility and safety, the church can ensure that all users feel welcome and secure.

### **4.6.3. APPRAISAL OF PROPOSED SCHEMES IN SPACE, SIZE AND RELATIONSHIP**

The proposed Christ Apostolic Church Area Headquarters requires a thorough appraisal of its space, size, and relationship to ensure that it meets the needs of its users. Here are some key considerations:

## **Space Requirements**

- **Worship Spaces:** The worship spaces should be designed to accommodate large congregations, with adequate seating, standing room, and circulation space. A minimum of 1,000 square meters of floor space may be required to accommodate a large congregation.
- **Administrative Offices:** The administrative offices should be designed to provide a functional and efficient workspace for church staff. A minimum of 200-300 square meters of floor space may be required to accommodate the administrative offices.
- **Community Facilities:** The community facilities should be designed to promote fellowship and socialization among church members. A minimum of 500-700 square meters of floor space may be required to accommodate community facilities such as meeting rooms, kitchens, and restrooms.

## **Size and Scale**

- **Building Size:** The building size will depend on the specific needs of the church and the site constraints. A building size of 2,000-3,000 square meters may be suitable for the Christ Apostolic Church Area Headquarters.
- **Height and Massing:** The height and massing of the building should be designed to be compatible with the surrounding context. A building height of 2-3 stories may be suitable for the church headquarters.

## **Relationship between Spaces**

- **Proximity:** The worship spaces, administrative offices, and community facilities should be designed to be in close proximity to each other to promote efficiency and convenience.
- **Circulation:** The circulation paths should be designed to be clear and efficient, with adequate signage and wayfinding.

- Visual Connections: The design should incorporate visual connections between spaces to promote a sense of community and connection.

### **Site Planning**

- Site Size: The site size will depend on the specific needs of the church and the building design. A site size of 1-2 acres may be suitable for the Christ Apostolic Church Area Headquarters.
- Parking and Access: The site should be designed to provide adequate parking and access for church members and staff.
- Landscaping: The site should be landscaped to promote a sense of serenity and community.

### **4.6.4. EQUIPMENT AND OPERATIONAL PERFORMANCE REQUIREMENTS**

The Christ Apostolic Church Area Headquarters will require various equipment and operational systems to ensure its effective functioning. Here are some of the key equipment and operational performance requirements:

#### **Audio-Visual Equipment**

- Sound System: A high-quality sound system will be required to ensure that the spoken word and music are clearly audible to the congregation.
- Projectors and Screens: Projectors and screens will be required for presentations, videos, and other visual aids during services and events.
- Microphones: Microphones will be required for the worship leaders, speakers, and other users.

#### **Lighting and Electrical Systems**

- Lighting: A well-designed lighting system will be required to create a welcoming and comfortable atmosphere for worship and other activities.

- Electrical Systems: The electrical systems should be designed to meet the needs of the church, including powering audio-visual equipment, lighting, and other essential systems.

### **HVAC and Ventilation Systems**

- Heating, Ventilation, and Air Conditioning (HVAC): A reliable HVAC system will be required to maintain a comfortable temperature and air quality in the church.
- Ventilation: The ventilation system should be designed to provide adequate airflow and ventilation to prevent the buildup of stale air.

### **Security and Safety Systems**

- Security Cameras: Security cameras will be required to monitor the church premises and ensure the safety of users.
- Alarm Systems: Alarm systems will be required to detect and respond to potential security threats.
- Fire Safety Systems: Fire safety systems, including fire alarms and suppression systems, will be required to ensure the safety of users in the event of a fire.

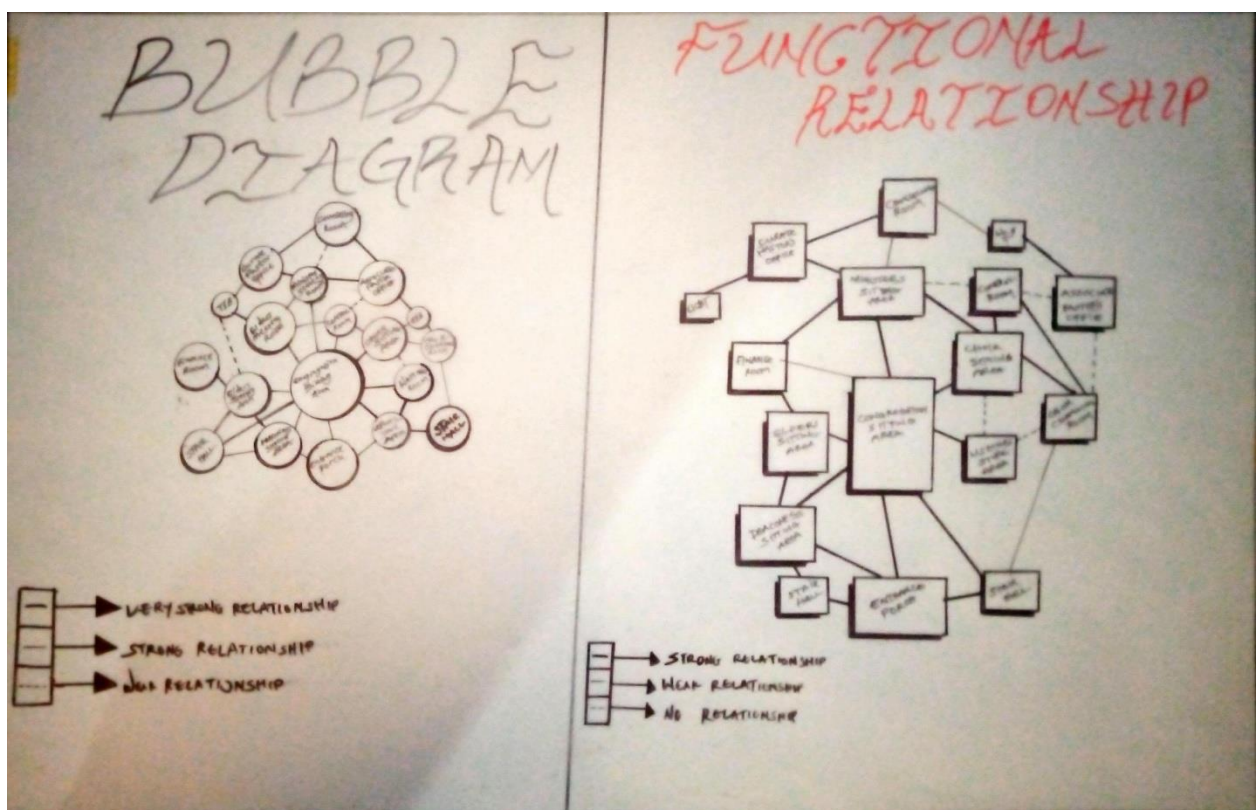
### **IT and Communication Systems**

- Computer Systems: Computer systems will be required to manage church operations, including administration, finance, and communication.
- Communication Systems: Communication systems, including phones and email, will be required to facilitate communication between church leaders, members, and the wider community.

## Operational Performance Requirements

- Maintenance: Regular maintenance will be required to ensure that the equipment and systems are functioning properly.

### 4.6.5. FUNCTIONAL RELATIONSHIPS



### 4.6.6. CONCEPTUAL DEVELOPMENT

The Christ Apostolic Church is a vibrant and dynamic community of believers that seeks to spread the message of Jesus Christ to all corners of the world. The bell and Bible are two significant symbols that represent the church's core values and mission.

#### The Bell: A Call to Worship



The bell is a powerful symbol that represents the call to worship and the gathering of believers. In the Christ Apostolic Church, the bell is a reminder of the importance of coming together as a community to worship, pray, and seek guidance from God. The sound of the bell is a call to attention, a reminder that we are in the presence of God, and that we should be mindful of our actions and words.

### **The Bible: A Source of Guidance**

The Bible is the sacred scripture that contains the teachings of Jesus Christ and the history of God's relationship with humanity. In the Christ Apostolic Church, the Bible is revered as a source of guidance, wisdom, and inspiration. The Bible teaches us about God's love, mercy, and justice, and provides us with a framework for living a meaningful and purposeful life.

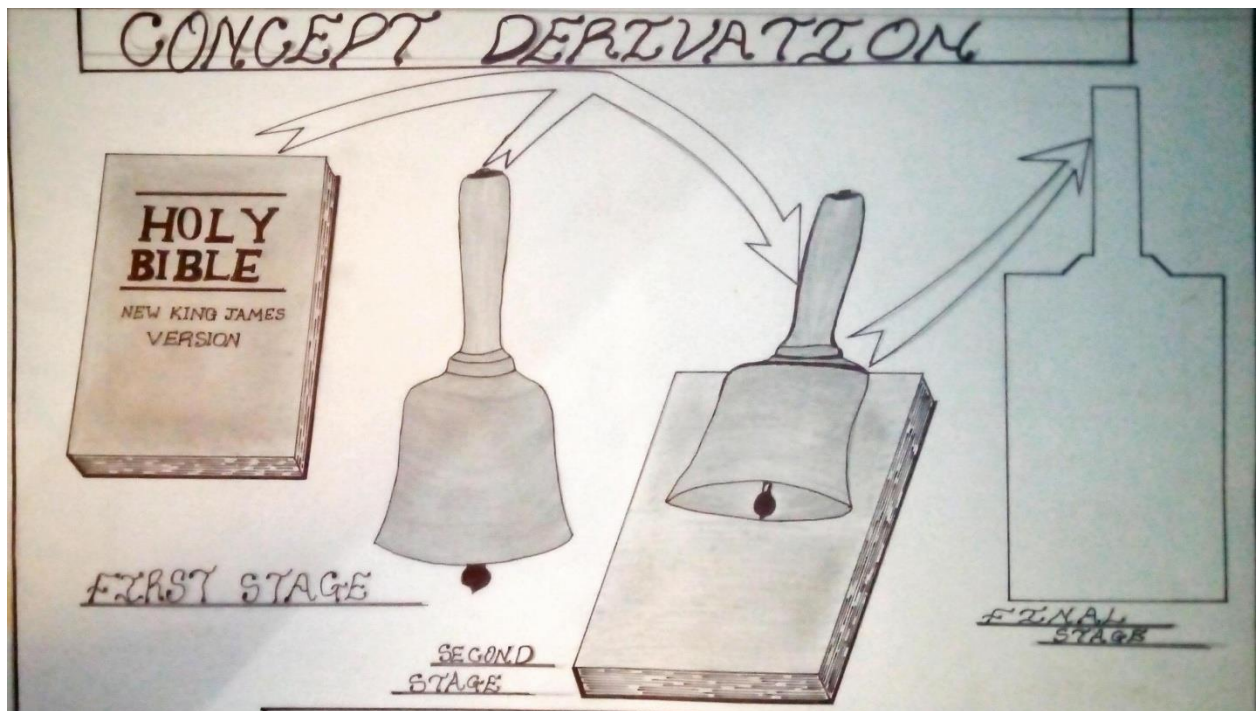
### **Integration of Bell and Bible**

The integration of the bell and Bible in the Christ Apostolic Church represents the importance of combining worship and scripture in our lives. The sound of the bell calls us to worship, while the Bible provides us with the guidance and wisdom we need to live a life that is pleasing to God. Together, the bell and Bible remind us of the importance of seeking God's guidance and wisdom in all aspects of our lives.

### **Conceptual Development**

The conceptual development of the Christ Apostolic Church using the bell and Bible as symbols can be seen in the church's architecture, worship services, and community outreach programs. The church's design may incorporate elements that reflect the significance of the bell and Bible, such as a prominent bell tower or a Bible-inspired mural. The worship services may include the use of bells and scripture readings, while the community outreach programs may be guided by the principles of compassion, love, and service that are found in the Bible.

## CONCEPTUAL DERIVATION



#### 4.7. SPATIAL ALLOCATION

##### CHURCH BUILDING SPATIAL ALLOCATION

S/N	UNITS	S/N	LENGTH (M)	BREADTH (M)	AREA (LxB) M <sup>2</sup>
1.	Entrance Porch	1	6600	3000	19.8
2.	Media Room	1	4700	3000	14.1
3.	Usher's Store Area	2	6000	3300	19.8
4.	Control Room	1	4000	3800	15.2
5.	Deaconess Sitting Area	1	16200	5900	95.59
6.	Elder's Sitting Area	1	8200	6000	49.2
7.	Congregation	1	18000	25000	450
8.	Choir Changing Room	1	4000	4000	16
9.	Finance Room	1	8000	4000	32
10.	Elder's Meeting Room	1	8000	4000	32
11.	Good Women Meeting Room	1	8000	4000	32
12.	Stair Hall 1	2	5400	3400	18.36
13.	Stair Hall 2	1	8000	1200	9.6
14.	Stair Hall 3	1	5400	3000	16.2
15.	Counselling Room	1	4000	3000	12
16.	Curate Pastor Office	1	5400	3600	19.49
17.	District Superintendent's Office	1	5000	4000	20
18.	Associate Pastor's Office	1	5000	3000	15
19.	Conference Room	1	6000	5400	32.4
20.	Toilet and Bathroom	5	2100	1200	2.52
21.	Lobby	1	8300	1200	9.96

