



College of Technology and Built Environment

Chair of Conservation of Urban and Architectural Heritage

**Prospect of Architectural Heritage Conservation in Addis Alem St. Mary Church
and its surroundings, Western Oromia Region, Ethiopia**

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October 2025

Addis Ababa

Addis Ababa University

College of Technology and Built Environment

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A Thesis Submitted to the School of post graduate Studies, Addis Ababa University
School of Built Environment

For the Degree of Master of Science in Conservation of Urban and Architectural Heritage

ACKNOWLEDGEMENTS

To begin with, I would like to thank my Almighty God for bestowing upon me the health and strength to handle anything pertaining to my life.

Secondly, I would like to thank Addis Ababa University for opening the department of conservation of urban and architectural heritage. Further, I want to express my deepest gratitude to the Ethiopian Heritage Authority for supporting me for covering my entire tuition fee for this degree program.

I also would like to thank my instructor and advisor **Taddese Girmay**, for his help and oversight from the time I Chose my Title till this stage.

In addition, I would like to thank Inventory and Documentation and Conservation Directorate staffs at Ethiopian Heritage Authority (EHA) and Addis Alem St. Mary church Administrators, Ejera Woreda Culture and Tourism office and the Community of Addis Alem Town for being helpful during data collection.

Lastly, I want to give a particular thanks to my friends and mentors, for supporting me during the entire process and for sending me research materials.

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ACRONYMS AND ABBREVIATIONS

UNESCO – United Nation Education Scientific and Cultural Organization

EHA – Ethiopian Heritage Authority

ICOMOS – International council on Monument and Site

Abba—a local nickname given for a priest

All the name written as Addis Alem St. Mary, Dagmawit Tsion Mariam Addis Alem Mariam Church, and St. Mary Church of Addis Alem are refereeing similar name

All the name written as Emperior Menelik is refereeing to Emperior Menelik II

ABSTRACT

Architectural heritage, particularly religious structures like St. Mary Church of Addis Alem, plays a vital role in preserving Ethiopia's cultural identity, historical continuity, and collective memory. Despite the historical and cultural significance of the Addis Alem Building Complex, limited efforts have been made to study its architectural value and conservation status. To address this gap, the objective of this thesis is to examine the conservation status of architectural heritage in St. Mary Church and its surrounding areas in the western Oromia Region, Ethiopia. The researcher employed a qualitative research method, incorporating both primary and secondary sources. Secondary data was gathered through desktop research, while primary data was obtained through field observation and interviews with stakeholders in the study area. Ten significant architectural heritage sites were identified, all constructed during the reign of Emperor Menelik II. These include St. Mary Church of Addis Alem, Nebir'ed Residence, Dej Selam (Zewditu Building), Bell Tower, Emperor Menelik II Palace, Tej Bet, Emperor Menelik's Swimming Pool, Theology Schools 1 and 2, and the Banquet Hall. Among these, the conservation condition of four structures i.e St. Mary Church, Banquet Hall, Nebir'ed Residence, and Emperor Menelik II Palace was assessed in detail. The thesis concludes with general recommendations for landscape management in the study area, along with specific conservation strategies for the four assessed buildings. This study contributes to academic research in heritage conservation by addressing the lack of documented studies on Addis Alem's architectural legacy. It also serves as a valuable resource for federal, regional, and local heritage institutions, offering data that can inform policy-making, conservation planning, and management decisions. Furthermore, the research fosters community awareness and involvement by highlighting the historical and cultural value of these heritage buildings. It underscores the urgent need for a comprehensive and sustainable conservation strategy in Addis Alem, especially for the St. Mary Church complex and its surroundings.

Keywords: Heritage Conservation, Historic landscape and historical buildings

CHAPTER ONE

1. Introduction

Architectural heritage plays a vital role in preserving the cultural identity, historical continuity, and collective memory of societies. In Ethiopia, religious structures such as churches serve not only as places of worship but also as repositories of artistic, architectural, and as spiritual heritage. Among these, St. Mary Church of Addis Alem stands out as a significant landmark. Constructed during the reign of Emperor Menelik II in the late 19th century, the church embodies a unique blend of Ethiopian Orthodox architectural traditions and imperial symbolism (Finneran, 2007; Phillipson, 2009). Its historical relevance, spiritual significance, and artistic value make it a critical site for heritage conservation.

However, like many heritage sites across Ethiopia, St. Mary Church and its surrounding landscape face growing threats. Environmental degradation, lack of maintenance, and limited institutional support have placed the site at risk. Despite its importance, conservation efforts remain fragmented and under-resourced. The town of Addis Alem, once envisioned as a capital by Emperor Menelik II, contains additional historical structures and cultural landscapes that are similarly neglected. This reflects broader challenges in Ethiopia's heritage management system, including gaps in policy implementation, insufficient funding, and limited community engagement (Asrat & Tadesse, 2020; Bernard & Jukka, 1998).

These historic areas and their surroundings require careful study, considering individual monuments and buildings as part of a larger heritage context. Human activity within the built environment and its spatial organization are equally significant and deeply interconnected (Bernard & Jukka, 1998; UNESCO, 2013).

The main objective of this research is to study and assess the conservation status of the architectural heritage found in St. Mary Church of Addis Alem complex and its surroundings. This includes a detailed examination of the physical condition of the

buildings, the historical and cultural significance of the site, and the extent to which preservation efforts have been implemented or are needed.

1.1 Background of the study area

Addis Alem is located 55 km away from west of Addis Ababa in the western Shewa zone of Oromia region at Ejera woreda, central Ethiopia. The geographical location is 9.0457° or 9° 2'45" north and 38.40123° or 38° 24' 4" east with an elevation of about 2315 meter above sea level. (<https://mapcarta.com/13035630>)

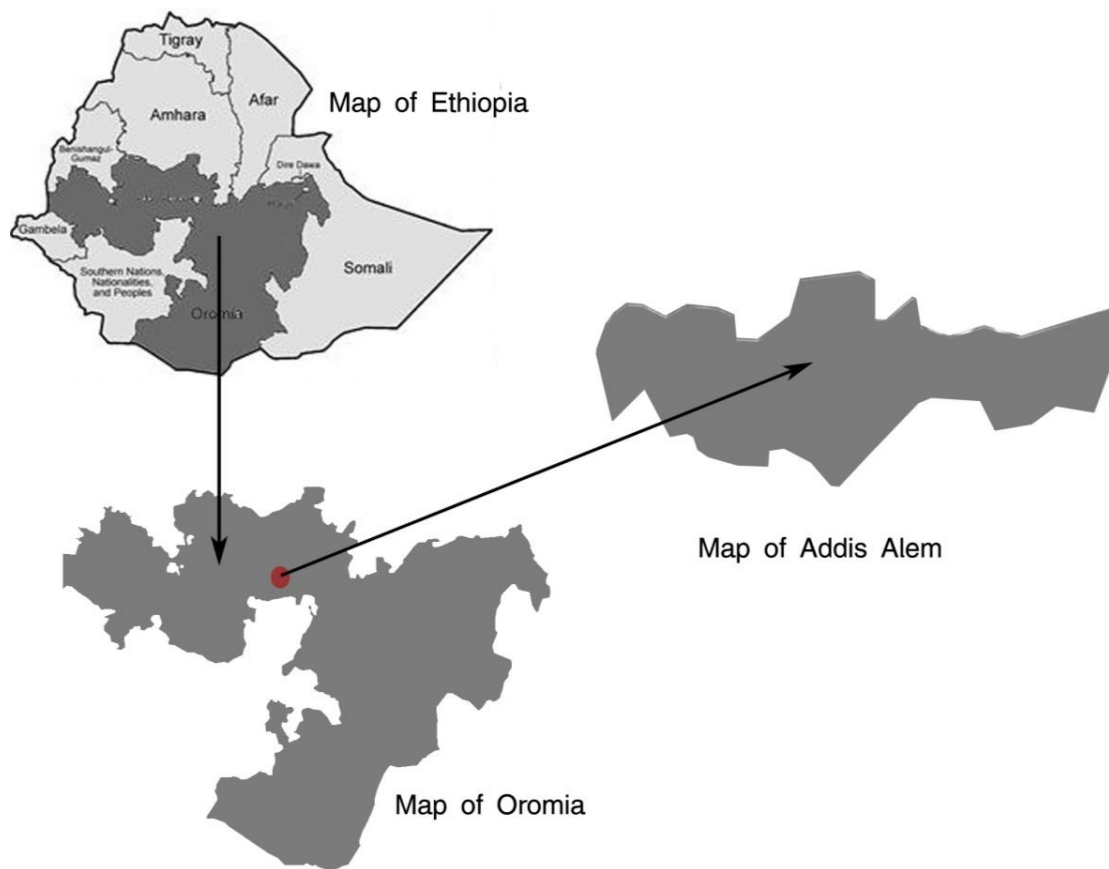


Figure 1 Location map of Addis Alem

1.2 Background of the Study

The Emperor Menelik II founded the town of Addis Alem in 1900. The town was established to make it an alternative to Addis Ababa when resources scarcity was created after the establishment of Addis Ababa (Pankhurst, 1951). The area where the town was selected to be the capital was covered with thick forest. However, when the king planned to transfer capital to Addis Alem individuals and the government started to build houses on a large scale. Palace and villas were constructed for royal families. Infrastructures like telephone, water pipes were installed in the palace. In 1900, the palace was under construction. The Empress Tayitu proposed to transfer the building under construction into church, the king accepted the proposal, and orders was given to build another palace in a place next to the church (Abba Ewostatewos, 1988)

The Emperor spent the whole vacation inspecting the construction of the church and the palace. The church of Addis Alem was completed three years after the founding of Addis Alem as a town. St. Mary church has a rectangular shape. The techniques of the buildings found at the church complex are interesting, has functional and historical significant. The emperor named the church of St. Mary Church of Addis Alem as *Dagmawit Tsion* because he wanted to follow the footsteps of his father to make the town a religious place like that of Axum Tsion as a place where the theology of Christianity was practiced. Similarly, the church of Addis Alem was organized by establishing the church school (Taddesse, 2000)



Figure 2 During the construction of the church in 1900

(Addis Alem museum collection, photo by circa 1900)

1.3 Problem Statement

According to the researcher's experience less efforts were made to study the architectural heritages of St Mary church of Addis Alem and its surroundings. Despite the historical and cultural importance of the Addis Alem Building Complex, particularly the Church of Addis Alem Mariam and Emperor Menelik II's palace scholarly engagement with its architectural characteristics and conservation status has remained limited. While some early initiatives were undertaken, such as the documentation of the palace's architectural plans in 1987 and the church's wall paintings in 2003 by the Ethiopian Heritage Authority's. These efforts have been limited in scope, failing to provide a comprehensive understanding of the site's architectural significance.

Furthermore, existing literature by both Ethiopian and foreign researchers has primarily focused on the general history of the town, implicitly neglecting the architectural value and conservation needs of its heritage buildings (Mohamed, 2019). There is no comprehensive documentation or strategic conservation plan specific to the area. Interventions, such as those by the church committee in 1996 E.C., have been limited to partial restorations and lacked continuity (EHA Archive, 1995 and 1996).

The strain of the issue is reflected in the ongoing deterioration of heritage structures, due to both natural factors and human activities. For example, the construction of new functional spaces with no proper care around the church has compromised the integrity of the historic environment. Moreover, the absence of regular monitoring and the challenges in mobilizing resources intensified by the informal transmission of indigenous knowledge have hindered effective conservation.

This negligence extremely affects the local community, particularly elders and religious groups who rely on these sites for cultural identity, spiritual practices, and community cohesion. The lack of preservation also limits opportunities for cultural tourism and education, which could benefit the broader population economically and socially.

The researcher was motivated by the urgent need to safeguard these irreplaceable assets and address the existing knowledge gap. Specifically, the research gap lies in the absence of comprehensive architectural documentation, systematic conservation assessment, and strategic planning for St. Mary Church of Addis Alem and its surrounding heritage structures. This study seeks to bridge that gap by conducting a detailed analysis of the site's architectural features, evaluating its current conservation status, and proposing viable preservation strategies. In doing so, it aims to contribute meaningfully to both academic scholarship and practical heritage management.

1.4 Research questions

The research intends to address the following three research questions as shown below.

- What kinds of architectural heritages are present in the study area?
- What is the conservation status of those architectural heritages found in the study area?
- What are the possible methods and approaches for the conservation of Architectural heritage in the study area?

1.5 Objective

1.5.1. General objective

The general objective of this study is to examine the architectural Heritage conservation status of the Addis Alem Mariam church and its surrounding.

1.5.2. Specific objective

The specific objectives of this study are to:

- ❖ Identify the architectural heritages found in the study area
- ❖ Identify heritage values associated with the study area
- ❖ Identify and analyze the existing statuses of the architectural heritage in the study area; and
- ❖ Explore methods and approaches for the conservation of the architectural heritages in the study area

1.6 Methodology

To do this research the researcher used a qualitative research technique for the majority of the analysis. The theoretical ideas and facts were gathered from secondary source, historical resources dealing with cultural heritage conservation of the study area, as well as from different international heritage convention. Then primary data was gathered from relevant bodies in the heritage preservation and institutions like government agencies. Interview questions was prepared and was collected from heritage authorities and the communities.

1.6.1 Method of data collection

To do the data collection of this research the researcher uses both primary and secondary data. The primary data was gathered from interview and observation. The secondary data was acquired from records and archival review. The archival data was gathered from published and unpublished sources from Desktop research (Internet books, journals, videos, articles etc.), Addis Alem St. Mary church and archives Museums, EHA library and Digital Archives and from Addis Ababa University Libraries.

1.6.2 Interviews

The primary data was collected from interviews, observation and survey. The interviews prepared by the researcher were structured interviews and were one to one interview administered by the researcher verbally. An in depth, interview was collected with heritage experts, stakeholders and heritage institutions especially the Heritage Inventory Directorate and Conservation Directorate from EHA.

The interview questions were gathered from twenty persons. Among this, from Ethiopian heritage, authority six interview questions were collected .That is from department of inventory and documentation three interview questions were collected. Besides, from the department of conservation three interview questions were collected from the experts and the department head.

In addition, from *Ejera* Woreda Culture and Tourism Office two interview questions were collected from head of *Ejera* Woreda Culture and Tourism and heritage conservation expert. Additionally, from the Addis Alem Mariam Church two interview questions were collected from church administrator and church's main secretary. The selection criteria of the interviewee was based on knowledge and management statuses And Addis Alem church community or from the worshippers ten interview questions was selected from, the persons who knows about the history of the site.

Table 1 summary of Sample interview questions collected selected groups and organizations

No	Interviewed Organization	Number of interview collected	Position
1	Ethiopian Heritage Authority	3	3 interview from inventory and documentation department <ul style="list-style-type: none"> • 1 from the department head • 2 from inventory and Documentation expert
			Interview from conservation department <ul style="list-style-type: none"> • 1 from department head • 2 experts from the department
2	St. Marry church Addis Alem	2	<ul style="list-style-type: none"> • 1 from the church administrator • 1 Museum
3	Ejera Woreda culture and tourism office	2	<ul style="list-style-type: none"> • . from 1 heritage team leader • 1 from expert
4	Addis Alem town community	10	<ul style="list-style-type: none"> • Worshippers and community

1.6.3 Observation

One of the methods the researcher used was observation to investigate the architectural heritage found in the study area. To observe the ten heritage structures found in the study area, the researcher went to the site starting from the month of April, 2023 for six times at the interval of one month. During observation period, the researcher took photos and sketches and measurements in order to gather data about the heritage structures and surrounding landscapes.

Besides, to observe and examine the conservation status of the heritage, the researcher used four samples of significant heritage structures by considering their architectural value and conservation statuses.

In addition, In order to understand the morphology of the study area the researcher used Google earth maps by integrating it with the visual investigation.

1.6.4 Method of data analysis

Data was analyzed by cross checking the finding with the literature. Besides data obtained from the oral tradition was related with the existing data. Then, the collected data was compared and elaborated using graphics software (such as Auto cad, Photoshop), tables, photographs converted in to graphics interpretations.

Furthermore, to analyze the significant architectural heritage found in the study area, the researcher investigated by using interviews, observation and Google map data. Then the investigators understood the morphology of the significant architectural heritage found in the study area.

Moreover, to investigate the damage or state of condition of the selected significant heritage structures occurred in the study area, the researcher analyzed by using sketches, drawings and photographs. In addition, to determine the status of conservation of the heritage buildings and to observe the majority of deterioration defects the researcher used to analyze by classifying the structural elements starting from roof, roof structures, wall, openings (window and door), floor and decorative

elements, as well the researcher tried to analyze surrounding landscape around the heritage's structures.

1.7 Scope of the study

The scope of the study mainly focused on studying the architectural heritage conservation status of St. Mary Church of Addis Alem and its surroundings.

1.8 Significance of the study

This research is helpful for scholarly purposes to present more information in the field of heritage conservation. By providing inclusive analysis preservation statuses of architectural heritages in the research area. Supply absence of existing scholarly on this subject. This will be an essential source of reference for upcoming studies of built heritage conservation in Ethiopia. It can also help researchers, scholars, and students in achieving the issues, Methodologies, and best practices in heritage conservation at the local level. Apart from this, it will be useful to heritage institutions at federal, regional, Woreda, and Kebele levels. By providing general assessment of the conservation status of heritage buildings in the study area.

The study presents evidence-based results that can be used to develop policies, allocate resources, and implement specific conservation interventions. Heritage management authority can use the research as a basis to develop guidelines for sustainable restoration and conservation work. It also provides practical guidance on managing and conserving architectural heritage, hence making it a convenient handbook for decision-makers who have heritage to manage.

The study is also responsible for sensitization of the local community to the significance of their architectural heritage. By bringing out the cultural and historical importance of these structures, the study encourages participation of the community in conservation efforts. Except for according to researcher's experience up till now no study has been conducted to the architectural of the study area on conservation grounds, this research serve as an authoritative document for future conservation plans. With recording the architectural heritage of the study area and studying its

conservation requirement, this study may support the process of developing heritage tourism in area. In general, the study is relevant not just in academic enrichments but also because of its immediate applicability in the practice of heritage management, policy-making, community engagement, and sustainable tourism. It gives foundations for future preservation procedures and serves as a primary reference for all who are handling safeguarding the architectural heritages of the study area.

1.9 Limitation of the study

The limitations of the study are limited financial means, limited time, and limited availability of sources. The limited funds created a limitation on the scope of field surveys and data collection, while the restricted timeframe restricted the depth of analysis. Furthermore, the insufficiency of written sources outlining the architectural history of the area of study made it challenging to source detailed historical and technical information.

1.10 Organization of the Thesis

The thesis structure has four main chapters. The First Chapter deals with introduction a background of the study and the methodology used to do the research. The Second Chapter is about literature of related studies of theoretical and practical aspects of the study. In addition, the third Chapter discusses about findings data presentation and, analysis in the study area. The Fourth Chapter deals with conclusions and recommendations.

CHAPTER TWO

2.1 Literature review

This chapter deals with a comprehensive review of exiting literature on architectural heritages particularly focused on St marry church of Addis Alem and its surroundings. It examines various approaches to heritage management, conservation efforts and theoretical and empirical frameworks as follows;

2.1.1 Contextual literature review

2.1.1.1 Definitions, concepts and heritage conservation approaches

Architectural heritage has been defined in various ways across international and national frameworks. According to UNESCO (1972), architectural heritage refers to monuments, groups of buildings, and sites that possess Outstanding Universal Value from the perspectives of history, art, and science. These structures are considered cultural heritage and are preserved for their historical and aesthetic significance. Conservation of such unique resources involves extending the material, historical, and design integrity of built heritage through carefully planned interventions that balance authenticity with functionality (Hector, 2020; Jokilehto, 2006).

In Ethiopia, the Heritage Proclamation No. 209/2000 (Article 10) defines conservation as the process of transferring cultural heritage across generations by prolonging the lifespan of cultural property without compromising its authenticity. This aligns with broader international perspectives that view conservation as both a technical and cultural endeavor. More broadly, conservation refers to measures taken to extend the life of cultural heritage while reinforcing its meaningful transmission. Its aim is to preserve both the physical and cultural characteristics of heritage, ensuring that its value remains intact over time. This includes protection and restoration using effective methods to maintain the property as close to its original condition as possible, thereby safeguarding not only its physical attributes but also it's embedded messages and values (UNESCO, 1976).

The Venice Charter (1964) further elaborates on the conservation of historic structures, emphasizing their functional adaptation for social purposes while preserving original layouts and decorations. It advocates for the maintenance of traditional settings and outlines principles for conservation and restoration based on scientific knowledge. The Charter underscores the importance of long-term preservation and permanent maintenance, allowing modifications only when they do not alter the building's essential character. Similarly, the International Congress of Architects and Specialists of Historic Buildings emphasized the need for a central authority to oversee heritage preservation, marking a pivotal moment in the global conservation movement.

Historically, conservation efforts focused on individual buildings. However, contemporary approaches embrace a more holistic perspective, emphasizing sustainable conservation that balances heritage preservation with modern development. Liang et al. (2023) argue that modern conservation must reconcile historical integrity with the pressures of urban growth. The Deschambault Declaration (1982) supports this view, highlighting community participation as a cornerstone of sustainable conservation. By integrating heritage sites into daily life, communities become active stewards of their cultural legacy.

UNESCO (2001) also stresses the importance of aligning conservation with sustainable development, tourism, and community engagement, ensuring that heritage sites contribute to local development while retaining their cultural value. ICOMOS (2017) advocates for conservation approaches that respect local traditions, techniques, and building practices, promoting diverse methodologies tailored to specific contexts.

Several theoretical frameworks underpin architectural heritage conservation. The Burra Charter (Australia ICOMOS, 2013) defines cultural significance in terms of aesthetic, historic, scientific, and social value, emphasizing the need to retain these embedded values in conservation efforts. Values-based conservation, as proposed by Avrami, Mason, and de la Torre (2000), suggests that heritage decisions should reflect the diverse values of stakeholders spiritual, communal, economic, and

symbolic. This is particularly relevant in Ethiopia, where religious heritage sites like St. Mary Church serve as spiritual and cultural anchors.

The Historic Urban Landscape (HUL) approach developed by UNESCO (2011) integrates heritage conservation into broader urban planning, recognizing the dynamic relationship between built heritage and contemporary development. This approach is especially pertinent in towns like Addis Alem, where historic structures coexist with modern interventions. Additionally, place attachment theory (Low & Altman, 1992) explores the emotional and cultural bonds between people and heritage sites, reinforcing the importance of community involvement in conservation. This theory helps explain the deep connection local elders and religious groups have with St. Mary Church and its surroundings.

Finally, the concepts of authenticity and integrity, as defined by UNESCO World Heritage guidelines (2021), emphasize the importance of retaining original materials, design, and context to preserve historical value.

This section has explored the definitions and conceptual frameworks of architectural heritage and the diverse approaches to conserving historic buildings. The following section will delve into the historical context of the town of Addis Alem.

2.1.2 Historical context of Addis Alem Town

Three major institutions shaped the development of Ethiopia's historical towns. These are Military institutions, churches, markets and palaces. They played major roles in political, economic and cultural affairs in the evolution of Ethiopian towns (Fasil, 2009). These institutions were the major factors for the establishment of historic towns that were established during the reign of Emperor Menelik II. Ankober, Addis Ababa and Addis Alem are some of the historic towns founded during the reign of Emperor Menelik II (Ofcansky, T.p., et al, 1993).

The town of Addis Alem was established in 1900 by Emperor Menelik II (Pankrust, 1961). According to tradition, the place where the old quarter of Addis Alem (St. Mary church and its surrounding area) was owned by the land owner called

Chengere who had a border dispute with another land owner name called *Uki Gulae*. The emperor was informed about this conflict and sent a messenger to solve the dispute. In 1891 E.C, the messenger of the emperor visited and surveyed Addis Alem and its surroundings. The king's messenger reported to the Emperor that Addis Alem could be alternative to Addis Ababa. Afterwards, the emperor visited and observed the place. The place where the king observed was located in higher elevation a few kilometer away from Addis Alem. He also saw a small hill covered with forest and olive trees. This site was where St. Mary Church currently is found. The emperor met the property owner of the area (*Chengere*) in order to discuss if he would be willing to exchange the land in another area. Accordingly, the landowner accepted proposal of the emperor. Then after, the Emperor began the construction of a palace at Addis Alem at the hilltop of the area (Aba Ewostatewos, 1988).



Figure 3 view from the palace to the surrounding landscape (Captured in 1937/1938)

(<https://www.deutschefotothek.de/cms/home.xml>)



Figure 4 Church gate and the Zewditu building (Captured in 1937 or 1938)

(<https://www.deutschefotothek.de/cms/home.xml>)

According to *Sergew Hable Selassie*, in 1903, immediately after the rainy season of 1902 ended, the emperor ordered the construction of a road from Addis Alem to the capital city of Addis Ababa. The road starts from west of Arada market to Addis Alem. The main purpose of constructing this road was to transport wood for the construction of houses in Addis Ababa (Milena and Gian, 2004).



Figure 5 Road construction from Addis Ababa to Addis Alem

(Milena. and Gian, 2004)

The researcher identified that the road which was constructed during the Emperor Menelik's reign is with a single lane a two-way road built with Crashed stone on a well-defined median (Author. 2023)



Figure 6 Current view of the old road

(Author ,2023)

After the arrival of railway and wagon from Europe in 1896 E.c, the opening of road from Addis Ababa to Addis Alem, it became easy for transporting wood for the construction of houses in Addis Ababa (Aba Ewostatewos.1988). In addition, the introduction of Train of Serkis and the introduction of Eucalyptus tree solved the shortage of wood in Addis Ababa. The emperor decided not to move his capital from Addis Ababa to Addis Alem. During the rainy season of 1902, the emperor ordered the construction of the palace to be changed to that of a church declaring that ‘the kingdom of heaven is worth more than the kingdom of earth’ (Pankhurst, 1961)

2.1.3 Previous Interventions of Heritage Structures of St. Marry church of Addis Alem complex and its surroundings

There were three structures registered as a heritage by the former authority of heritage (Culture and Sport Minister, by Heritage Inventory and Supervision Subdivision) in

1972. The inventory was carried out in the banquet hall of Menelik II, St. Mary Church and the king palace building in the study area (EHA inventory archive,1972).

2.1.3.1 St. Marry Church of Addis Alem

This church was constructed during Emperor Menelik II period. In 1935-1936, the asbestos roof was converted into corrugated iron sheet during Emperor Haileselesie. In 1995, the floor was reconstruct with cement and stone by the former Heritage Authority (EHA Inventory archive, 1979 E.c).

In 1995E.c, there was an initiative on restoration works of Addis Alem St. Mary church by the church committee. The conservation was carried by a contractor. The main restoration was conducted around the main church building rearranging the *bazzola* found that surrounds the verandah replacing the deteriorated Corrugated iron sheet roof, roof timber structures replacing the deteriorated veranda column, protected the base of the column with iron sheet to protect it from moisture, and re-plastered the cracked wall by lime mortar.

In addition, strengthening intervention was done at the masonry fence. Furthermore, new coping dressed stone was constructed in order to protect from rain (Addis Alem Mariam church committee,2003).

Similarly, there was an intervention to replace the deteriorated wooden windows and doors with similar material and design of the church compound. In 2000 E.c, there was a conservation work on the church paintings in the roof, wall, window and door by voluntary religious peoples. However, there was no prior conservation study for the restoration of the wall paintings (EHA Archive, 2008)

2.4.1.1.1 Addis Alem St. Mary Church Paintings

The architectural building of the church and its sanctuary were adorned with a diverse array of captivating paintings, featuring depictions of wildlife, biblical scenes, and various Ethiopian rulers. Several artists contributed to the church's artistic decoration. The first artist was Abebe Wolde Giorgis (1897-1967), who received his training in France. Following him, Worku Mamo Dessalegn, who studied art both in Ethiopia

and Russia, contributed his talents. Lastly, Tadesse Bedaso Begna, who was educated at an art school in Ethiopia and later specialized in graphic arts in London, also played a significant role in the church's paintings (Addis Alem Resie Adbarat Wegedamat Dagmit Tsion, <https://blessed2love.jigsy.com/>)

According to 1995 E.C archive report of EHA, most of Addis Alem paintings were executed using three techniques. That is on wood, canvas, stone, directly on the wall and stainless glass paintings. The interior parts of the wall have paintings with biblical motif with Ethiopian traditional painting style (EHA Archive, 2003)

Table 2 Types of paintings found at Addis Alem St. Mary church

The table below summarizes the 1995 E.c report archive of Ethiopian Heritage Authority; It describes five types of church paintings that we find at Dagmawi Debre Tsion Addis Alem St Mary church.

No	Type of paintings	location
1	Painting on wood	This types of painting found at Addis Alem St. Mary church are mostly phrase most of them are engraved (curved) directly on wooden structures and apply paint on it.it found at the door and window and as a frame edge of the roof wall.
2	Painting on canvas	These types of painting are found at the four direction <i>Mekdes/</i> interior parts of the church /. Some of the paintings have a phrase painting used as frame for the paint.
3	Painting on stone	The paintings found on stone are entirely covered with phrase having different shapes.

4	Painting on Stainless glass	Stainless glass paint found on the upper parts of the door and window made of steel with frames with colorful (different) colors glass with circular shape.
5	Painting on wall	This type of painting are in two types on the church wall that is directly on the wall found at the external wall (surrounding veranda) mostly phrase paintings and on lime plaster.

The image below elaborates the transformation and hybridization of Ethiopian traditional painting styles with modern artistic approaches. Notably, the depiction of the human face in the artwork reflects a shift towards modern aesthetics while retaining elements of traditional iconography. This church paintings exemplifies the evolution fusion of conventional Ethiopian art with contemporary visual expression (Researcher. 2023)

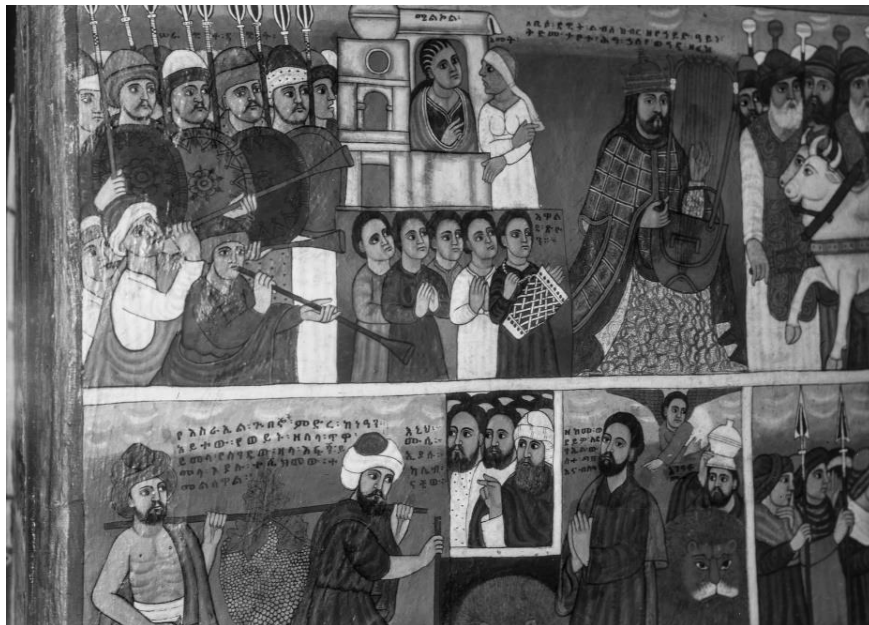


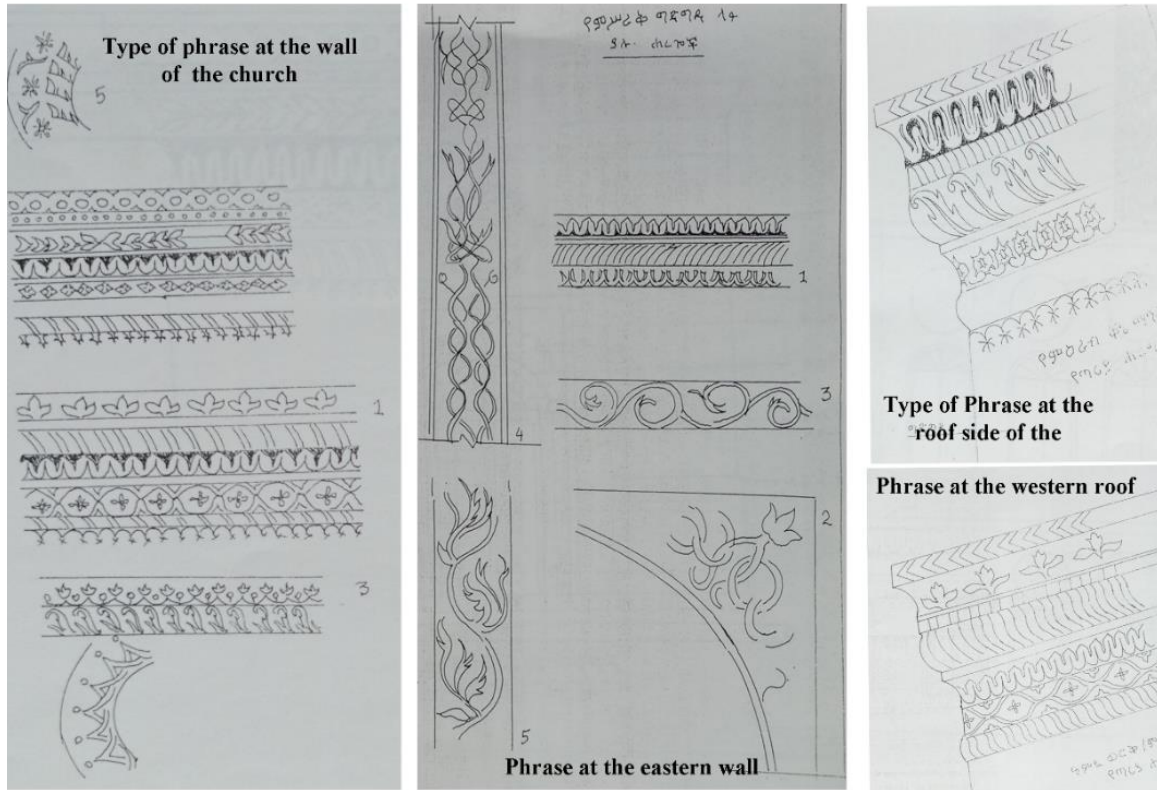
Figure 7 The interior fresco painting parts of Dagmawit Tsion Addis indicates the Dawit celebration of return of Arc of covenant this painting is painted on compass 1937/1938



Figure 8 The interior paintings of the church indications how the pervious Emperor see themselves below the religion. 1937/1938

(Schottenloher and Rudolf, <https://www.deutschefotothek.de/cms/home.xml>)

In 1995 E.C, artist Yonas Kena undertook a comprehensive documentation of paintings found throughout both the interior and exterior of the church. The records documents representative samples of phrase-based artworks from western, eastern, northern and southern sections of the church's internal and external surfaces. According to the records, the paintings were present in every part of the church's *Mekedes*(sanctuary). Many of these artworks carry significant biblical meanings (Artist Yonas Kena.1995).



(Artist Yonas kena,2003)

Figure 9 Type of phrases at the Addis Alem Mariam church wall

The documentation also details the specific type of phrase that was painting on the wall and cornice with in the church, as well as those adorning the surrounding verandah. These phrases is rich in spiritual, aesthetical, and biblical symbolism, was carefully recorded to preserve the historical and artistic significance (Artist Yonas Kena, 1995 E.c).

To support the written analysis, the researcher has included the artist’s original sketch documentation as visual evidence. These sketches are attach in the appendix labeled as Annex II, providing the readers with a clear understanding of the placement, style, and thematic content of the phrase paintings (Artist Yonas Kena.1995 E.c).

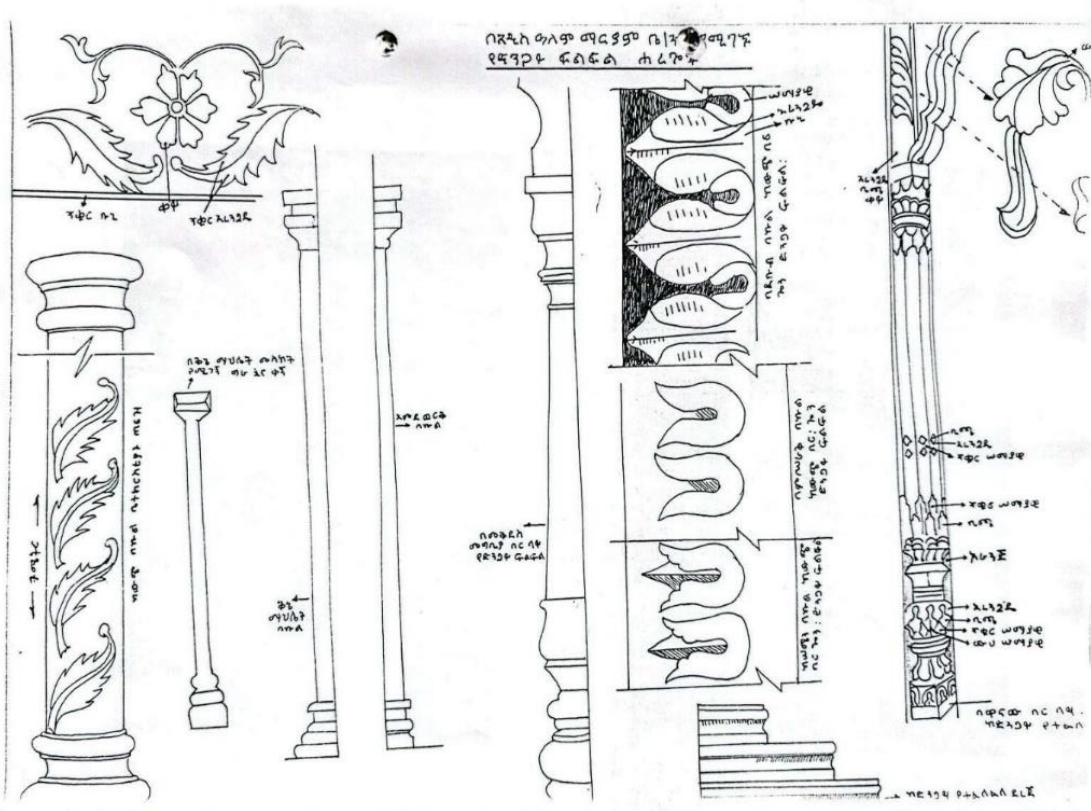


Figure 10 Type of phrases engraved on stone

(Sketched by Artist Yonas Kena,2003)

2.1.3.2 Palace of Emperor Menelik II

According to 1972 E.c, Inventory Archive of EHA the palace was constructed in 1892 by Emperor Menelik II for kings' residence and guest reception. The engineer who built it was **Wali Mohammed**. It is a rectangular building constructed with stone, lime, corrugated iron sheet and wood. The rooms were intended for a hall, king's bedroom. Later, the palace was converted to a museum, store and residence. The roof was originally thatched roof. Later, thatched roof was changed to asbestos roof during Empress Zewditu in 1919 E. c. In 1956, *Sirana Ketema Minister* converted the roof to corrugated iron sheet and some parts of the walls were plastered with compo mortar (cement with lime) (Archive of EHA, 1979).

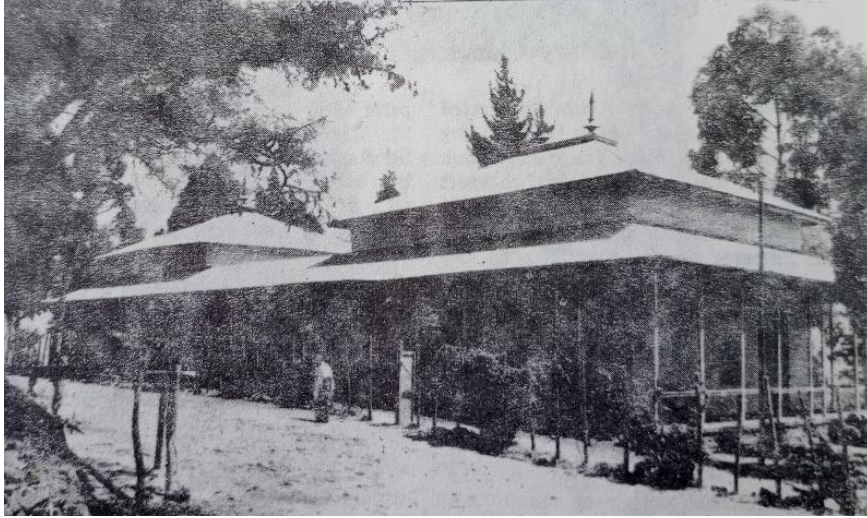


Figure 11 Old picture of Emperor Menelik II palace at Addis Alem
(*CHRONICLES OF DEBRE SEYON*, page 15)



Figure 12 The palace before the fire accident

(Fekade Selassie Tefera, *Journal of 100th Year Anniversary of the Church*, page 27)

In 1966, the movable heritage collection of St. Mary church of Addis Alem was publicly displayed for the first time, housed in a single room. By 1987(1979E.c.), during an inventory period, detail plans and elevations were sketched, reflecting the museum's Layout. This Documentation marked a significant academic and professional effort to catalogue and to preserve the church's valuable artifacts. The initiative underscored the importance of heritage conservation and provided a

foundation for future scholarly research and public education about the church's cultural treasures (EHA Inventory Archive, 1987).

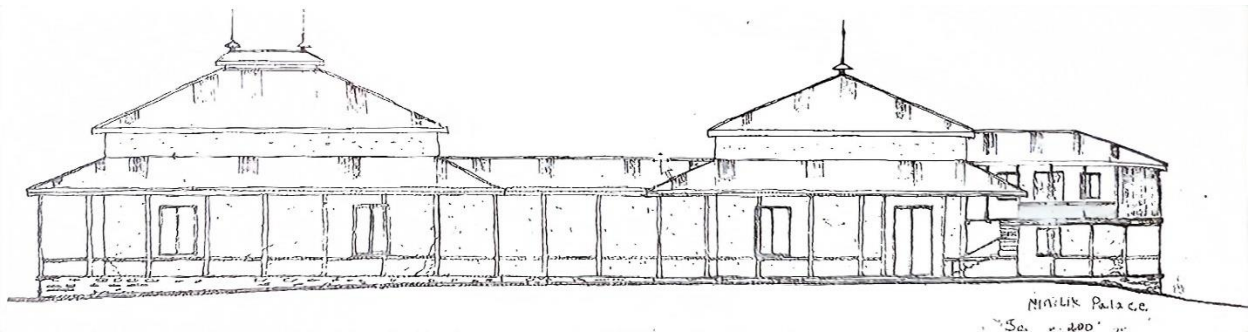


Figure 13 South Elevation

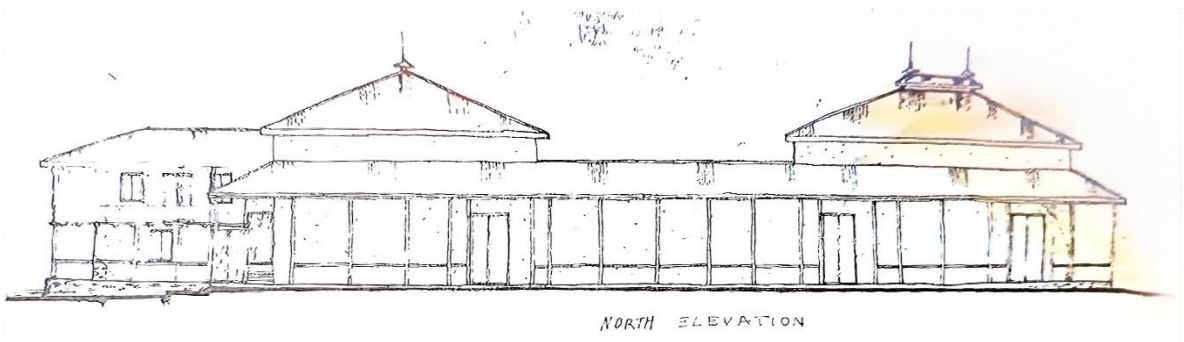


Figure 14 North Elevation

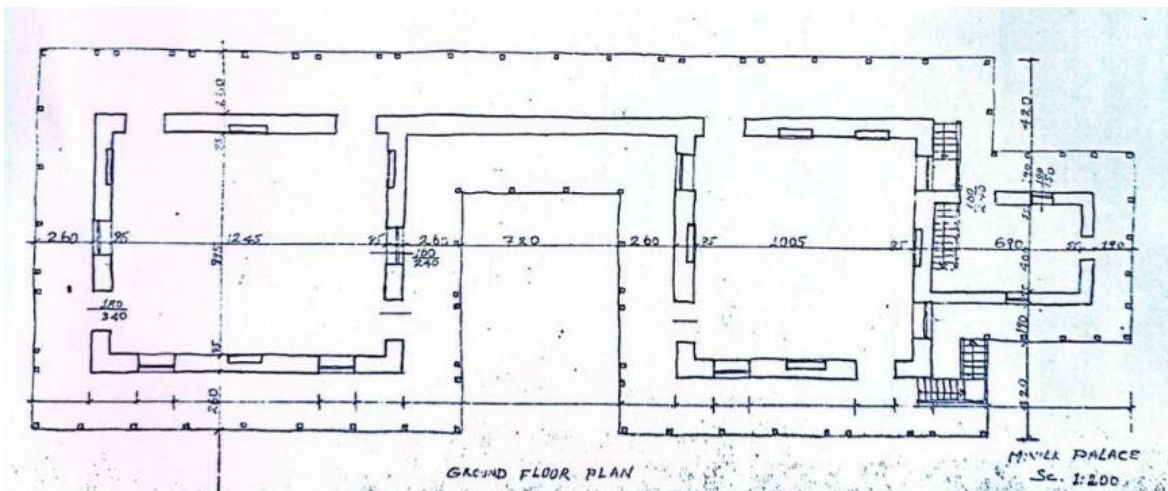


Figure 15 Ground floor plan

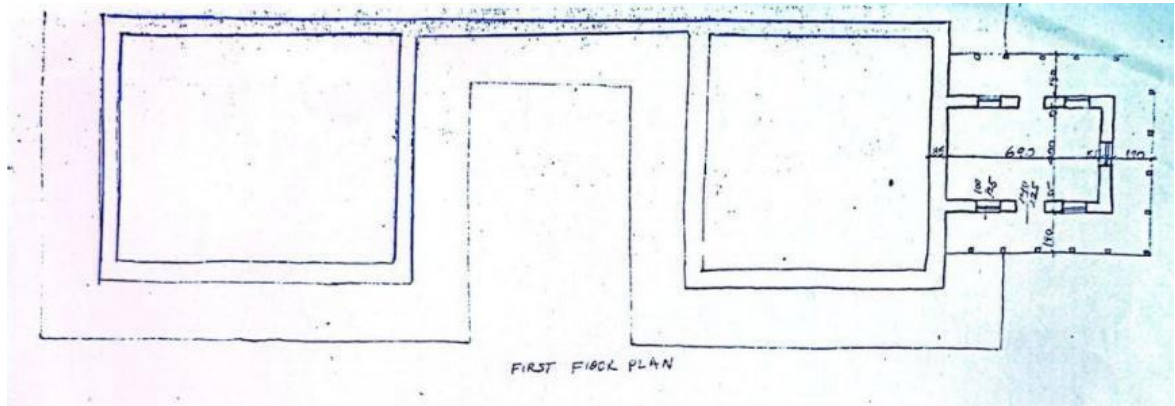


Figure 16 First Floor plan

(Artist Yonas Kena, EHA Inventory Archive of 1979 E.C)

In 1989 E.C., the palace was damaged due to a fire caused by the negligent handling of candles. On the same day, the community quickly gathered to save the artifacts from destruction, ensuring that no artifacts were damaged. According to the inventory list by the Development Committee of Addis Alem(2007), the fire primary damaged the museum room, including the roof and some parts of openings (EHA Archive, 2000).



(a)



(b)

Figure 17 Palace building during fire damage in 1996

(image (a) and (b) is journal issue for 107th and 100th year celebration journal of St. Marry church of Addis Alem(2007), page 6 and,51 respectively)



Figure 18 Feeling of the community during fire accident of the palace in 1996

(100th Year Celebration journal page 52)

In 1999, the Redevelopment Committee of St. Mary church restored the palace structure in collaboration with different level experts from Ethiopian heritage authority and religious individual with a fund obtained from Orthodox Church followers found in different parts of the country through fund campaign (redevelopment committee of St Mary church of Addis Alem.2007)



Figure 19 The damaged Palace Building during renovation,1999

(Fekade Selassie Tefera, 100th Year Celebration of the church ,page 51)

2.1.3.3 Banquate Hall of Menelik

This structure was constructed during Menelik period and was designed as a dining hall for religious ceremony to feed religious tourists and the poor. The king and the church administrator (Neburid) used to assist the feeding activities in this building. Currently, it functions as meeting hall. The building has a rectangular shape with semi-circular form at the two wings (northern and south) of the directions and has 28 surrounding rectangular wooden columns around the veranda. It has stairs at the interior of the hall. The roof was originally made of thatched grass that was later changed to asbestos. In 1956 E.c, *Sera Minister*) covered the roof with corrugated iron sheet and the floor with stone bedded (EHA Inventory Archive, 1987)



Figure 20 The palace and banquet hall (image captured in 1937 or 1938)

(Schottenloher and Rudolf, <https://www.deutschefotothek.de/cms/home.xml>)



Figure 21 Old picture of the hall

(Chronicles of *Debre Seyon* of Addis Alem, page 13)

2.1.3.4 Bell Tower of the Church

The construction of the bell tower of was started during Emperor Menelik period and was completed in 1924 E.c by Etege Menene. It Started giving service since 1926 E.c .The bell tower is a two story, 30 meter high (Aba Ewostatewos, 1988). There was an intervention activity in the bell tower's wooden stair structure to consolidate and painted a moisture protection paints (EHA, Report Archive, 2000)

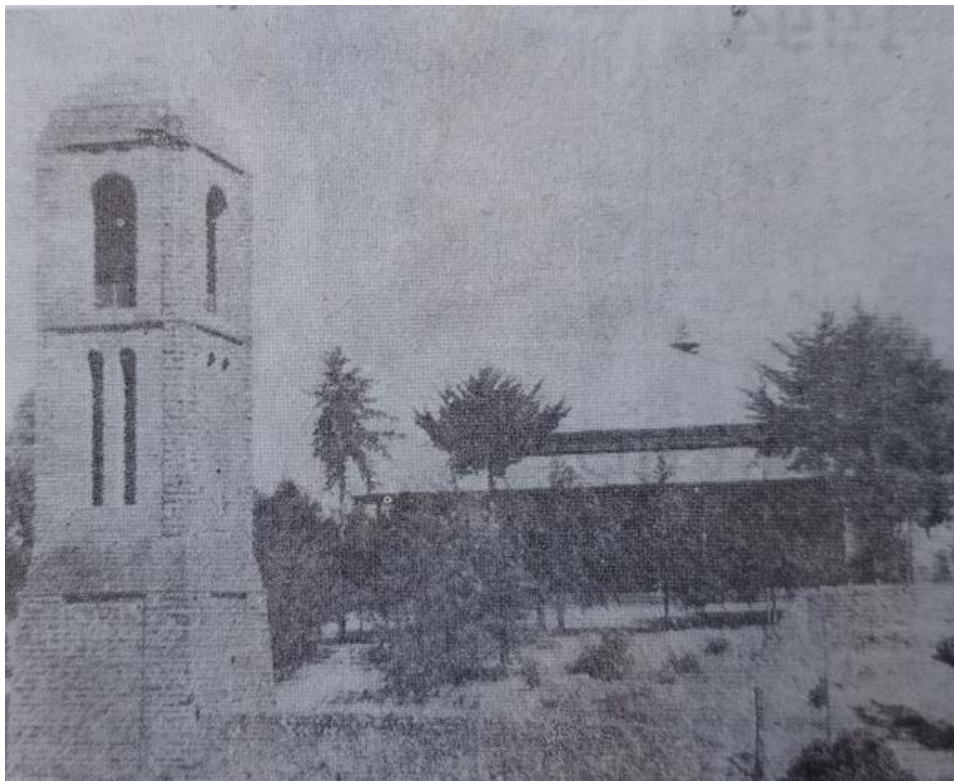


Figure 22 The Bell Tower and St. Marry church at the back in 1930's

(Journals of 100th year anniversary, page 2)

2.1.4 Empirical literature review

Empirical studies on architectural heritage conservation in Ethiopia reveal both progress and persistent challenges. Finneran (2007) provides a comprehensive overview of Ethiopia's archaeological and architectural heritage, highlighting the significance of religious structures but noting the lack of detailed architectural

documentation. Phillipson (2009) similarly explores ancient Ethiopian churches, emphasizing their historical evolution but not their current conservation status.

Woldeyes (2015) specifically examines Addis Alem's heritage, identifying gaps in preservation and the limited role of local institutions. His study underscores the need for strategic planning and community engagement. Asrat and Tadesse (2020) review Ethiopia's heritage management policies, revealing systemic issues such as insufficient funding, fragmented implementation, and lack of technical expertise.

The Ethiopian Heritage Authority (EHA) archives document partial interventions in Addis Alem, including the 1987 architectural plans of Emperor Menelik II's palace and the 2003 recording of church wall paintings. However, these efforts were limited in scope and lacked follow-up (EHA Archive, 1995; 1996).

Globally, UNESCO reports (2013, 2021) offer best practices in heritage conservation, emphasizing participatory approaches, sustainable development, and the integration of indigenous knowledge. These insights are valuable for contextualizing Ethiopia's challenges within a broader international framework.

In conclusion, this chapter has provided a comprehensive review of the contextual, theoretical, and empirical foundations relevant to architectural heritage conservation, with a focus on the historic town of Addis Alem and the St. Mary Church complex. It established key definitions and conservation approaches, explored global and local frameworks such as the Burra Charter and UNESCO's Historic Urban Landscape, and examined theories including cultural significance, place attachment, and authenticity. Empirical studies revealed that while Ethiopia possesses rich architectural heritage, conservation efforts remain fragmented, underfunded, and lacking strategic planning particularly in Addis Alem, where previous interventions have been limited in scope and continuity. The literature highlights a clear research gap in architectural documentation and conservation assessment, reinforcing the need for this study to contribute both academically and practically to safeguarding the site's cultural and historical value. In the next chapter data presentation and analysis parts will be discuss.

CHAPTER THREE

3.1 Data Presentation and Analysis

This section is discussing about the research findings. The researcher interprets and analysis the information gathered from the site through interpretation and analysis.

3.1.1 Morphology of the study area

Based on the field observation conducted in March 2023, the heritage site of the study area located on elevation terrain, accessible via a gentle slope from main road. The surrounding landscape predominantly composed of agricultural fields and dispersed small settlement contributing to the rural character of the area.

In addition, the researcher observed that, the most historically significant section architectural heritages of the settlement is concentrated around the St. Marry church complex and its surrounding. This Area marks the origins of the old quarter but also exhibits the highest density of green coverage, indicating a well preserved natural environment (Field observation, March 2023)



Figure 23 View from the church compound to the city indicates how the study area found at the highest level of the town

According to the researcher visual examination and the data obtained from the Google earth, The Heritage structures located at Dagmawit Tsion Addis Alem

Mariam church and its surrounding are found in a dispersed manner that respects the natural landscape. At the top of the hill, there is a church followed by a palace and next to that Theology School and then residence (Field visit, March 2023)

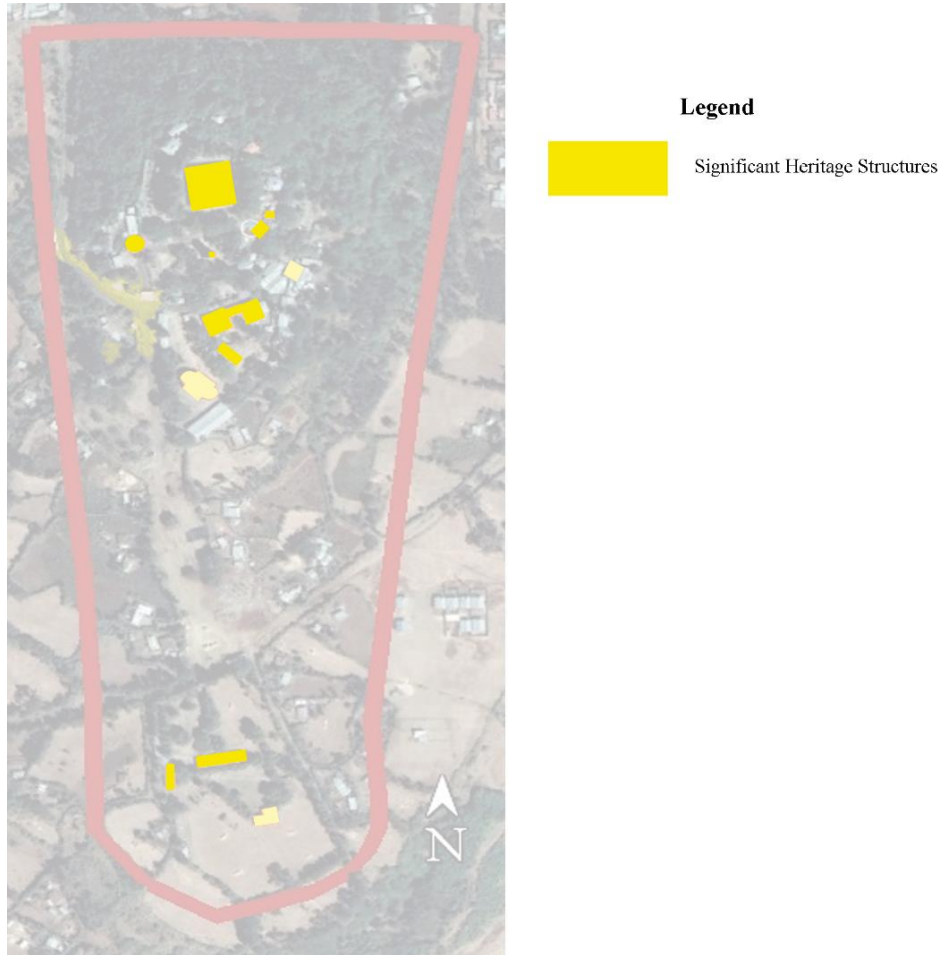


Figure 24 Identified heritage structures in the study area

3.1.2 Values of Architectural heritage

From an architectural heritage perspective, conservation extends beyond the mere physical preservation of historic structures to encompass the protection of their cultural, historical and symbolic or architectural values .Feliden (1982) implies that heritage conservation is not solely about maintaining tangible attributes but also about safeguarding the messages, meaning and values for future generations. Consequently, it is important to know the value of an architectural heritage structures in the study

area. In addition, the researcher found out that, there are no sources that elaborate on the values of the architectural heritages in the study area. Therefore, the researcher elaborated and discusses the important and the significance the architectural heritage in the study area as follows;

3.1.2.1 Historical Value

The study area has a rich history, dating back to the time of Menelik II plan to move his settlement from Addis Ababa to Addis Alem starting from 1892 E.c. Additionally; it has played a significant role in the establishment of town in the study area. Historically, the architectural heritages identified in the study were the first architectural buildings constructed during the foundation of the town. The architectural heritages serves as a tangible link to the past, reflecting the historical narratives, social transformations, and cultural identities of different periods. The buildings in the study area, constructed during the reign of Emperor Menelik II, provide valuable insights in to the political, social, and technological advancement of the period. (Pankrust, 1961. Mohamed, 2019)

3.1.2.2 Cultural and Symbolic Value

The study area has a cultural significance as it provides an excellent example of the life of Ethiopian ruler at the time showing the relationship between the palace and the church. For instance, the emperor gave his palace, which was under construction, to be used as a church .This illustrates the relationship between the ruling class and religion at that time (Pankrust, 1961). Besides St Mary, church of Addis Alem is not just an architectural landmarks but also a spiritual center with profound religious importance the local community. Similarly, Emperor Menelik palace and Banquet hall symbolize royal power and governance during the reign (Researcher, 2023)

3.1.2.3 Architectural and Aesthetics Values

The architecture significance of the study shows the introduction of construction of rectangular church during the Emperor Menelik period. This was the first typology of its kind, as most of the churches during that period were octagonal in shape, such as

St. Mary church of *Entoto* and St. *Raguel* church (Fasil,2009). Additionally, the historical building found in the study area became the landmark of Addis Alem town and the unique combination of traditional Ethiopian construction technique and imported influence in the study area showcases a distinctive architectural identity. The craftsmanship of wooden decoration, lime plastered mud masonry and circular roof structure demonstrates the skill and artistry of historical builders, which should be preserved as part of Ethiopian architectural legacy (Field observation,2023).

3.1.2.4 Educational Value

The study area provides tangible evidence to learn and describe the written history of the king and queen through architecture. Besides, the church trained many church scholars such as deacon and priests in theology school buildings (Chronicle of Addis Alem, 1988).

3.1.2.5 Environmental Value

According to the researcher's observation, the environmental significance of the research area, including the significant architectural heritage buildings in the study area and the surrounding area plays a crucial role in protecting the environment by avoiding demolition and new construction. The place of the study area still serves as the lung of the city because it is one of the green coverage of the town (Field Observation, 2023).

3.1.2.6 Economic Value

The economic significance of the architectural heritages in the research area became popular tourist attraction areas. The St. Mary church of Addis Alem buildings are a religious pilgrimage site that attracts many tourists came to visit the church and Emperor Menelik II palace and the church museum. This attraction has several ways of contributing the local economy generating income from the local and international tourists. (Church committee,2007)

3.1.2.7 Religious Value

According to the church Administrator St. Mary church of Addis Alem holds great religious significance. The Emperor Menelik named Addis Alem Mariam to be “*re’ese adbarat*” Which means the head all churches. As a result, the church has a very special place in the hearts of Orthodox Religion followers. Similarly it is believed that the Emperor give this name because of the Name Nebir’ed (it means a governor or as an administrator) it may aimed to continue the legacy of Axum (Church Administrator, 2023)

3.1.3 Significant Architectural heritage structures

There are a significant heritage structures in the study area. During field visit, the researcher observed important historical buildings in three different compounds. In the first compound located in the hilltop, there are four significant historical buildings. The first compound is Dagmawit Tsion Addis Alem St. Mary church complex, in this complex there are St. Mary church building, Nebir’ed residence, and the bell tower, Empress Zewditu building / *Dej Selam*. In the second complex, there are four historical buildings: Menelik Palace, Banquet hall, Tej Bet (Traditional liquor building), and Menelik Swimming pool. Moreover, the third compound has the Theology school. Accordingly, the researcher found that the church, palace and the Banquet hall were documented and describe by EHA in 1956 E.c. (Field observation, 2023)

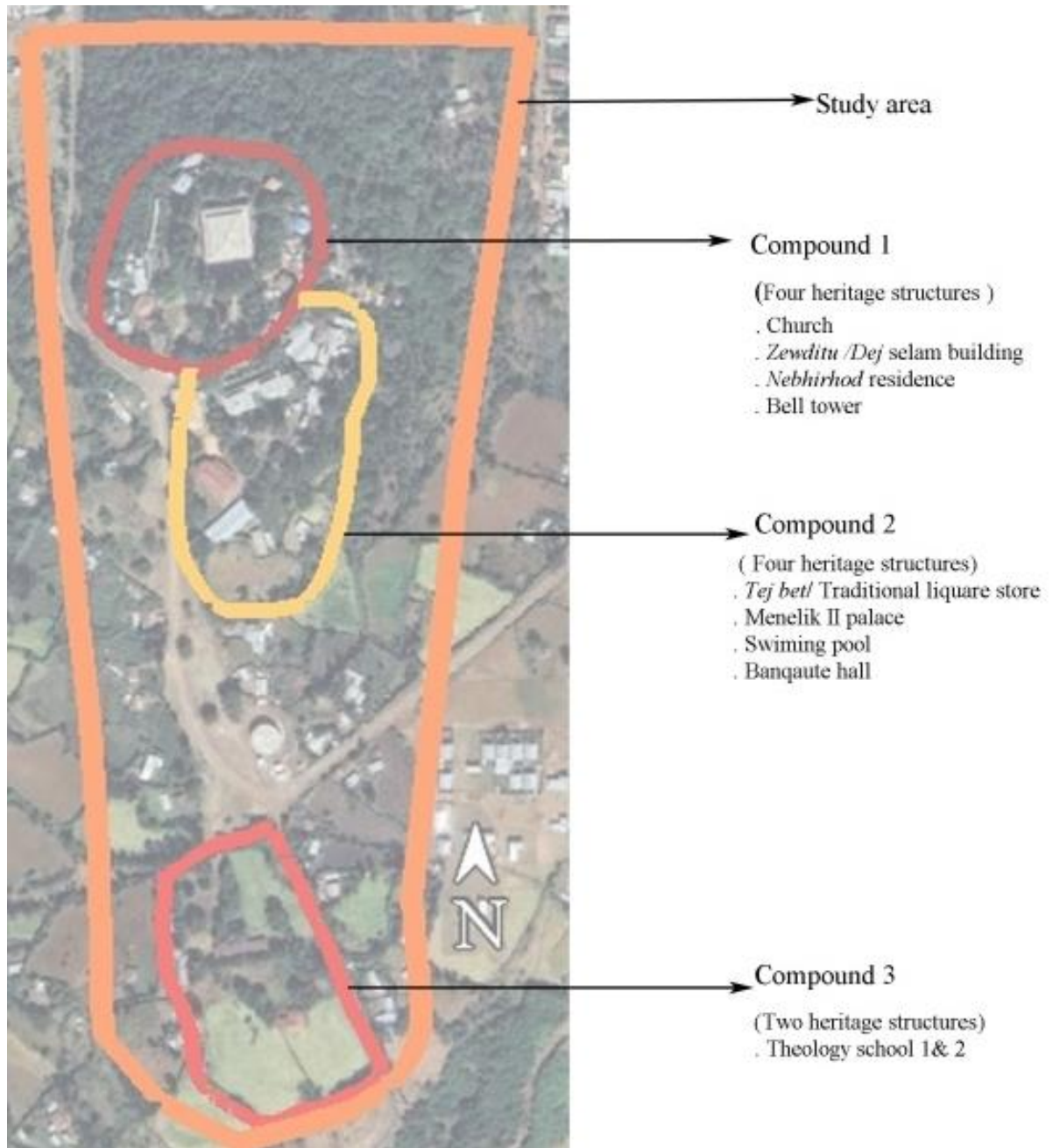


Figure 25 Compound where the heritage structures located

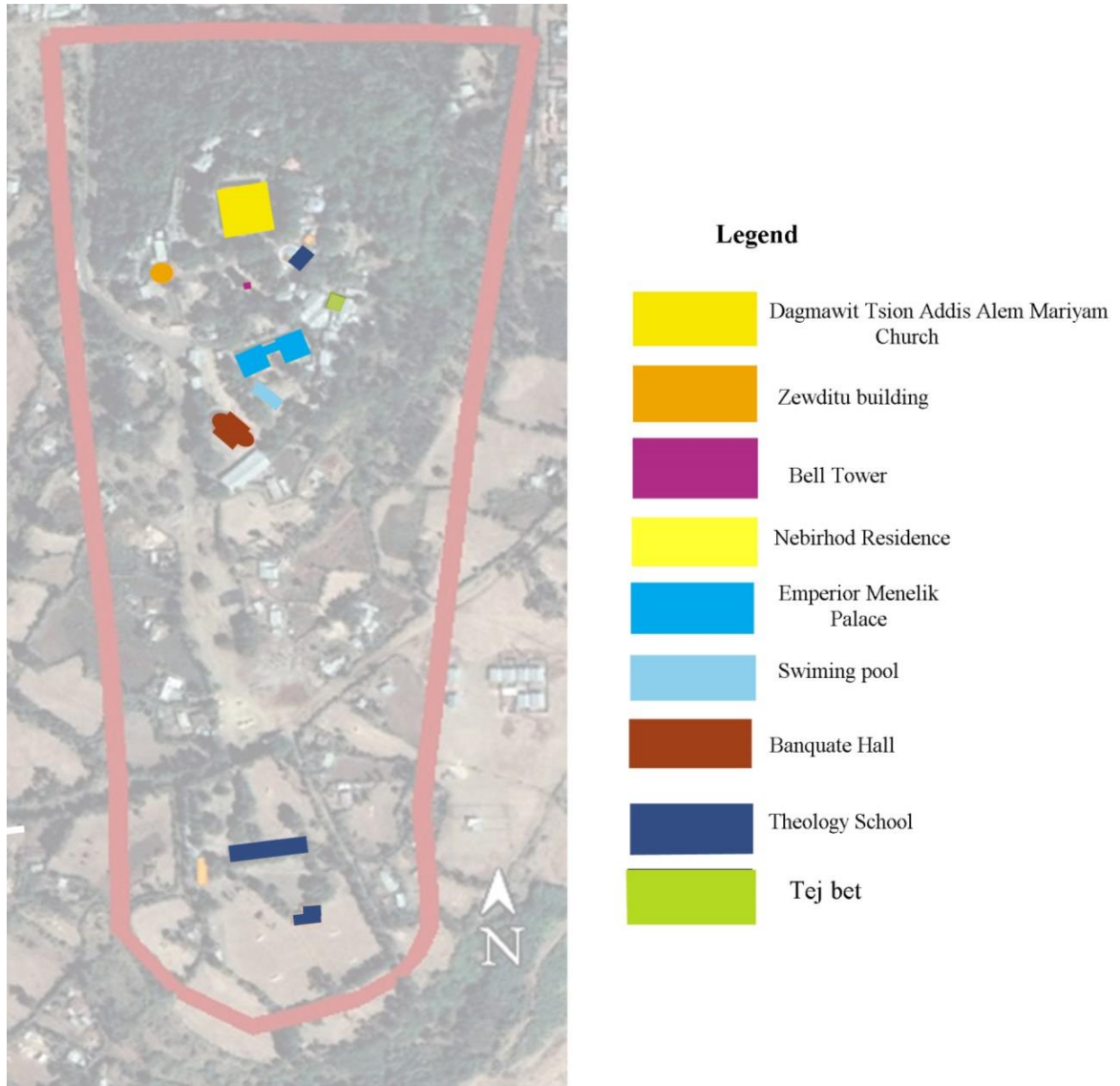


Figure 26 Significant heritages in the study area

3.1.3.1 Architectural analysis of heritage structures

In this section, the researcher examines the architectural heritage found in the study area. Specifically, the researcher attempts to dig into the detailed architectural features of the ten significant historical heritages observed during field visit.

3.1.3.1.1 St. Mary Church of Addis Alem

St. Mary church Addis Alem is the largest building in the study Area. It has a rectangular shape with an open veranda. However, most ancient Ethiopian St. Mary

churches are circular in shape .The veranda has forty-eight decorative wooden posts that support the roof. The roof is made of corrugated iron sheet with Gabel step roof and finials. Additionally, there is an ornamented wooden architrave. The church has well-decorated arched doors and windows on all sides of the wall. Besides, the internal and external walls were decorated with paintings (Field observation,2023).



Dagmawit Ztsion Addis Alem church building

Openings

Ornamented Church door which has a rectangular wooden leaf and well articulated fixed arched window at the top of the door and it is framed with phrase paintings

An ornamented arched wooden window which has a fixed semi circle wooden frame top window with glass and rectangular two wing wooden window , ecorated with phrase paintg

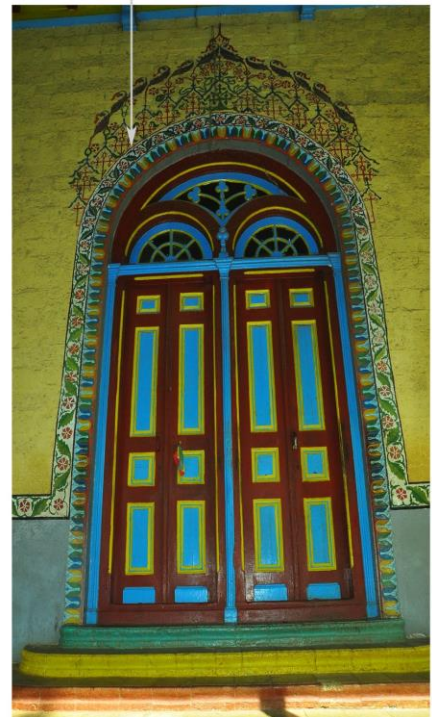
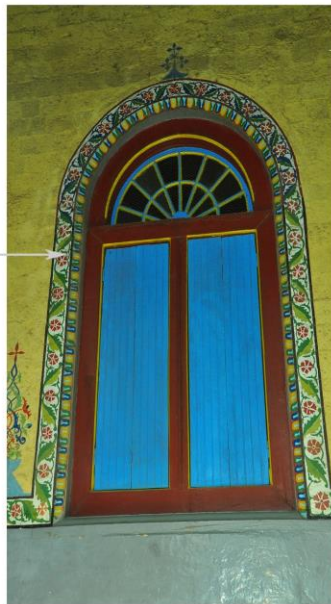




Figure 27 The architectural analysis of Dagmawit Tsion Addis Alem Mariam church

3.1.3.1.1.1 Painting at the internal and external wall of church

The church's exterior and interior walls are decorated with a variety of patterns. These designs are primarily found around the doors and windows. On the exterior façade of the church, there are depictions of different plants and animals in all four corners. Both the interior and exterior walls feature paintings around the doors, windows, pillars, and the area beneath the cornices. Inside the church, especially where the ceiling decorations are located, intricate patterns can be found. Although these interior designs might appear as simple color gradients from a distance, a closer look reveals that they are engrave with patterned phrases. Additionally, the sanctuary walls are painting with various biblical narratives. Unlike other churches in Ethiopia, depictions of kings, warlords, and noble families are also featured on the front and back façades of the sanctuary. Overall, the biblical narratives and the motifs of the climbing tree contribute to the church's unique beauty (Observation, 2023).

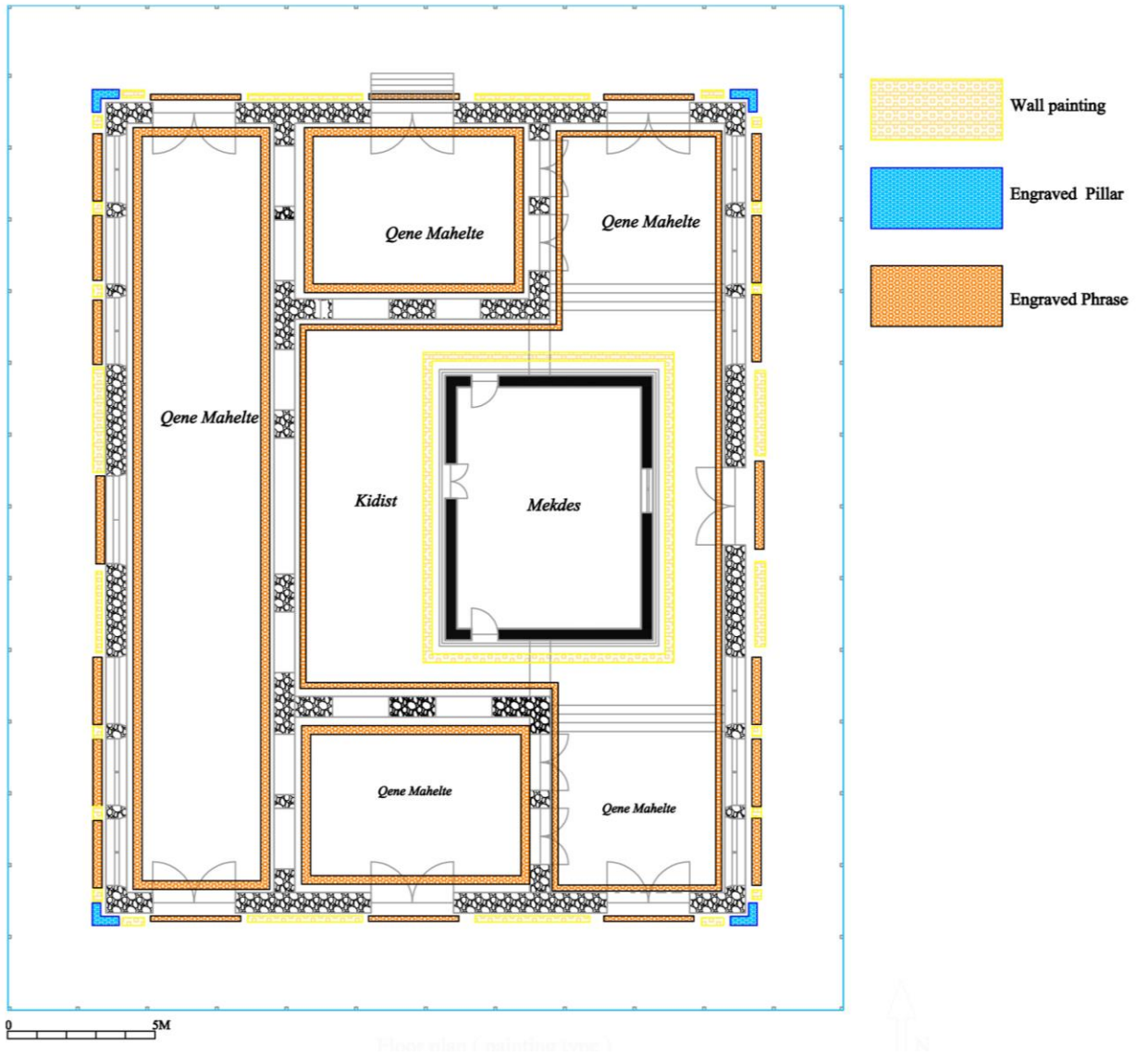


Figure 28 Addis Alem St. Mary church location of painting on the plan

3.1.3.1.2 Zewditu Building /Dej Selam

This building is a single-story structure that combines circular and rectangular form. The ground floor has rectangular walls, while the first floor has circular wall. The decorated wooden posts support the circular roof. Moreover, a straight flight stair provides direct access to the first floor from the external veranda. The building was constructed by using mud masonry plastered with lime and features a rectangular wooden door and window (Observation, 2023).

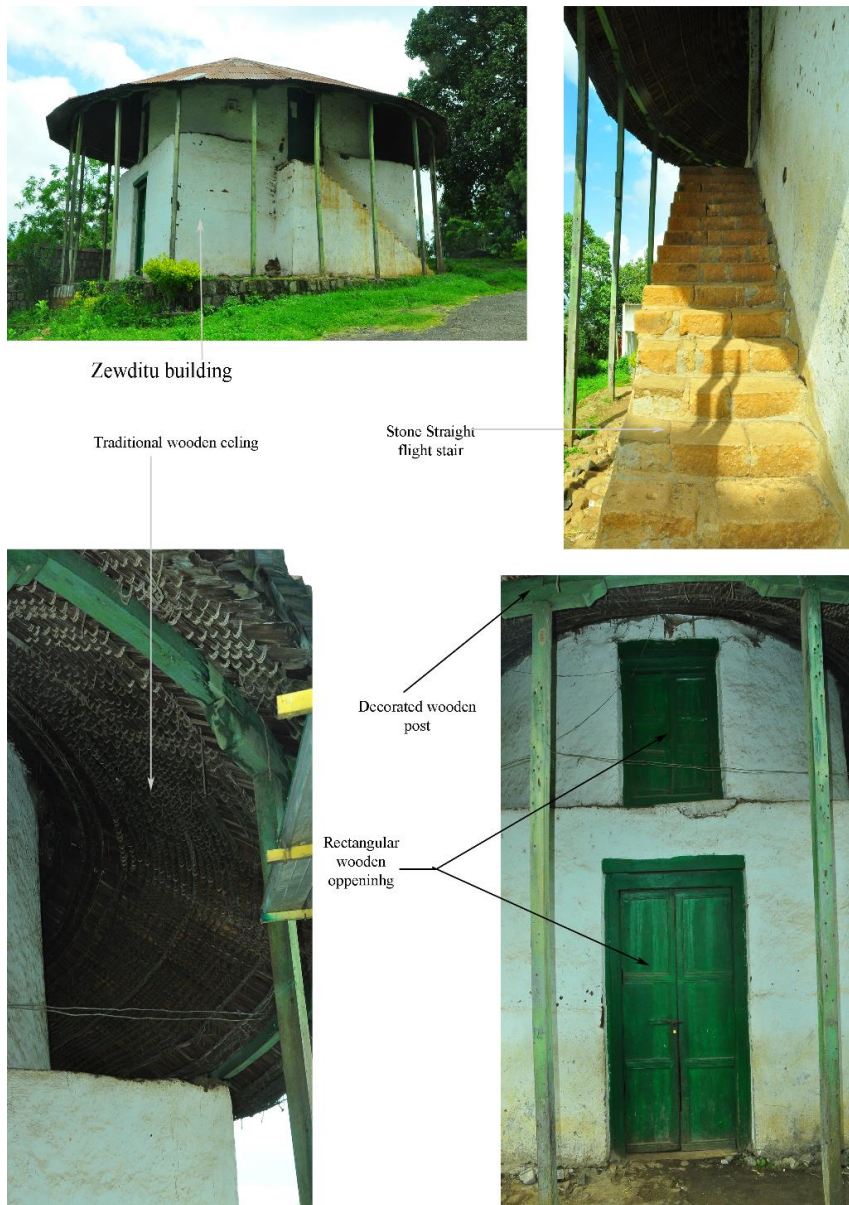
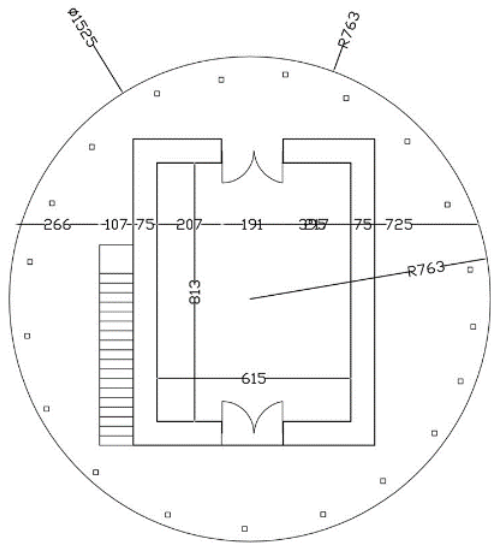
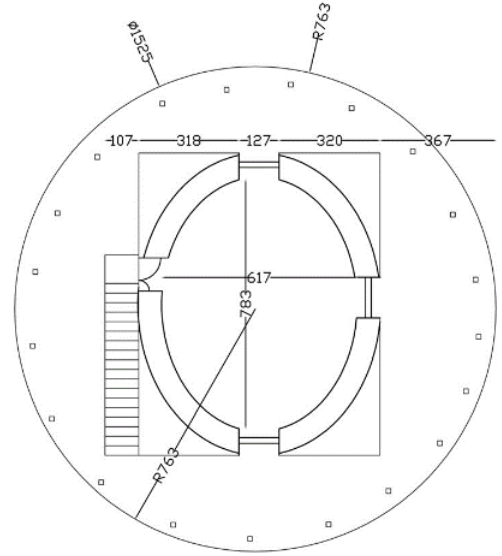


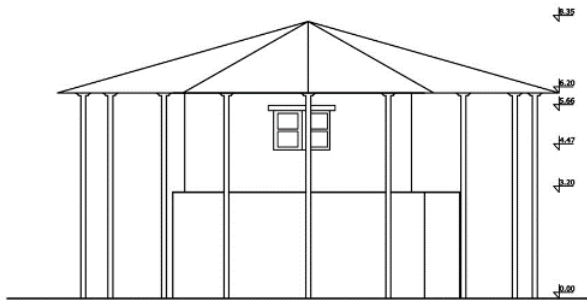
Figure 29 The architectural analysis of Zewditu Building



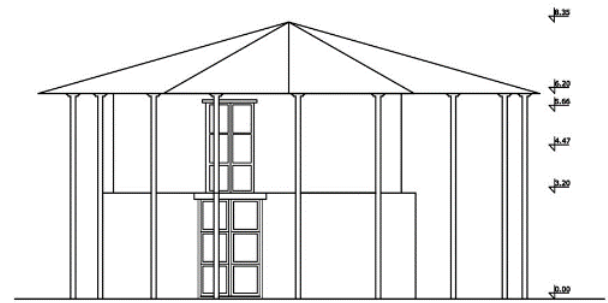
Ground plan



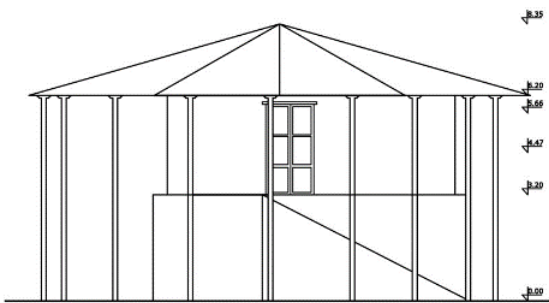
First floor plan



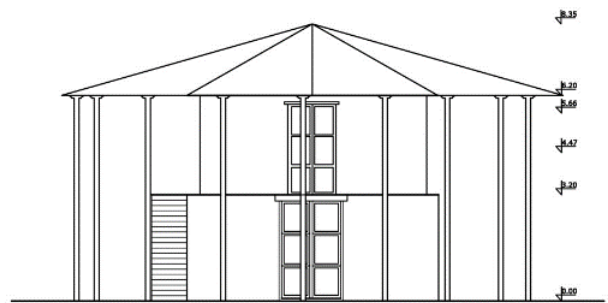
Left Elevation



Rear Elevation



Right Elevation



Front elevation

Figure 30 Plan and elevations of *Dej Selam* Building

3.1.3.1.3 Bell Tower

The bell tower is a distinctive structure with interesting high masonry construction. It has a rectangular shape with well-decorated arched opening, But it does not have a wing. Additionally, it has a wooden arched door that provides access to wooden stair way leading from the ground to the bell of the tower (Observation, 2023). According to video Archive of EHA, this structure began construction during Emperor Menelik period but was halted for a long period due to various reasons. The construction resumed and was completed in 1926 with the help of Etege Menene.

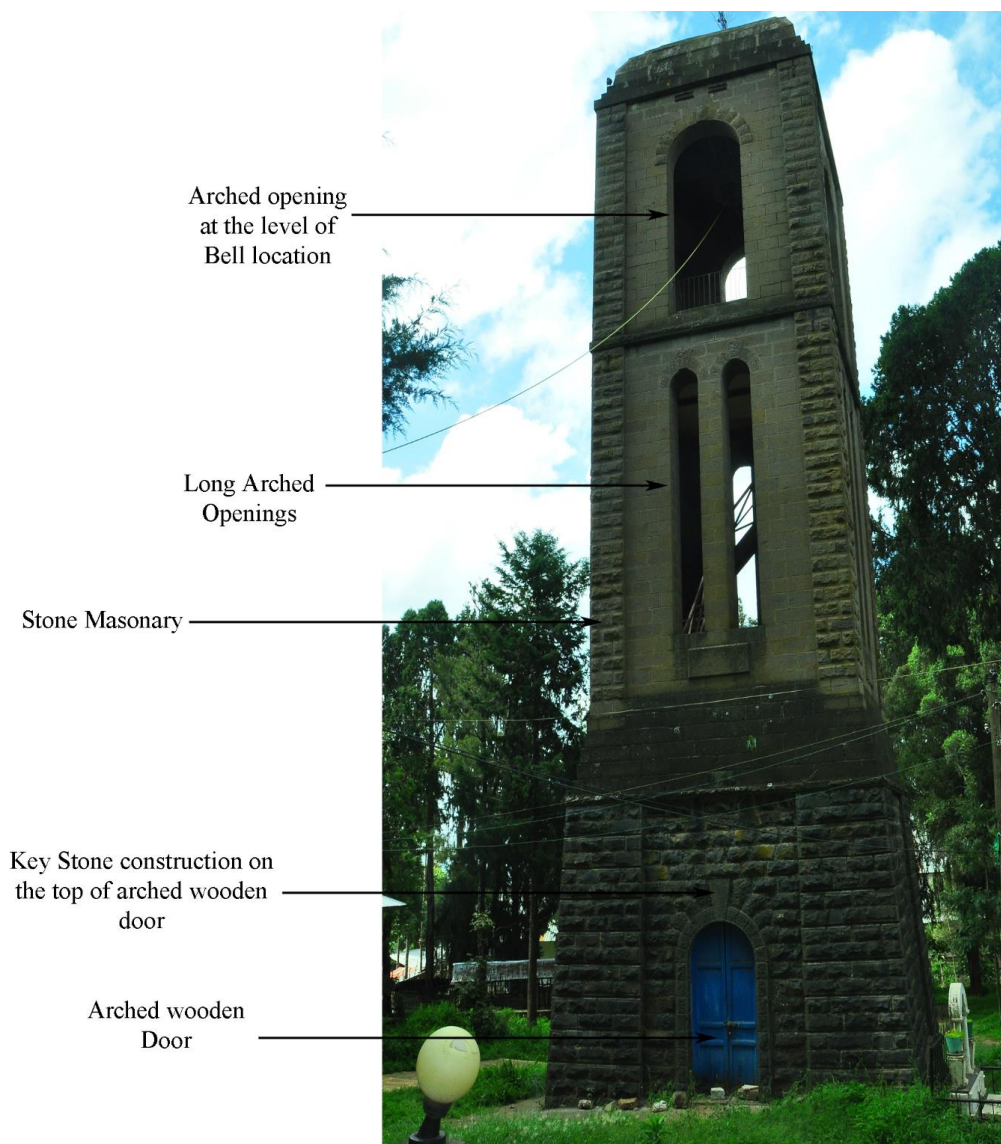


Figure 31 The architectural Analysis of the church Bell Tower

3.1.3.1. 4 Nebir'ed (Former Church Administrator) Residence

This structure is a significant rectangular shape one-story building constructed by preserving the natural landscape. The ground floor is a mud masonry building that can be accessed from the natural landscape whereas the upper floor is a timber structures accessed by using a street flight wooden stair connected with ground level of natural landscape. The building has a rectangular wooden and latter addition steel frame with glass window and doors. Additionally, it has an interesting well-decorated wooden balustrade and post that helps to support the roof (Observation, 2023).



Figure 32 The Architectural analysis of the Nebir'ed residence

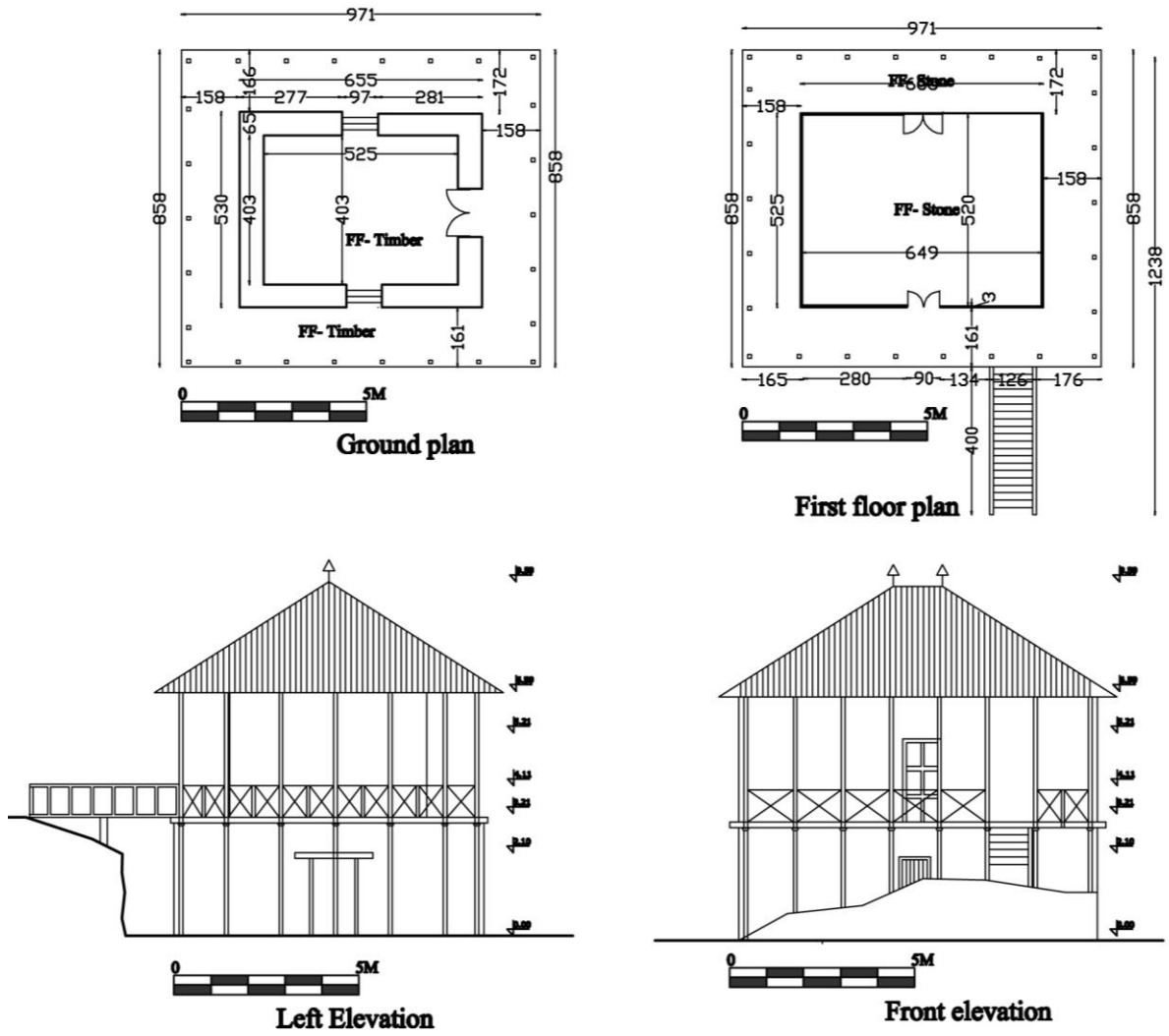
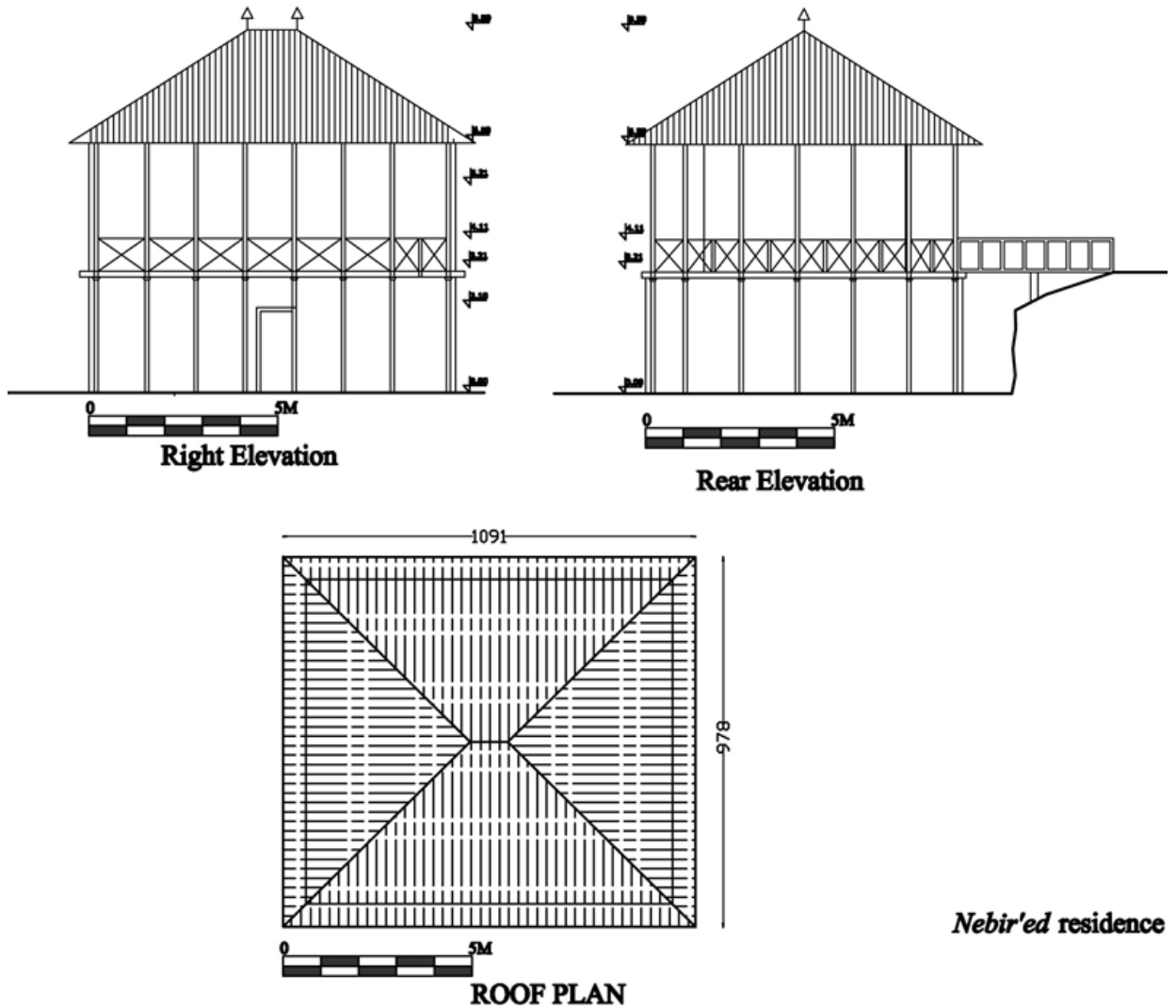


Figure 33 Plan and elevation of *Nebir'ed* Residence



Nebir'ed residence

Figure 34 plans and elevation of *Nebir'ed* Residence

3.1.3.1.5 Menelik II Palace

This palace was formerly used as a palace of Emperor Menelik, but now it serving as a museum and residence. The researcher observed that: It is a one-story building with two square blocks dominated the view and is connecting by covered veranda. In addition, the verandah has an ornamented quadrilateral wooden post. The structure has a rectangular, pointed, and arched window (in the internal parts) and doors. The ceiling has an interesting traditional unique technique (Observation, 2023).



Menelik palace



Finials at the roof top parts



Traditional internal ceiling at the palace interior part



The Beam serving as a ceiling and structural bearing at the external corridor parts

Palace interior serving as a museum



Decorated wooden post serving as roof structural bearing external verendah



Figure 35 Architectural analysis of Emperor Menelik palace

3.1.3.1.6 Banquet Hall

The researcher observed that the building is fascinating by, the elliptical roof design of this dining hall, which features a finials and rectangular pillars, in addition only the roof and the circular along the veranda edge are designed in an oval form. The building wall has a rectangular shape, which also reflects in its openings. The ceiling has an interesting look built in traditional technique. The ceiling has an intriguingly patterned rope made out of plant that is used to link the roof truss and ceiling. The surrounding veranda has 44 wooden posts with decorative fascia boards (field observation, 2023)



Figure 36 Architectural analysis of banquet hall of Emperor Menelik

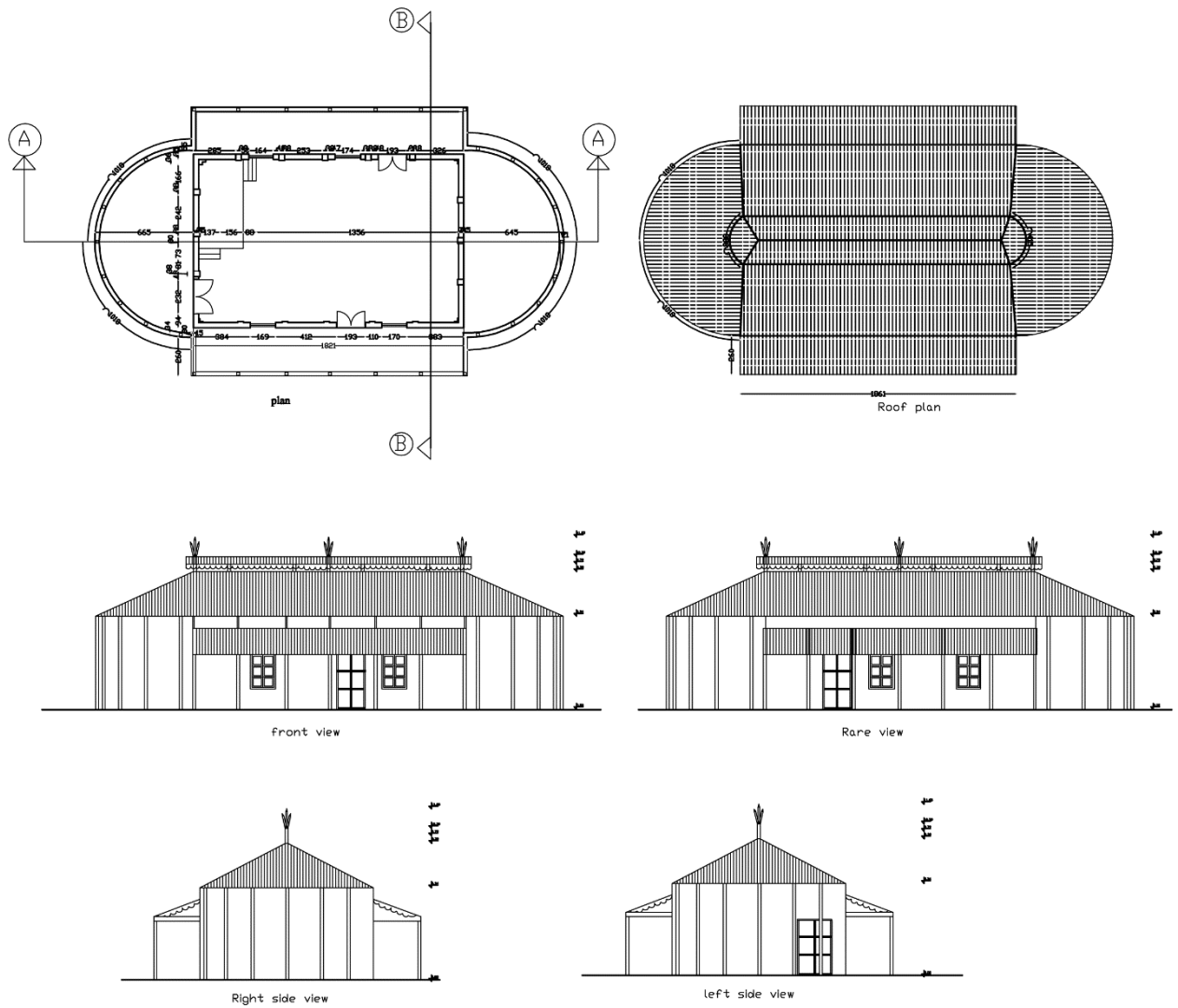


Figure 37 Plan and elevation of the banquete hall

3.1.3.1.7 Theological School

According to Kesis Desalegne, this school was built during the reign of Emperor Menelik period. It is located in the lower part of the study area and has a large compound that is not well treated and managed. There are two significant or old structures within the school compound, the one of which is still being used as a school, while the other is being used as a school, while the other is being used as a

store for stew and other items. But the school was originally constructed for teaching theology (Field observation, 2023)

3.1.3.1.7.1 Theological School Block 1

This school block has a linear form with square shaped window and wooden gate that emphasized in the middle of the plan. In the front façade, there are twelve square shaped windows with top window and opened wings. In the middle, there is a wide curtain opening. On the other hand, at the rear side there are six square-shaped window and four doors that helps to access the classroom. In addition, there is a rectangular wooden post at the rear side of the entrance door. The school was constructed using mud, stone, wood, and corrugate iron sheet (Field observation,2023)



Theological school 1

school front entrance
designed with glass and
wood



Rectangular wooden post at
the school verendah

Square Wooden
and glass window

Figure 38 Architectural analysis of Theological school

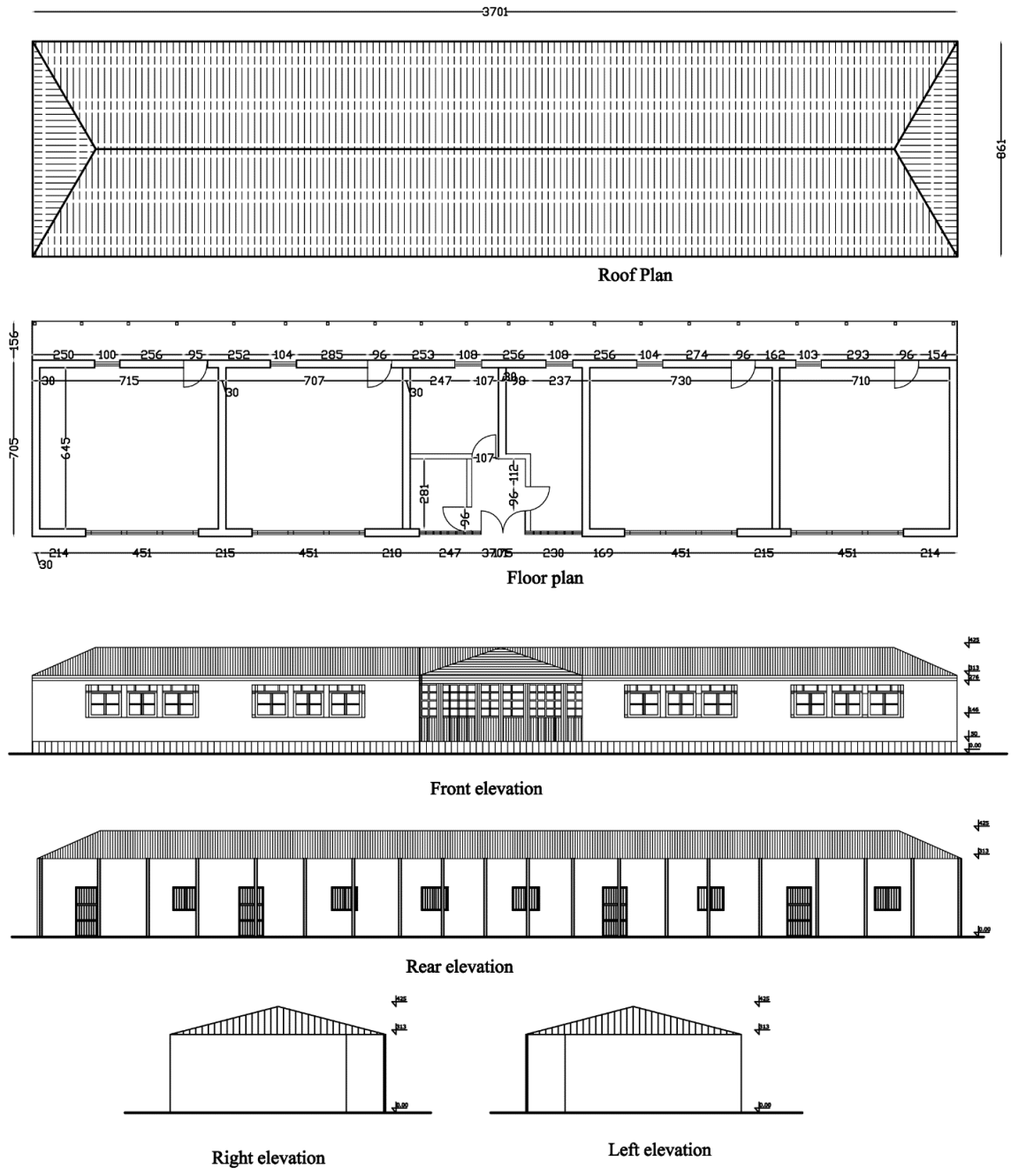


Figure 39 Plan and elevation of Theology school 1 school

3.1.3.1.7.1 Theology School Block 2

This block has L shape a G+0 block with corrugated iron sheet gable roof. The surrounding veranda has a wooden rectangular column. The wall is made of wooden and mud plaster finish in lime paints. The floor has three rooms has an access through veranda, with segregated entry for each room. The openings are made of wood and it has rectangular shape doors and windows (Observation, 2023).

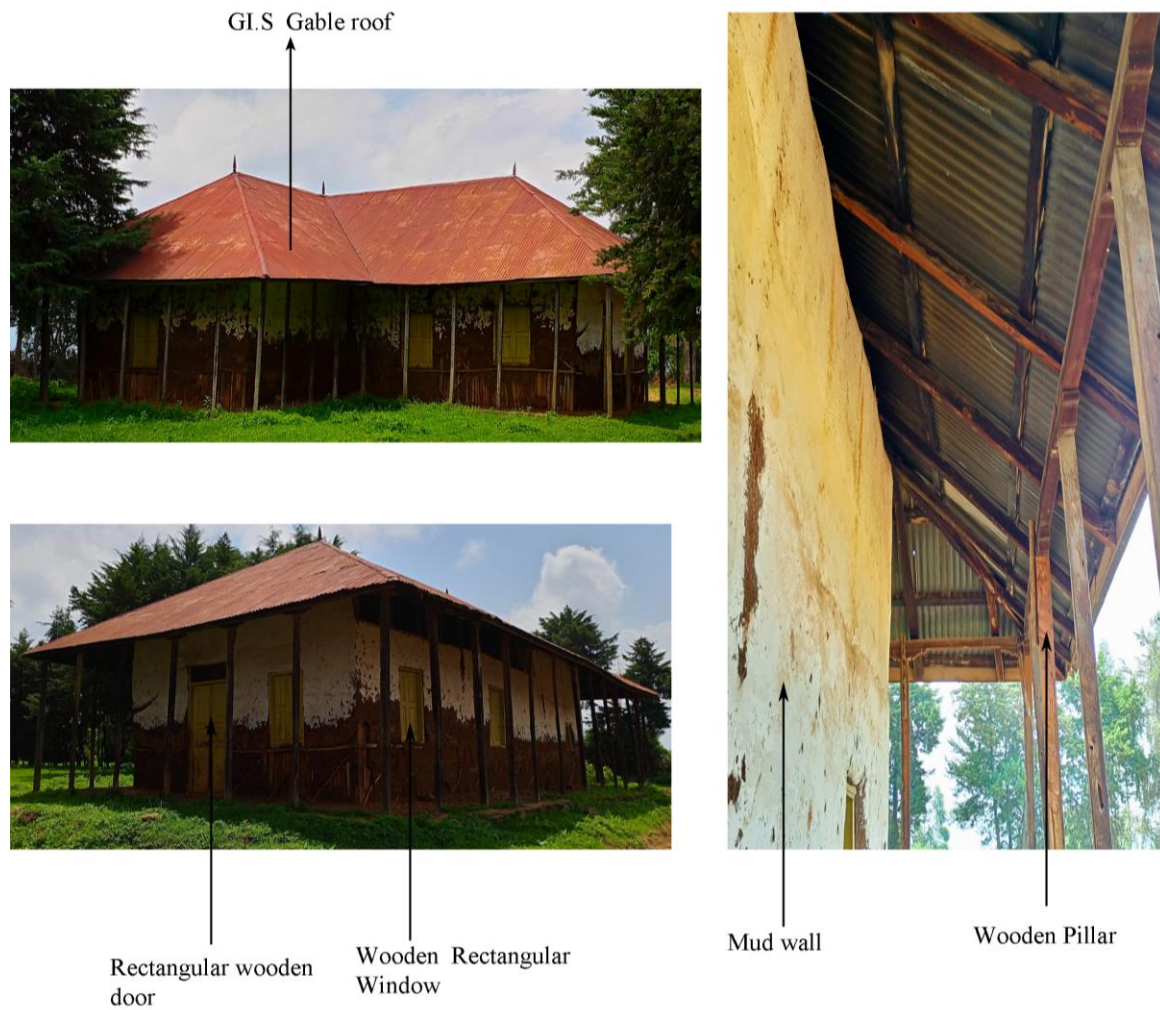


Figure 40 Architectural analysis of school block 2

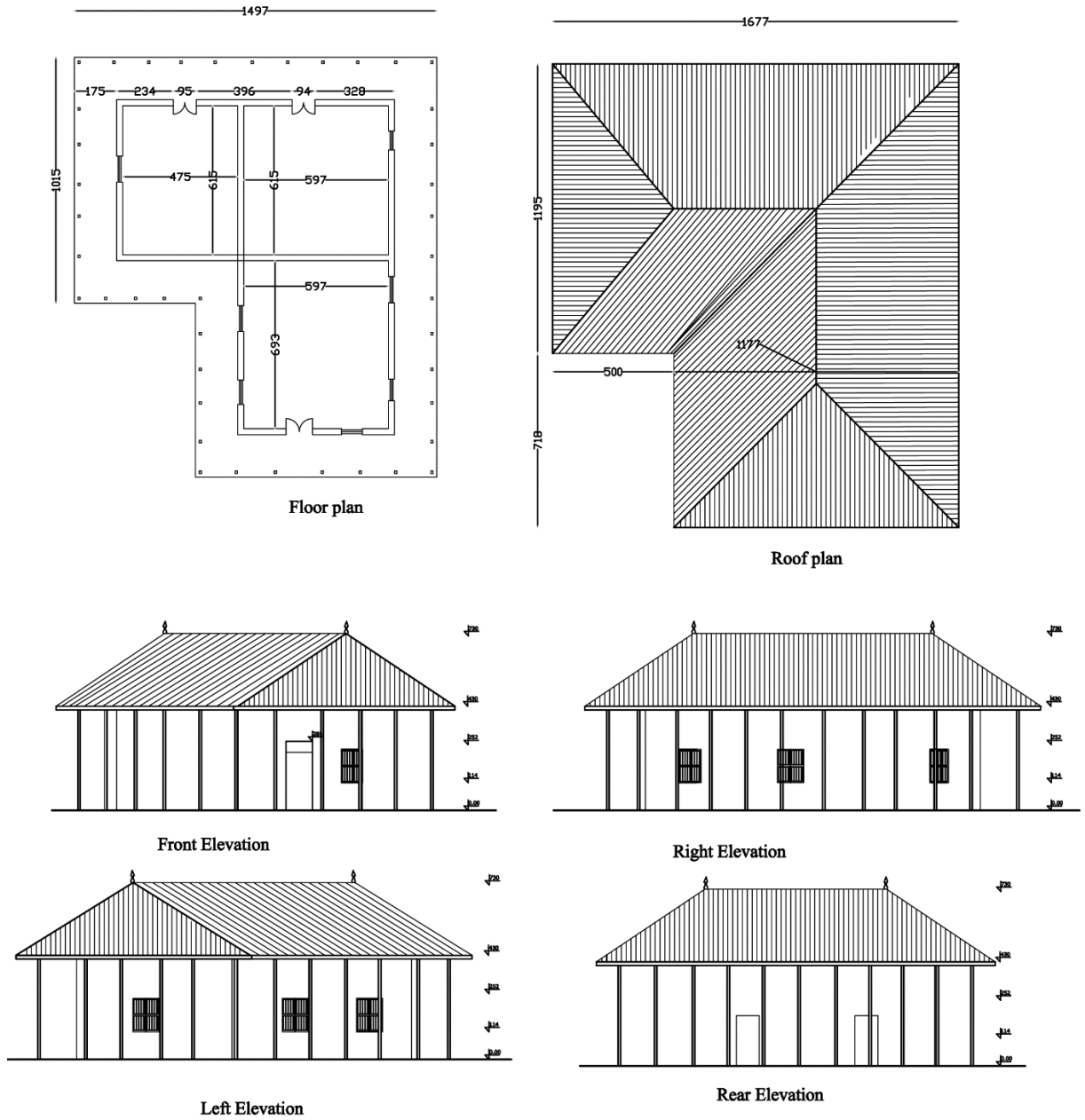


Figure 41 plan and elevation of Theology school 1 school

3.1.3.1.8 Tej bet

During Menelik II period, this significant structure that served for preparing traditional liquor(interview collected from church administrator,2023). The building has a rectangular shape with a gable roof and is constructed using mud and wood. Inside, a straight wooden staircase provides access to the mezzanine floor. This upper

level is made of timber and offers an open view down to the ground floor.
(Observation, 2023).

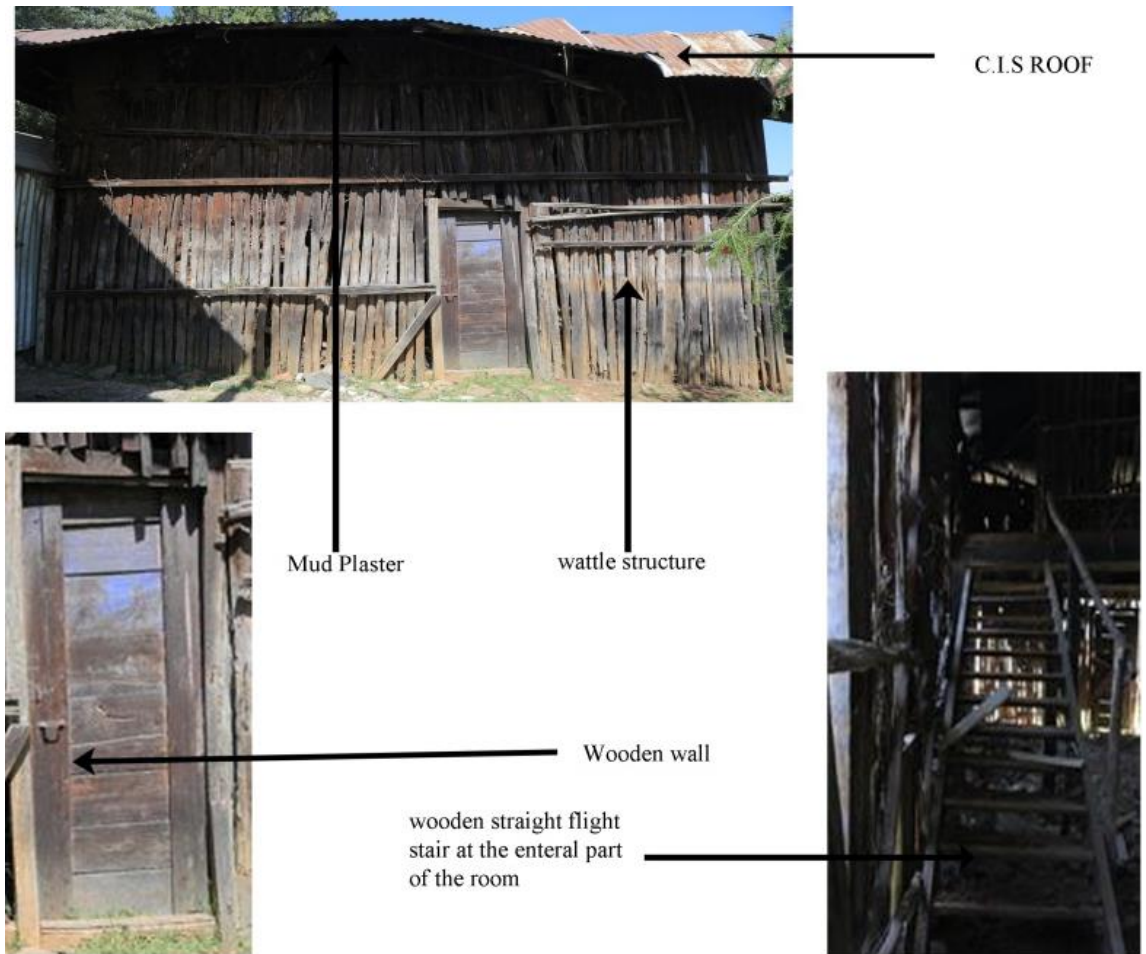


Figure 42 Architectural analysis of *Tej bet*

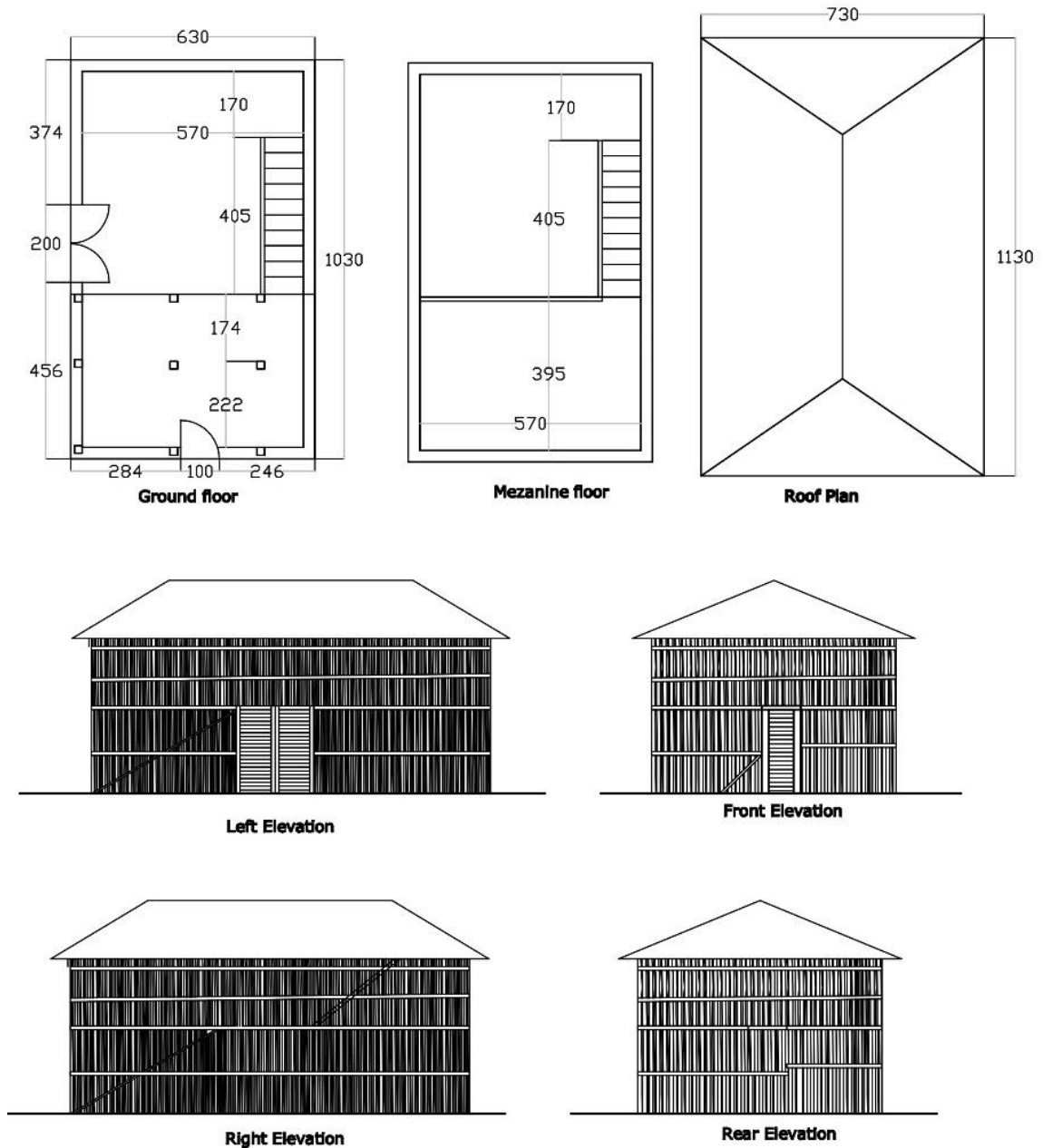


Figure 43 Plan and Elevation of *TEJ bet*

3.1.3.1.9 Emperor Menelik II Swimming Pool

This Swimming Pool was constructed during Emperor Menelik period similar with the construction period of the palace .It is constructed with traditional masonry technique .It has a 1.5 meter depth and the width 6 meter and its length 11 meter (field observation, 2023).

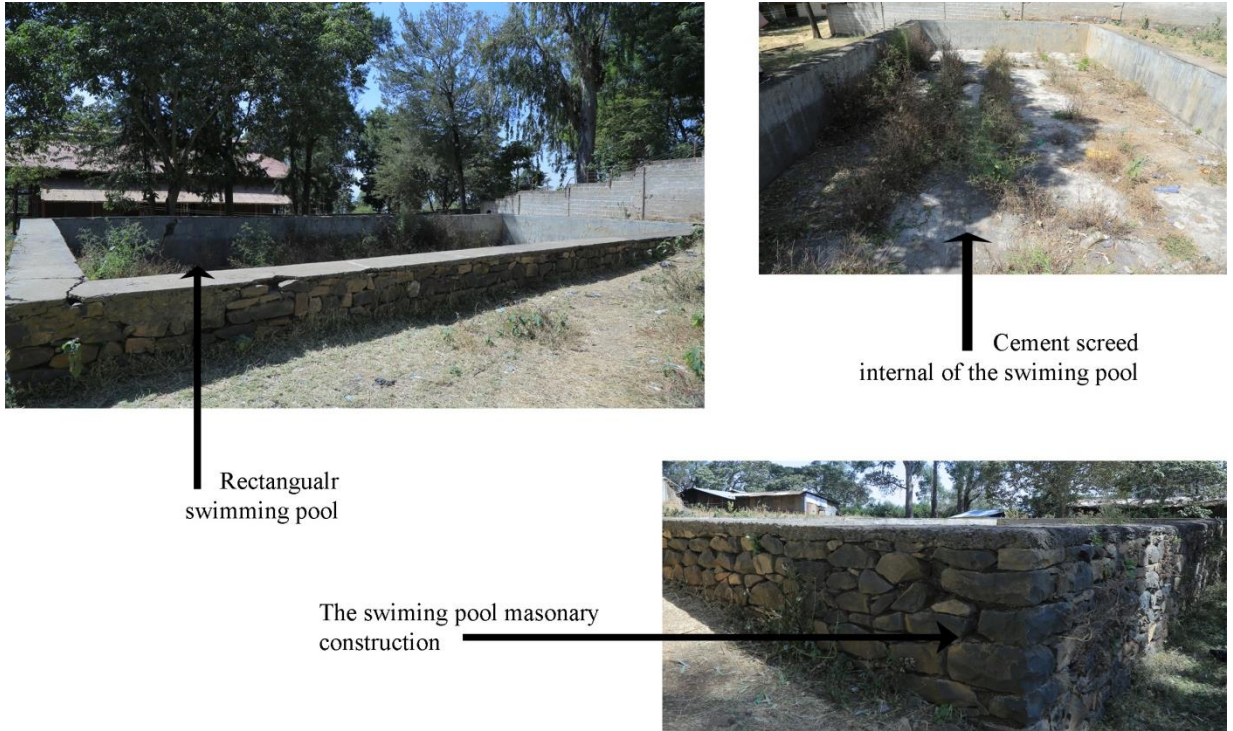


Figure 44 Swimming pool of Emperor Menelik II

3.1.4 Conservation Statuses of the landscape

The landscape is found with an interesting slope starting from the main road to the church. The church building surrounding is found to be well preserved except there is a change in entrance that was replaced with modern entrance fence. The former entrance was built with a masonry fence wall with an interesting entrance column that was destroyed. Only trace of a column is found standing at the courtyard of the church. There is also a new design and an integration of modern materials.



1930's image shows the historical masonry entrance of the church



Image captured in 2015 E.c shows the demolished historical entrance pillar



The current modern gate

Figure 45 Former and current gate of the church compound

3.1.5 Architectural characteristics

The architectural features of the historic buildings in the study area exhibit a strong resemblance to those found in the early settlements of Entoto and Ankober. These heritage structures typically range from single-story to two-story buildings. Their floor plans include a variety of shapes circular, L-shaped, square, rectangular, and semi-elliptical forms reflecting a rich spatial diversity. Roofs are often adorned with finials, adding ornamental detail, while the use of wooden posts and balconies

introduces distinctive vernacular typologies that emphasize craftsmanship and traditional construction techniques. (Field observation, 2023)

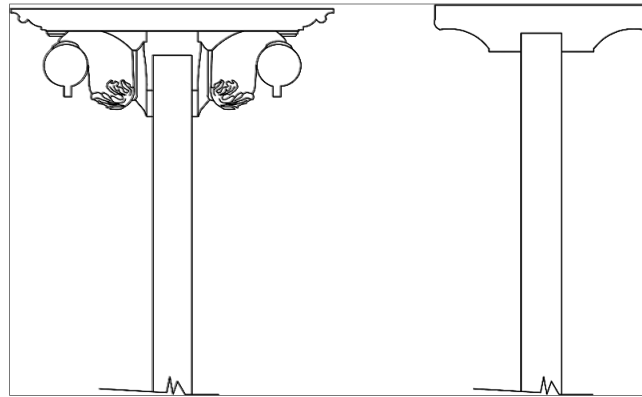


Figure 46 Type of Column decorative details historic built up structures at the old quarter

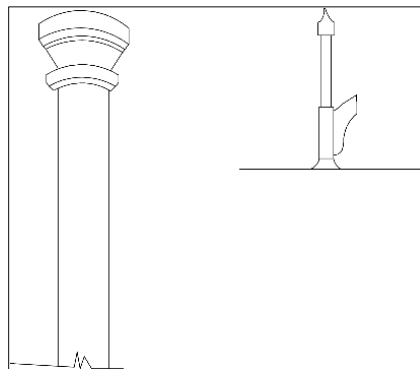


Figure 47 False column and wooden finials decorative details respectively

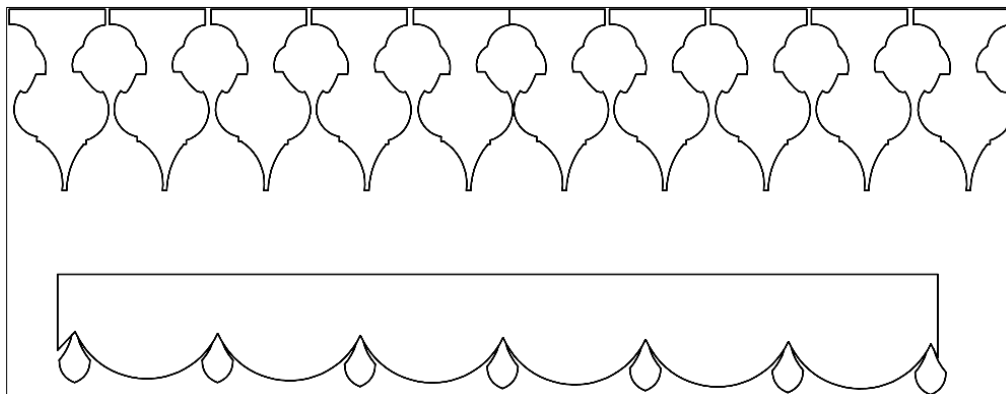


Figure 48 Different typology of ornamented wooden fascia board

In addition to the general architectural features, the study area exhibits a variety of opening typologies, each with distinct characteristics. Most of these openings are highly decorated, reflecting strong influences from traditional Indian architecture, such as intricate carvings, ornamental frames, and culturally symbolic motifs. Among the observed types, two forms are predominant: rectangular and arched openings. Rectangular openings tend to be simpler in shape but often embellished with decorative elements, while arched openings are more elaborate, frequently showcasing curved profiles and detailed ornamentation that enhance the aesthetic appeal of the structures. These openings not only serve functional purposes but also contribute significantly to the cultural and visual identity of the built environment. (Field visit,2023).



Figure 49 Types of door (a,b,c,d) and window (e,f,g,h)

3.1.6 Building materials

The common construction material used in the historic structures of the study area are stone, wood, glass, corrugated iron sheet, lime and mud. Stone have been used as a wall, foundation structure as masonry and as a pavement at the veranda and all around the historic structures. Historic buildings used wood for variety of purposes, including for wall, floor, roof trusses, intermediate beams, column, and balustrades, as well as decorative elements like window and door materials and glass is used for openings door and windows. On the other hand, corrugated iron sheet are commonly used for all roofing of all historic structures around the study area. Mud also utilized in construction of walls as a binding materials and a component of plaster (field observation, 2023)

Table 3 Summary of building materials

Building element	Construction materials	Building element	Construction materials
Foundation	Masonry	Stair	Stone with mud mortar and wood
Floor	Wooden panel, stone and bamboo	Top plate and trusses	Wooden member
Wall	Stone Masonry wall and mud wall	Roof top	Corrugated iron sheet
Wall plaster	plaster with compo mortar and lime	Celling décor	Grass straw tied up with leather strap, Mesh wire, wood
Post	Wooden	Connection of wooden members, joints and lock system of door	Cast iron, wood
Balustrade ,hand rail and guard rail	Wooden member	Window and door	Wooden frame, wooden panel and glass
Pavement around the building	stone	Roof décor(finials)	Decorative Wooden element and steel

3.1.7 Existing condition of historic buildings in the study area

During observation, the researcher identified eight significant cultural heritage building with very high cultural significance. According to the study conducted in the site and addressed literature review most of the historic buildings are located in the church surroundings, most of them are managing by the church, and all the identified heritages were constructed during the period of Emperor Menelik. In this section, the causes of deteriorations of the historic buildings are discussed in details.

The researcher tried to perceive the selected case study. As a case study, the researcher attempted to assess the condition of the historic buildings of Dagmawit Tsion Addis Alem Mariam church, the *Nebir'ed* residence, the banquet hall and the palace of Emperor Menelik II as follows;

3.1.7.1 St. Mary church of Addis Alem

The main church building of St. Mariam church is found in good state of condition than other structures. The building encounters more than 100 years old. Some of the deteriorations observed are cracks on the external wall of the church. Besides it is covered with dust that resulted from lack of periodic cleaning. Other than this, the paintings are disappearing on some parts due to man-made factors and previous conservation measures (field observation, 2023).

3.1.7.1.1 Floors

The church has two type of floor: stone bed floor and bamboo floor. It is found in a good state of condition. The stone-bedded floor and Bamboo floor is found in the internal parts of the St. Mary church. During the church service the church administrator, cover the floor with carpets (Observation, 2023).



Figure 50 Condition of the church floor

3.1.7.1.2 Walls

The masonry walls are in a good state of preservation. However, aside from the painting, there is dust on the external walls and surrounding areas of the church. Additionally, cracks less than 1 mm in width are observed on both the internal and external parts of the walls (Observation, 2023).



External parts of th church wall have painting at the four side of the wall



Internal parts of the church /outer parts of *Mekedes*/ the four sides Covered with paintings

Figure 51 Condition of wall paintings

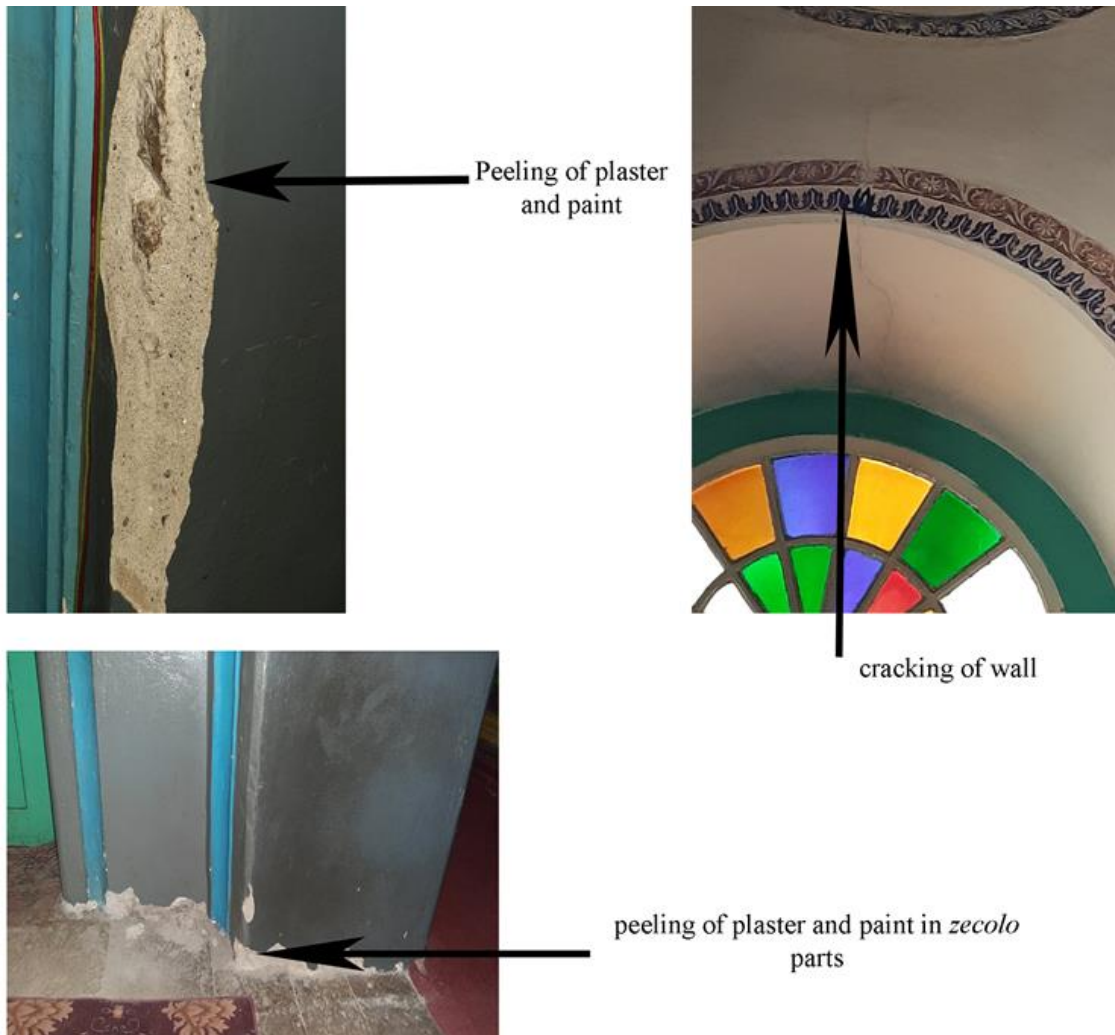


Figure 52 Current condition of the internal and external church wall

3.1.7.1.3 Openings (door and window)

Most of the arched openings are in a good state of preservation. However, some of the top window glass are broken due to little attention and care when moving staffs in to and out of the church. In addition, there is accumulation of dusts in the windows and doors of the church (Observation, 2023).

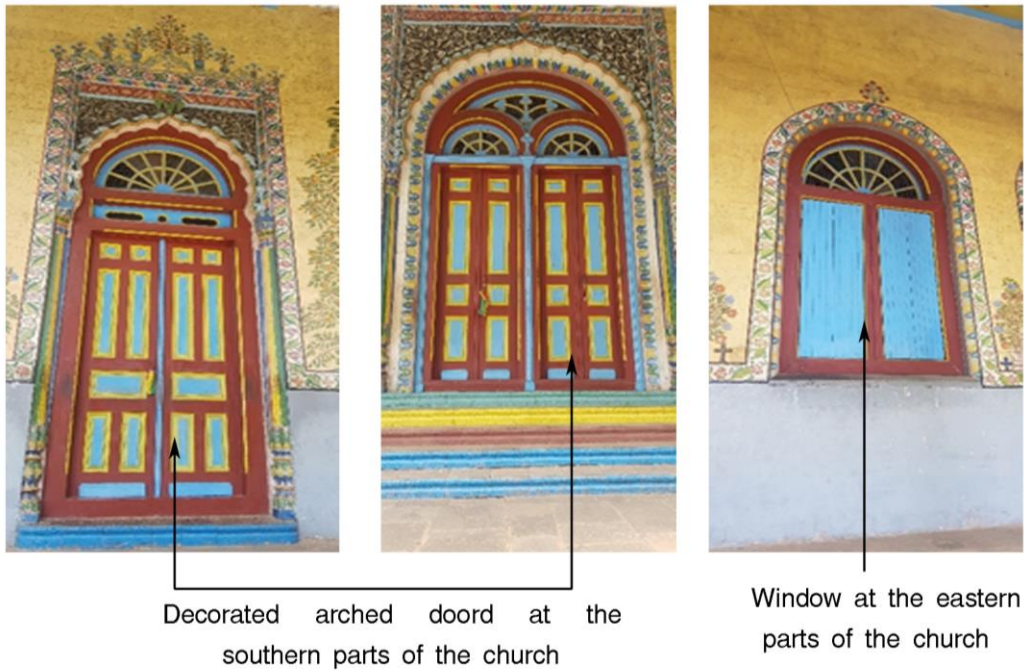


Figure 53 Current condition of the church opening

3.1.7.1.4 Roof

The researcher observed that, the roof of the church has rust due to weathering and lack of periodic maintenance. In addition, the detachments of paintings have occurred due to peeling of paints from the surface of the sheet due to improper surface preparation (Observation, 2023).

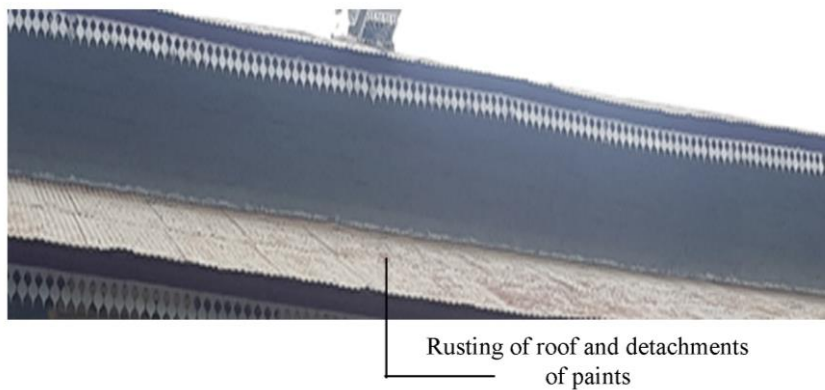
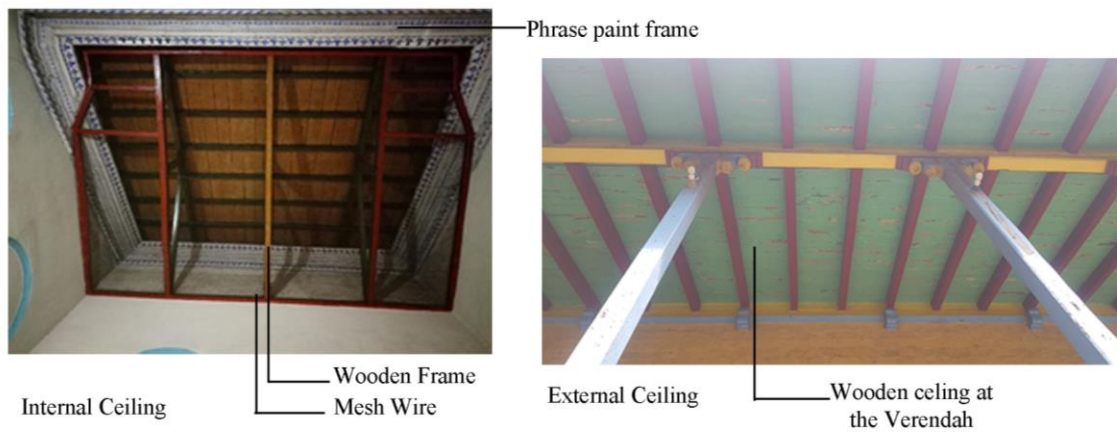


Figure 54 Current condition of the church roof

3.1.7.1.5 Ceilings

The internal ceiling is constructed from wood and mesh wire and remains in a good state of preservation. However, there is noticeable accumulation of dust, likely brought in from outside by foot traffic. In contrast, the external ceiling of the veranda also made of wood shows signs of deterioration. The damage is primarily due to peeling paint, prolonged exposure to moisture, aging materials, and fluctuations in temperature (Observation, 2023).



Wooden ceiling at the kedest of the church

Figure 55 Current condition of church ceiling

3.1.7.1.6 Decorative details

The decorative details are highly deteriorated due to moisture. There is also a missing of some decorative details around the verandah .In addition; there is wooden deterioration of antenna deteriorated due to age and weather conditions (Observation, 2023).

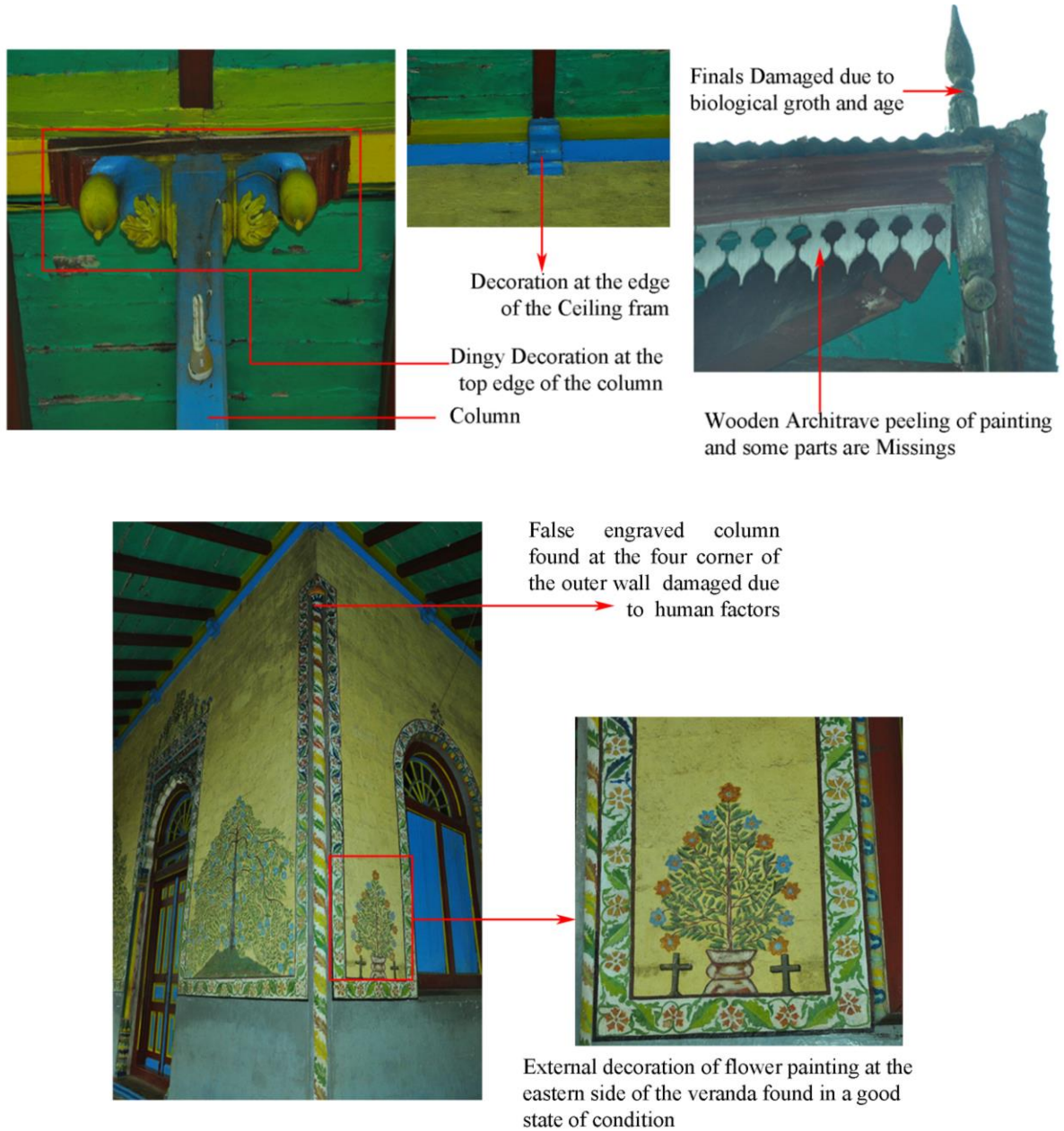


Figure 56 Current condition of the church decorative details

3.1.7.2 Banquet Hall

The exterior of parts of this structure is exposed to wind and other accelerated deteriorations. Due to this and routine inspections and cyclical maintenance, most of the building are deteriorating. Other than that this, the main deterioration of historic building is abandoning the traditional conservation techniques, which seems minor but it is very important for the protection of the historic structure. The main purpose of this building was to serve as a banquet hall. Currently, this is serving as gathering for clergymen and other church servants (Observation, 2023).

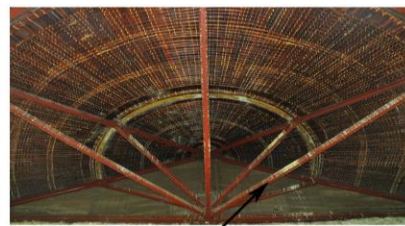
According to the interviews, the traditional technique to preserve the life span of the building was to smoke olive steam at the hall to decrease the attraction of termite and insects to wooden structures. This tradition was stopped due to lack consideration of its preservation status (Field visit, 2023).

3.1.7.2.1 Ceiling

The ceiling of the hall is deteriorating due to the acidic nature of bird droppings that cause serious damage to the internal and external surfaces of the banquet hall ceilings. In addition, the veranda are damaged due to dampness from the roof (Field visit, 2023).



Internal parts of the hall ceiling damaged due to bird droppings



External parts of the hall ceiling damaged due to bird droppings



External parts of the hall corridor ceiling damaged due to dampness comes from the roof

Figure 57 Current condition of ceiling banquet hall

3.1.7.2.2 Pillars

The banquet hall has a wooden pillar in the surrounding veranda with decorative details. They are damaged by termite, insects and Some of them are damaged due to rising damp and moisture (Field Visit, 2023).



Damaged by insect



Damaged by rising damp



Consolidation using incompatible material



consolidation by using wood



Damaged by borehole

Figure 58 Pillars damaged by insects and termites

3.1.7.2.3 Wall

It was observed, the building structural are in a good state of preservation, but the mud plaster on the wall surface are become weak and fragile and are disintegrated due to aging and other environmental factors. This mostly caused due to water infiltration in to the walls through cracked plaster (observation, 2023).

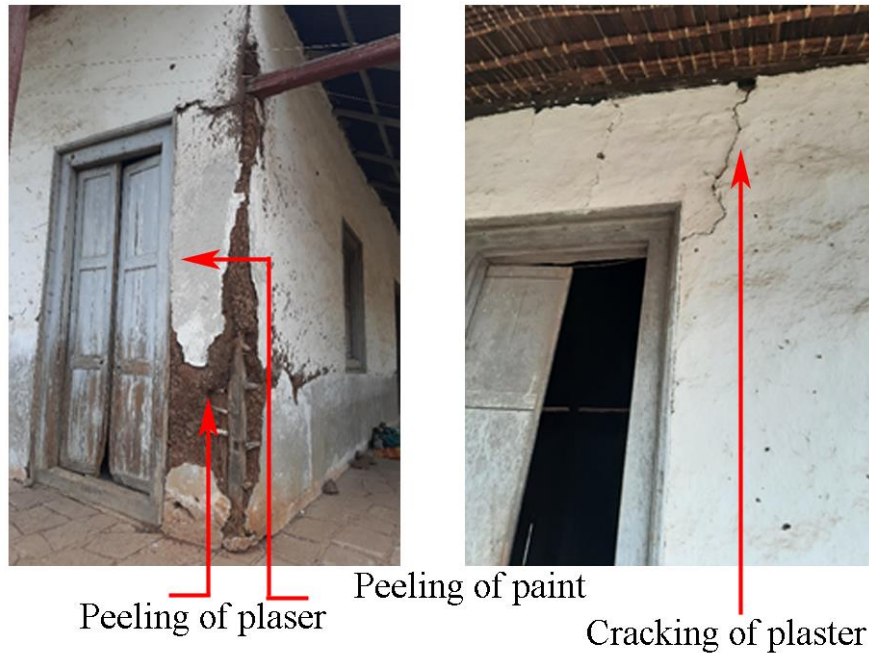


Figure 59 Current condition of the Banquet Hall wall

3.1.7.2.4 Window and Door

The main damage observed in the openings are blisters, peeling paint, rust on metal sills, and missing windowsills. This was occurred due to less protection and consideration of its preservation state. In addition to that it is damaged due to leaks in poor perimeter joists and improperly sloped sills during maintenances (site Visit, 2023)

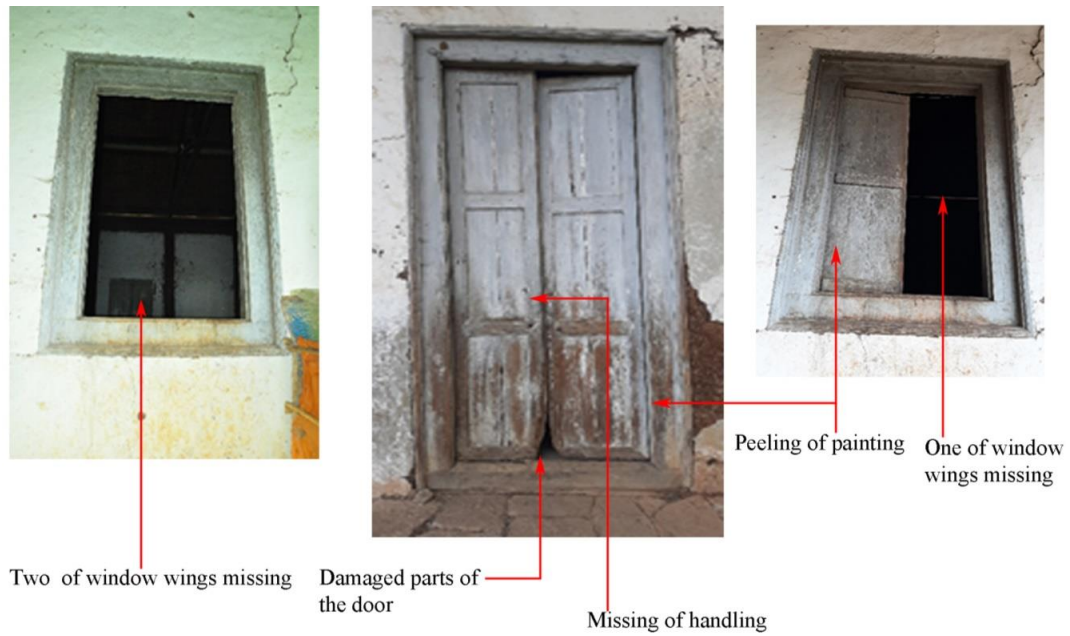


Figure 60 Current condition of the banquet hall openings

3.1.7.2.5 Floor

The stone floor is in a good condition of preservation. However, the surface of the floor has a leveling problem. Due to the poor workmanship has hidden the Appealing of the floor. In addition some of them have a missing of pointing in the joint of the stone (Field visit, 2023).

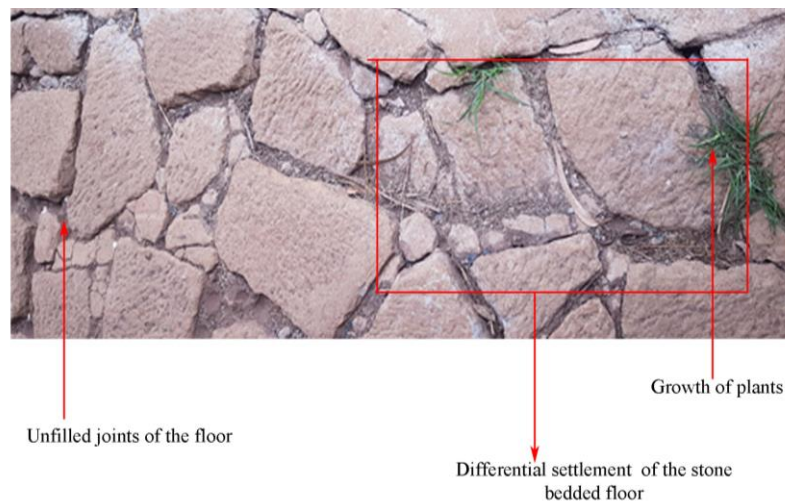


Figure 61 Current condition of the banquet hall floor

3.1.7.3 *Nebir 'ed* Residence

According to the interview collected in the site, this historical building said to be constructed in a similar period Emperor Menelik. This is a one story building has deteriorated due to both cultural and natural factors as there is a lack of attention given for this building (Interview,2024).

3.1.7.3.1 Roof

The researcher identified the roof of this important building is deteriorating due to age and falling of tree leaves falling on top of the building. Besides There is also missing of gutter around the building and rusting of the corrugated iron sheet (Observation, 2023).

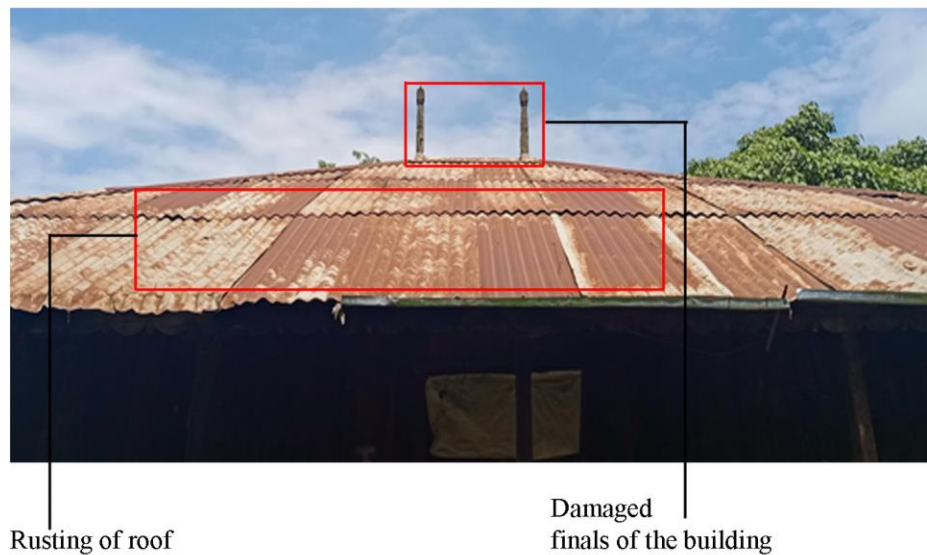


Figure 62 Current condition of *Nebir 'ed* building roof

3.1.7.3.2 Ceiling

The ceiling is made of timber and is currently in poor condition. Layers of dust and smoke have built up over time, largely due to candle use and foot traffic. The surface also shows visible damage from boreholes and long-term exposure to smoke, which has darkened the wood and contributed to its deterioration. Overall, the ceiling

reflects the impact of age, environmental factors, and daily activity within the space (Observation, 2023).

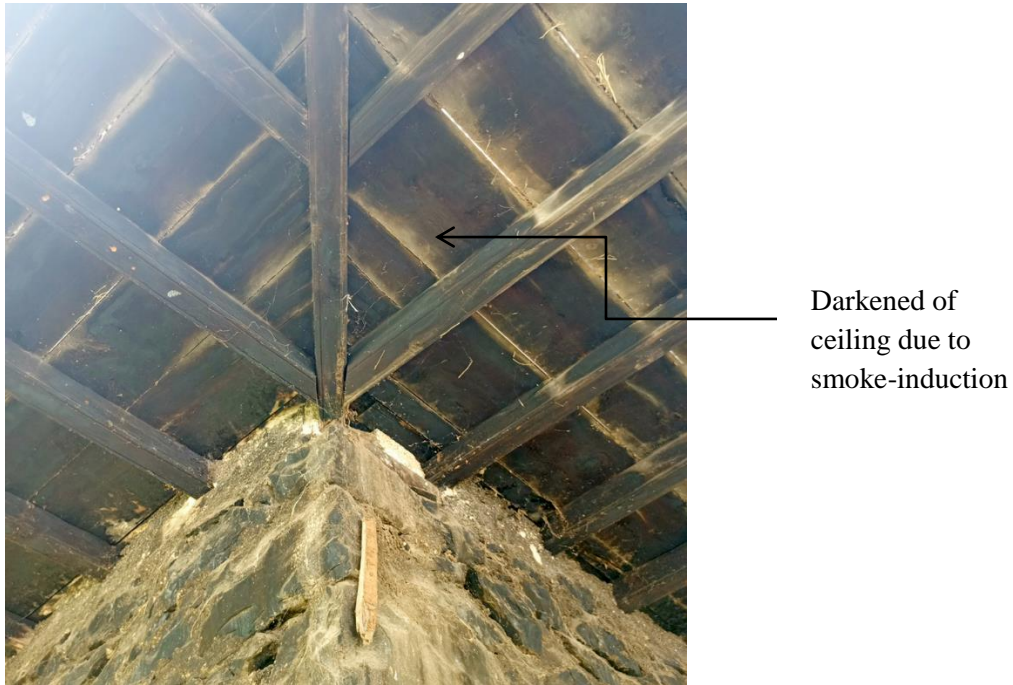


Figure 63 Ceiling current condition of *Nebir'ed* residence

3.1.7.3.3 Wall

In this structure, there are two types of walls: a stone masonry wall on the ground floor, and timber wall on the first floor. The masonry wall is found in a good condition of preservation and has some pointing with cement. Moreover, the first floor timber wall has accumulation of dust (Observation, 2023).

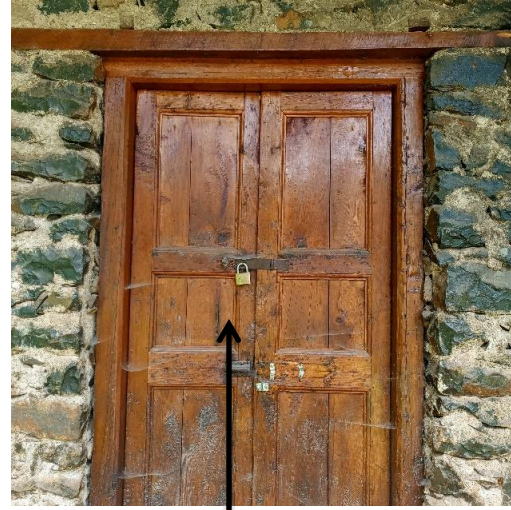
3.1.7.3.4 Window and door

The openings of this significant structure are made of timber ,which has interesting design made from locally available material called *habesha Tid* .Some of the window on the ground floor were changed to modern material steel with glass without considering the original opening. Meanwhile, the original timber is exposed to sun and wind that causes deterioration to the window and door. The door handle has also

been replaced with a modern material not compatible and authentic with the original ones (Observation, 2023).



Wood window change into glass and steel



The door lock has changed

Figure 64 Current condition of *Nebir'ed* residence openings

3.1.7.3.5 Floor

There are two types of floors: stone-bedded floor on the ground floor, which has accumulated dust, and a timber floor on the first floor, which is highly deteriorated due to exposure of sun and rain. Additionally, the timber floor's level is unbalanced due to lack of periodic maintenance and caused due to damaged pillars that support them. And it is very dangerous to pass through it. Furthermore, the veranda floor has been misused as a burial place (Field observation, 2023)

Deteriorated and damaged floor due to rain



Deteriorated floor of the ramp due to rain and age

Miss use of the Veranda floor as a burial



Figure 65 Current condition of floor in Nebir'ed residence

3.1.7.3.6 Decorative details

Nebir'ed residence has decorative details, including the balustrade, the finials and columns. The balustrade of the surrounding veranda on the first floor has deteriorated and some parts are missing due to age and natural factors. The finial is also deteriorated due to natural factors. Most of the decorative column that supports roof is missing and the other existed were replaced with eucalyptus pillar that is not similar

with original one. They are also highly deteriorated due to termites (field Observation,2023)



Figure 66 Condition of Nebirhood residence decorative details (handrail)

3.1.7.4 Menelik Palace

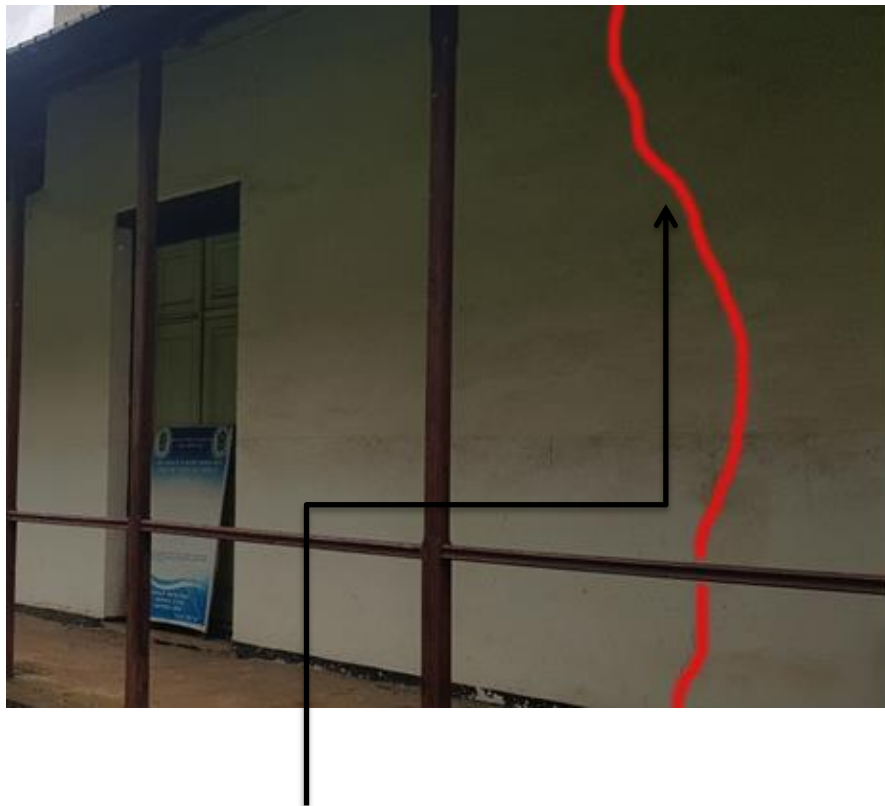
According to the interview conducted in the site and the data gathered from literature, Emperor Menelik II constructed this palace. However, currently it is serving as a museum for movable cultural heritage and church administrator residence. The building was adversely affected by man-made factors and it was burned by fire in 2004. This evidence is still visible at the backside of the museum. It is good to have some evidence of this incident to tell a story of its conservation history of the palace through time (Field observation, 2023). The church community restored the palace building (church committee, 2007).

3.1.7.4.1 Floor

This structure has two types of floors: stone-bedded floor on the ground floor and a timber floor on the first floor, where there is king's bedroom. The timber floor is deteriorating due to damage of fire and exposure of natural factors. It also attacked by termites and borehole (Field observation, 2023)

3.1.7.4.2 Wall

The masonry wall is in a good state of conservation overall, but there are rising damp and plaster cracks have been observed and peeling of paint was also noted during the observation (Field observation, 2023).



Plaster crack observed the front side of the wall

Figure 67 Current condition of wall

3.1.7.4.3 Roof

The palace roof is made of corrugated iron sheet. Its roof was replaced with corrugated iron sheet roof after the fire damaged in 2004 (Archive of EHA .But some parts of the roof are rusting, downpipe and gutter are damaged and broken (Field observation, 2023).



Figure 68 Current condition of roof

3.1.7.4.4 Openings (window and door)

The openings are found in a moderate condition due to some alteration made to protect the movable heritage from theft and steel grill have been installed for this purpose (Observation, 2023). Additionally, the 1997 fire damage has left its mark by blackening the wooden frame. This incident highlighted the community dedication to preserve their heritage and underscored the importance of proper handling and storage of cultural artifacts. The Prompt response by the community prevented a potential loss in valuable historical item and emphasize the need to improve safety measures (Observation, 2023).

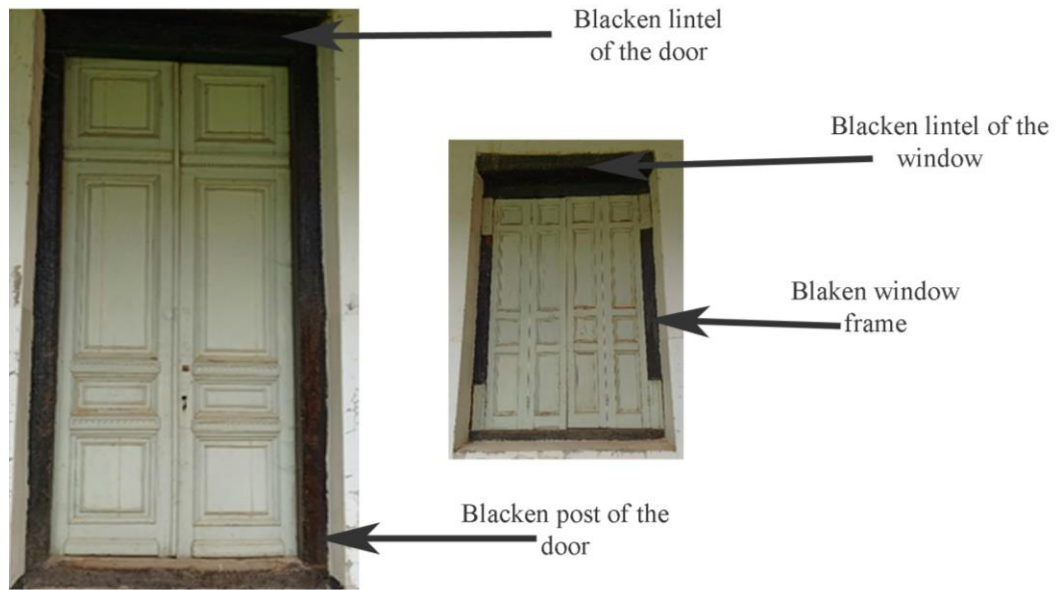


Figure 69 Current condition of place openings

3.1.7.4.5 Ceiling

According to the interview conducted in the site and the reviewed literature, the traditional ceiling was a traditional one that had a decorative pattern and arrangement similar with the roof interior form. However, these pattern and arrangement were destroyed by fire in 1997. It has been restored with a similar pattern and design and is now in a good state of condition.



Figure 70 Ceiling current condition of palace ceiling

In general, the researcher identified the above listed findings and discussed them in detail. In the next chapter, the researcher will present the conclusion of the research and recommendations based on the conclusion.

CHAPTER FOUR

4.1 Conclusion and Recommendation

This section elaborates on the research's conclusion and recommendations based on its findings and the literature review.

4.1.1 Conclusion

The historic buildings of Addis Alem, established during the reign of Emperor Menelik II, hold profound historical, cultural, architectural, environmental, religious, economic, and educational significance. This research identified and documented ten notable architectural heritages from that era. Among them, Emperor Menelik's former residence, Addis Alem St. Mary Church, and the Banquet Hall were previously recorded by the Ethiopian Heritage Authority. The remaining seven structures, including the Zewditu Building, Bell Tower, Nebir'ed Residence, Tej Bet (liquor preparation house), Menelik II Swimming Pool, and Theology Schools 1 and 2, were newly documented and analyzed by the researcher.

The inventory revealed diverse architectural forms rectangular, circular, and semi-elliptical with heights ranging from G+0 to G+1. Distinctive features such as finial-topped rectangular columns and decorative architraves characterize these buildings. However, many structures, including the Tej Bet and swimming pool, are currently abandoned or repurposed, reflecting a lack of consistent conservation efforts.

Empirical studies highlight Ethiopia's rich architectural legacy but also expose persistent challenges. Scholars like Finneran (2007) and Phillipson (2009) emphasize the historical importance of religious and royal structures, yet point to gaps in documentation and preservation. Woldeyes (2015) specifically identifies the shortcomings in Addis Alem, citing limited institutional involvement and the absence of strategic planning. Archival records from the Ethiopian Heritage Authority such as the 1987 architectural plans and the 2003 documentation of church wall paintings demonstrate partial interventions but lack continuity and follow-up. Asrat and Tadesse (2020) further reveal systemic issues,

including inadequate funding, fragmented implementation, and limited technical expertise.

International frameworks, particularly those from UNESCO (2013, 2021), offer valuable guidance by promoting sustainability, community engagement, and the integration of indigenous knowledge. These models provide a roadmap for Ethiopia to enhance its heritage management systems.

This study underscores the urgent need for a comprehensive and sustainable conservation strategy in Addis Alem, especially for the St. Mary Church complex and its surroundings. The findings reveal critical gaps in planning, community involvement, and institutional capacity. By aligning local efforts with global best practices such as those advocated by UNESCO and ICOMOS the research contributes meaningfully to the academic and practical discourse on heritage preservation.

Importantly, the study highlights the vital role of community and stakeholder participation. Their active engagement and commitment to heritage preservation are essential for achieving long-term, sustainable conservation outcomes. Ultimately, these findings reinforce the importance of safeguarding Addis Alem's architectural heritage for future generations, ensuring that its cultural legacy continues to inspire and educate.

4.1.2 Recommendations

In the light of the findings presented in this study, it is recommended that a comprehensive and a collaborative conservation strategy be developed to safeguard the architectural heritage of the study area. The ten documented historical buildings and the surrounding area bear unique historical, cultural and architectural significance.

So in order to effectively conserve the architectural heritage structures and surrounding landscape of the study area, the following four contemporary approaches of conservation recommended by UNESCO, ICOMOS, ICCROM, and the Deschambault Declaration should be applied:

The first approach is historic landscape approach. This approach helps to connect physical structures with cultural traditions by maintaining heritage buildings like the theology school and church, to protect the intangible practice and teachings they support.

The second approach is sustainable community participation, which used to engage local communities in the conservation process. When heritage sites are part of everyday life, people feel ownership and are more likely to protect and pass on traditional knowledge. As of the community, continue to apply the traditional conservation approach. For instance, the community should continue applying olive steam to avoid insects in the banquet hall and other heritage buildings.

The third approach is culture Tourism approach that helps to promotes responsible tourism that respects both the heritage site and local culture. Integrating religious heritage with tourism supports for the long-term conservation of architectural heritages.

The fourth is living heritage approach that focuses on keeping heritage relevant and active in society. By valuing traditional Knowledge and involving communities in decision-making.

In addition to the above listed approach, it is recommended protecting the heritage structures as a collective unit rather than as individual buildings. Development plans should respect the architectural features and landscape, to maintain the authenticity and integrity of the historical context.

Expand the formal recognition of all heritages the research find there is only a recognition for three architectural heritages from the identified ten architectural heritages by the Ethiopian Heritage Authority. This includes updating national and regional heritage registries and ensuring legal protection against demolition, alteration, or neglect.

Immediate restoration efforts should be prioritized for neglected structures such as the Tej Bet, Menelik Swimming Pool, and Nebir'ed Residence. Where feasible, adaptive reuse strategies such as converting unused buildings into cultural centers, museums, or educational spaces can breathe new life into these sites while preserving their integrity.

Before applying any intervention, comprehensive documentation of the heritage structures and landscape should be conducted. This includes recording important architectural features and the relationship between buildings and their environment.

Preventive Conservation Measures should be taken to protect and maintain masonry and mud structures, wooden elements, and landscape features. This includes ensuring proper drainage, applying appropriate finishes, and using traditional methods for repairs.

Restoration efforts should focus on repairing damaged features using traditional techniques and materials. For wooden structures, this includes cleaning, stabilizing, and repainting with historically accurate colors. When necessary, replace deteriorated features with compatible materials that preserve the original form and detailing.

By following the above listed recommendations, the historical and cultural significance of the study area can be preserved, ensuring its sustainability for future generations.

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APPENDIX

Annex I Interview questions

INSTITUTE: Addis Ababa University, Ethiopian Institute of Architecture and Building Construction

CHAIR: Chair of Urban and Architectural Heritage

PROGRAM: MSc in Conservation of Urban and Architectural Heritage

INTERVIEWER NAME: Selamawit Shimels

RESEARCH TOPIC: Prospect of Architectural heritage conservation in St. Marry Church of Addis Alem and its surroundings, Western Oromia, Ethiopia

Personal information

- Name of interviewee-----
- Position-----
- Place of interview-----
- Date of interview -----

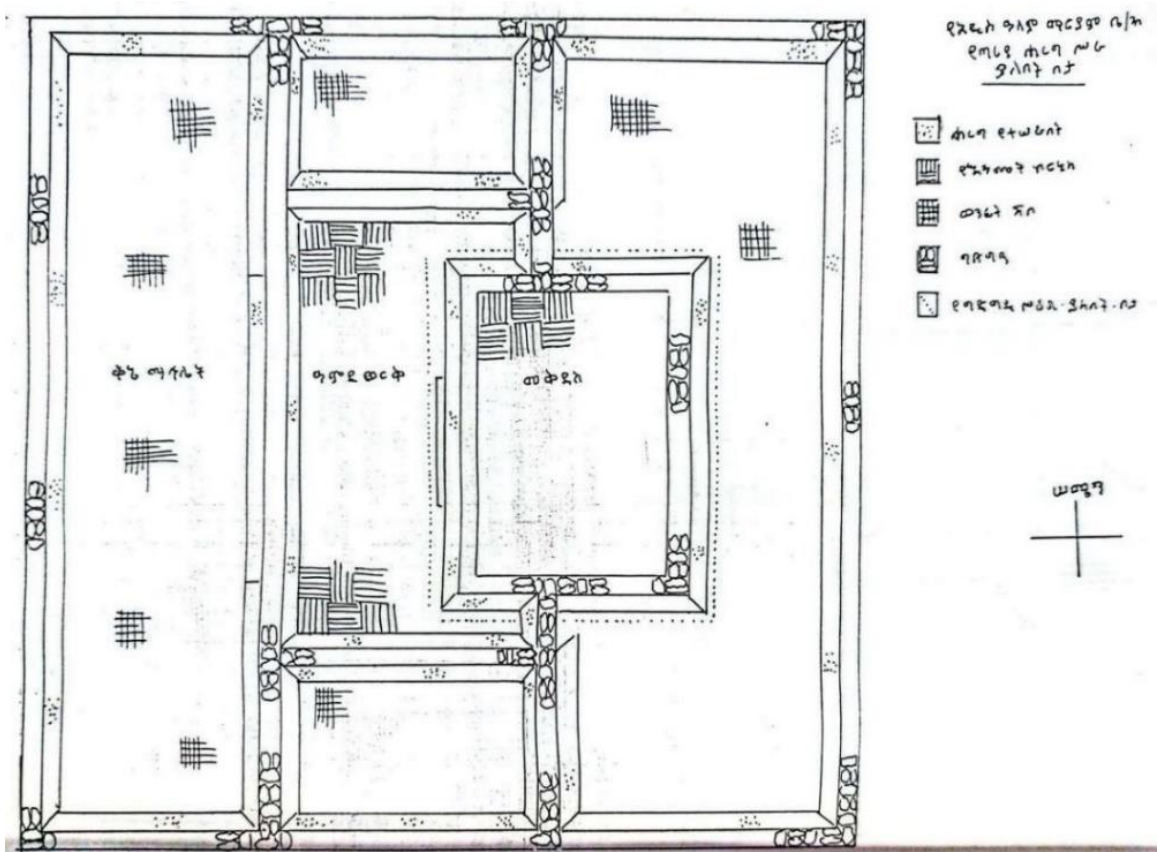
Questions

1. When was the heritage structure built?
2. Who built the heritage structure?
3. What was its original purpose?
4. What is its current function?
5. Is there any document regarding the heritage structures?
6. Is there any document regarding the church paintings?
7. What is the conservation status of the heritage structures?
8. What are the major deterioration factors of the heritages?
9. What is the conservation history of the heritage structures?
10. How does the churches conserve the heritage structures?
11. What was the conservation approach used?
12. How do you built a new structures around heritage quarters?

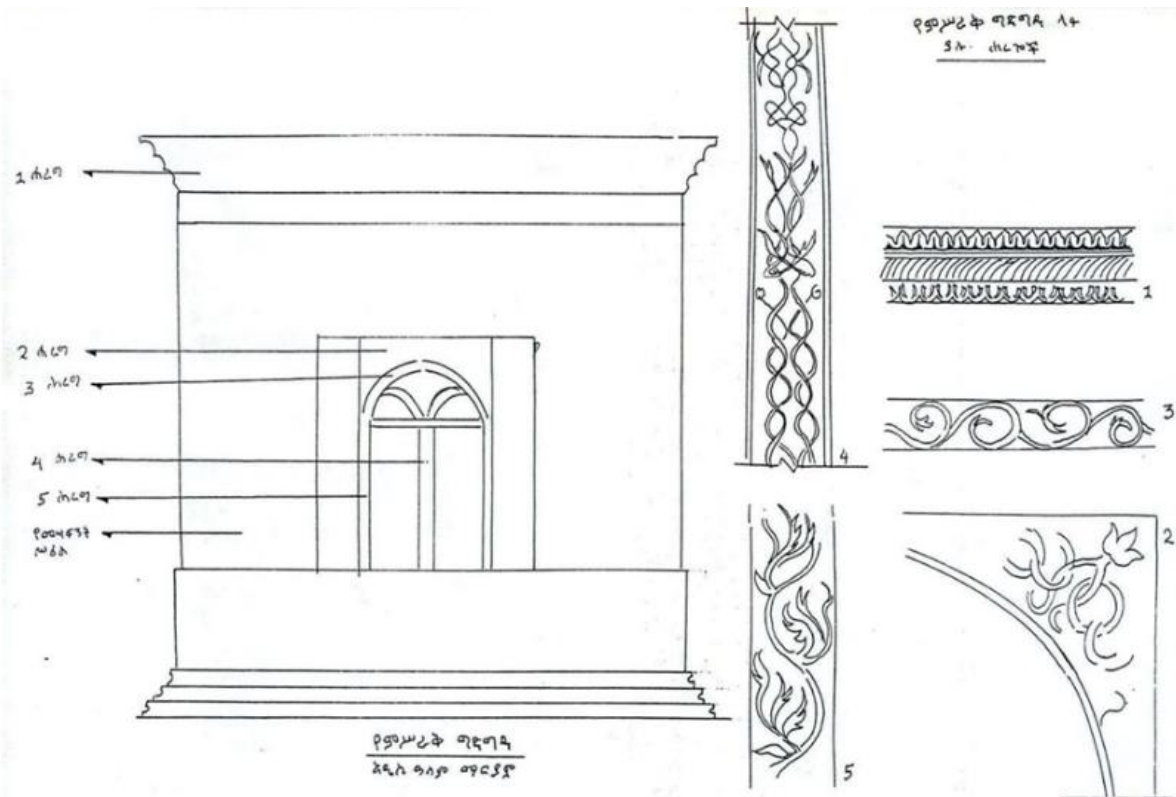
13. Do you think you have a strong attachment to the natural landscape and church and surrounding heritage structures?
14. Is there tourist coming to the site other than coming for the church purposes?
15. How is the response of religious pilgrimage tourist regarding the conservation of the heritage structures?
16. Who is managing the heritage structures?

Annex II 1995 painting documentation of Addis Alem Mariam church

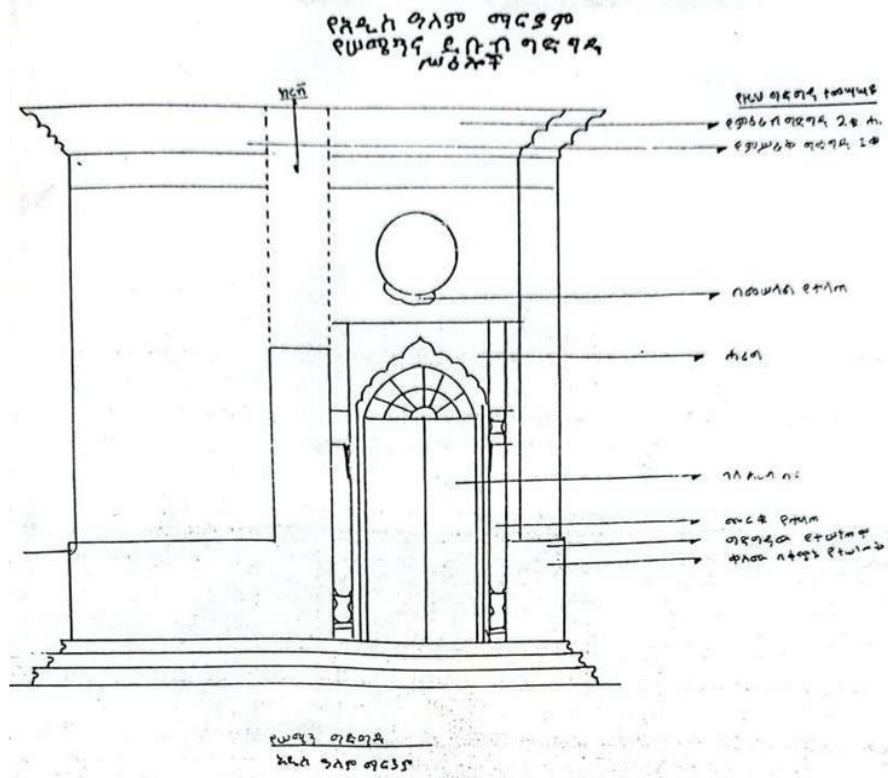
All the below sketches are sketched by Artist Yonas kenea.



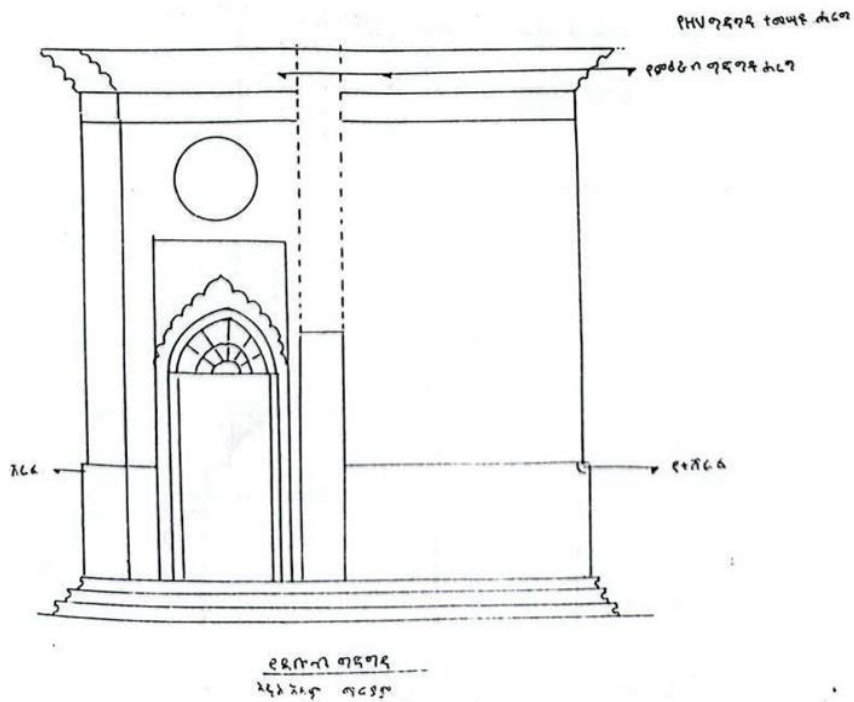
Plan of St. Marry church



Eastern wall

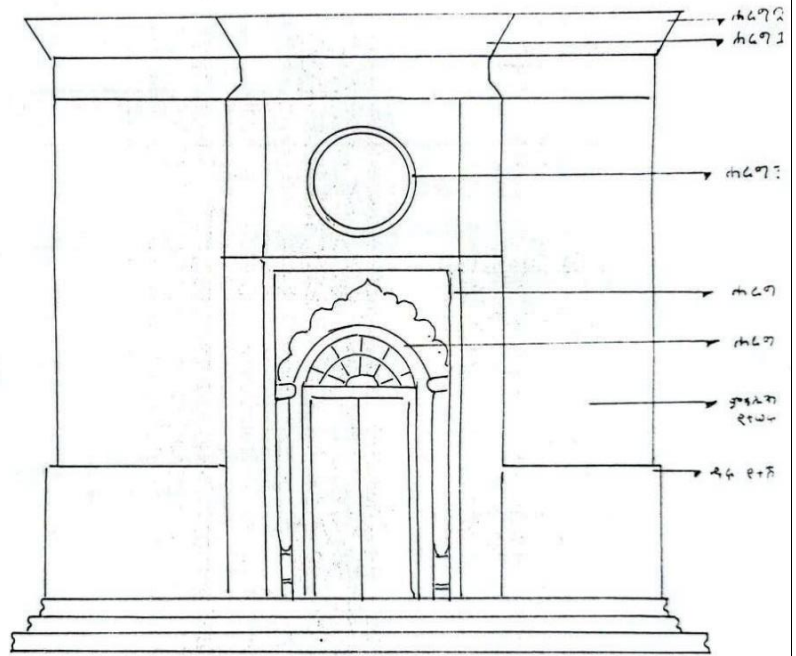
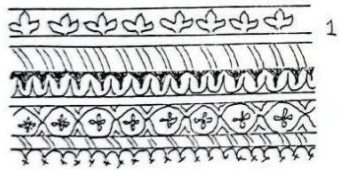
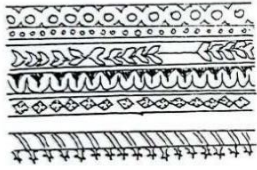


Northern wall of the church



Southern wall

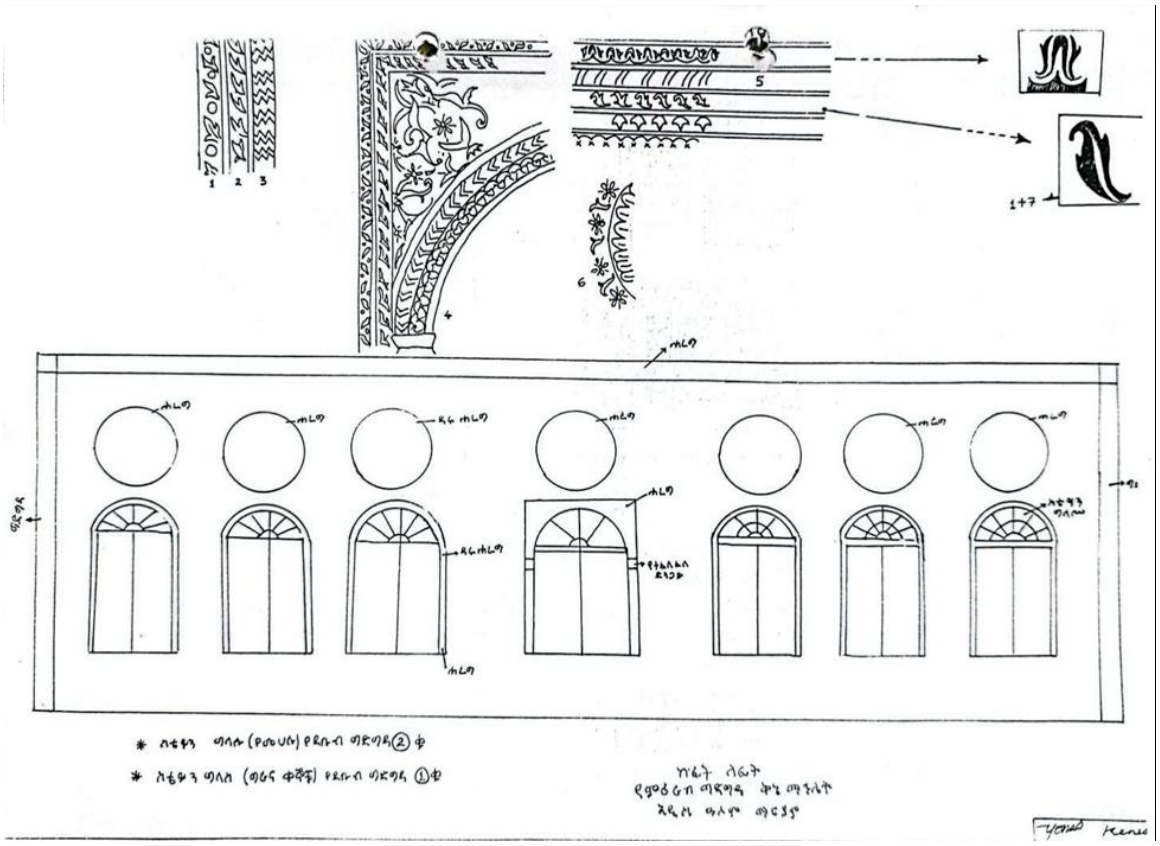
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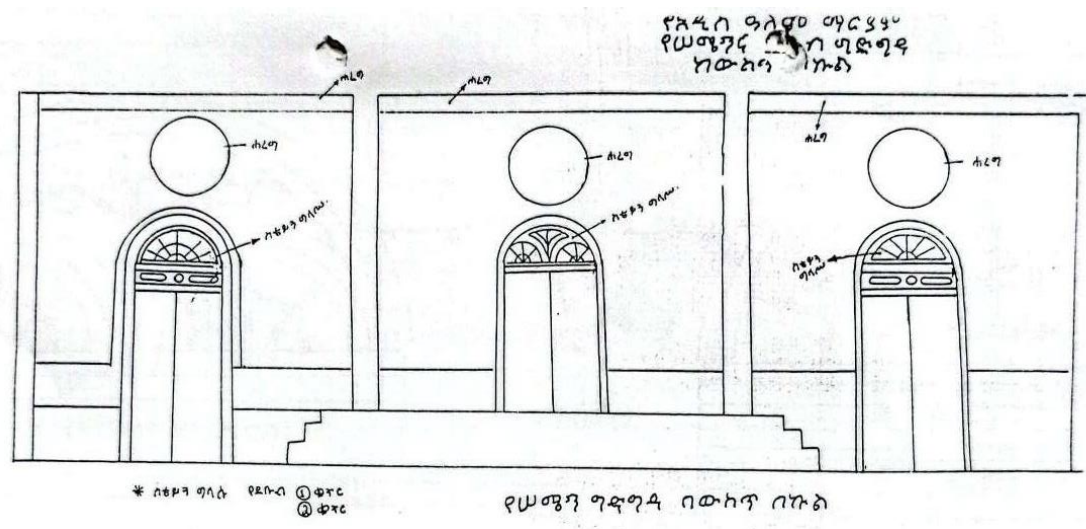
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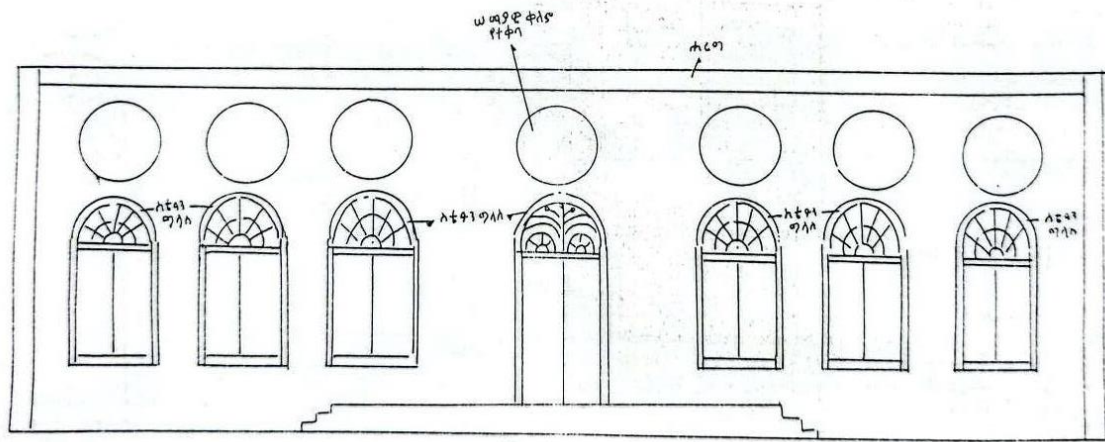
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Western wall



Western wall front side (Kene mahlet)

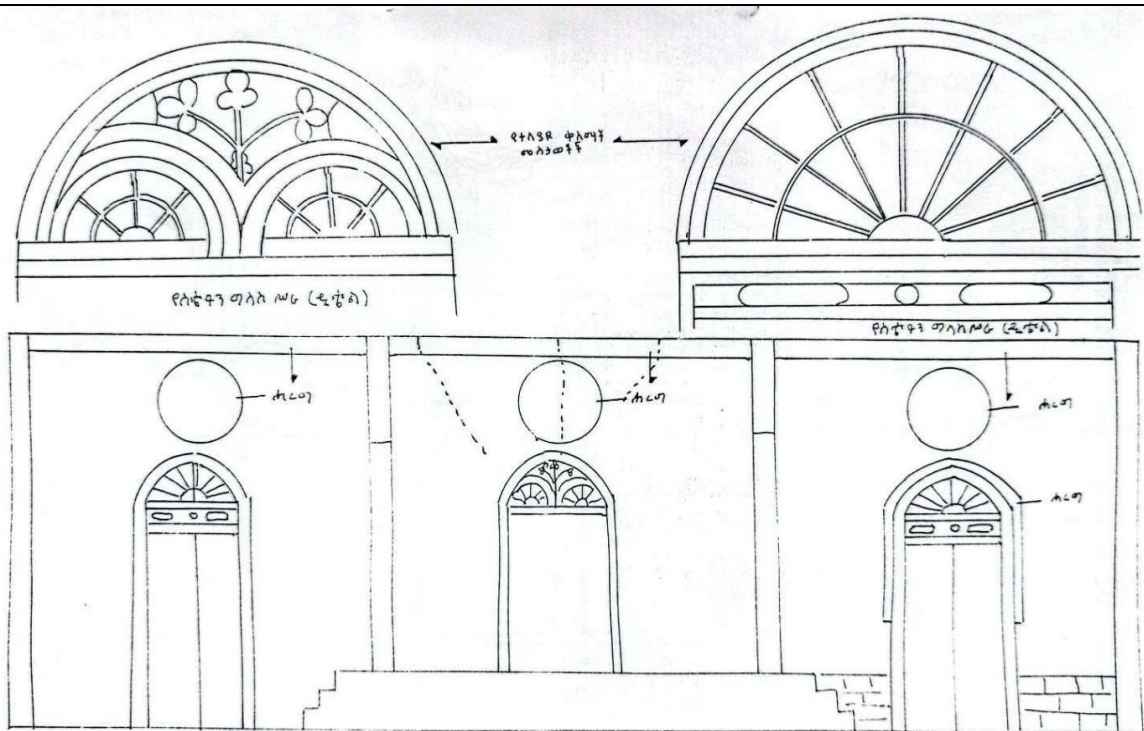




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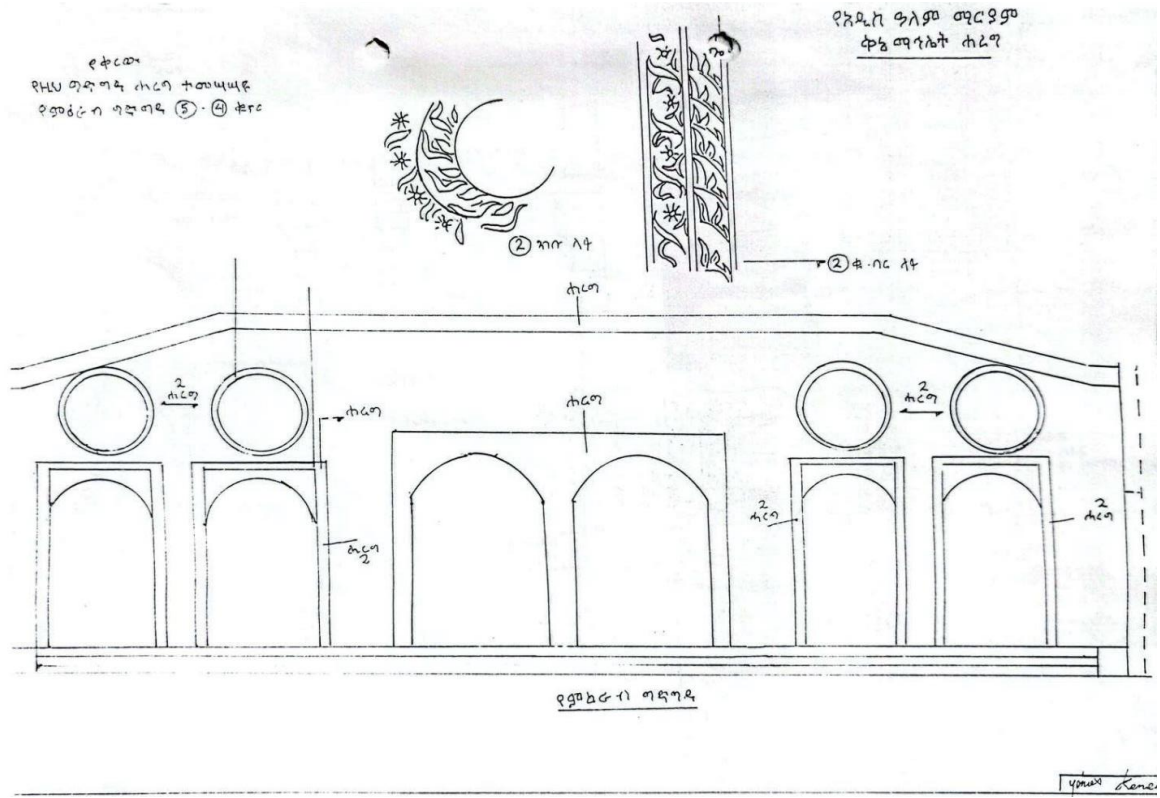
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Internal part of Eastern wall



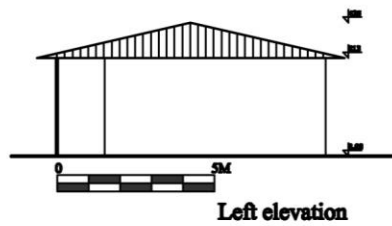
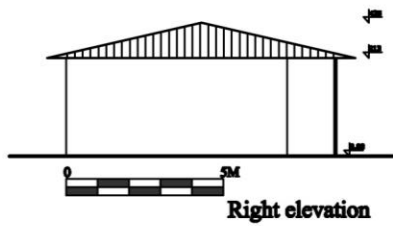
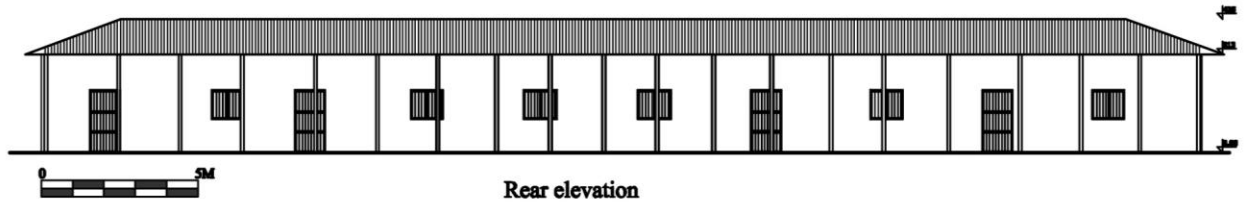
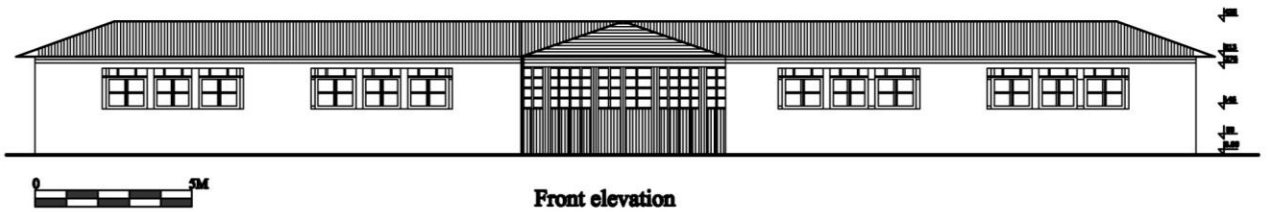
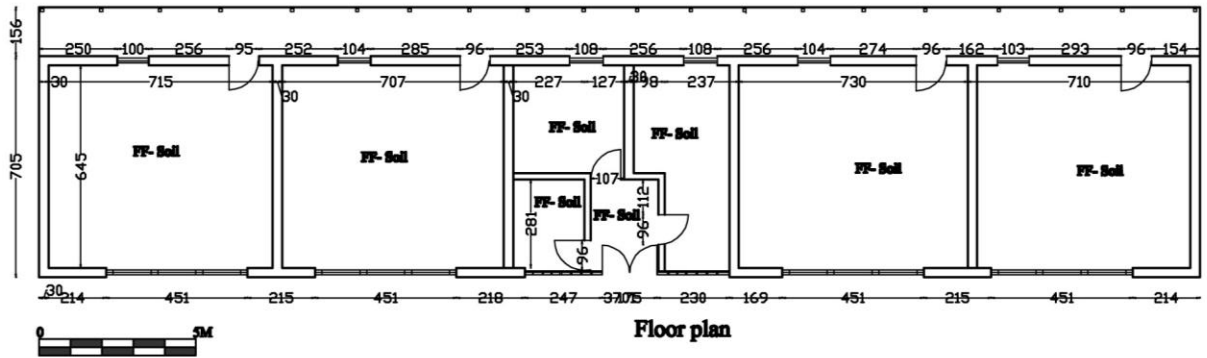
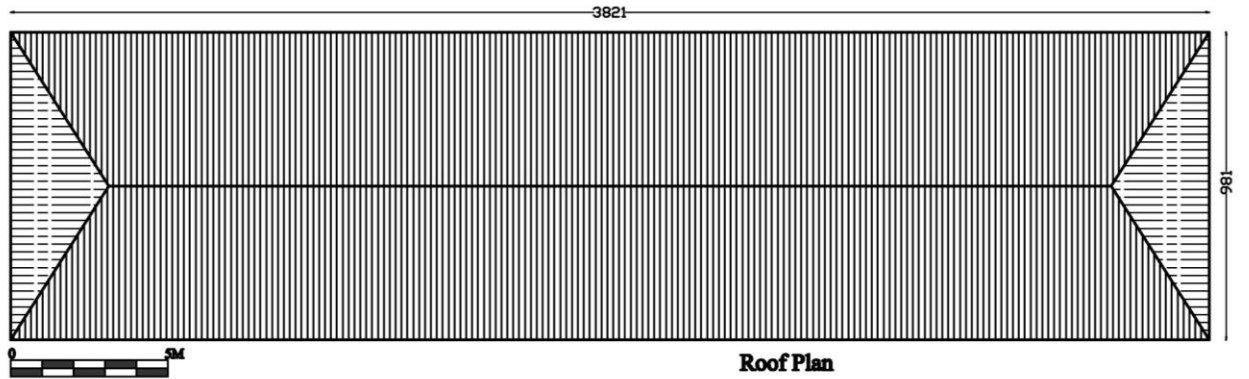
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የደቡብ ግፍፍት ገጠላ ገጠላ Internal parts of southern wall

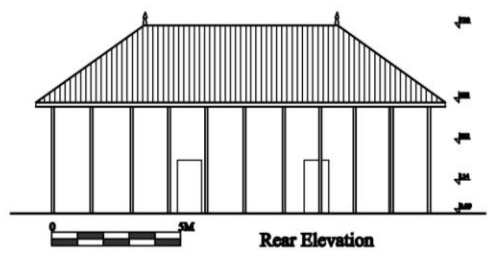
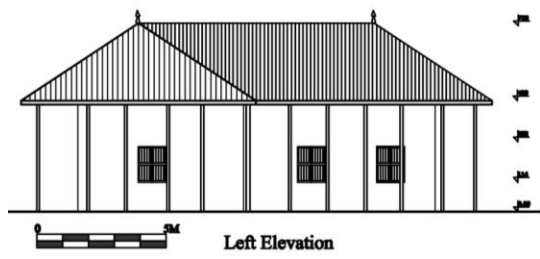
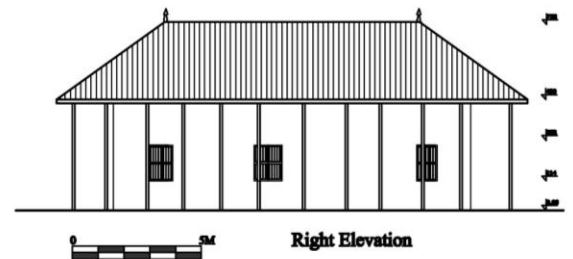
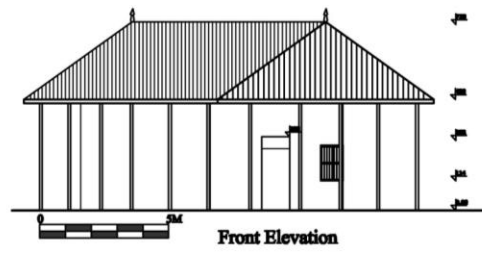
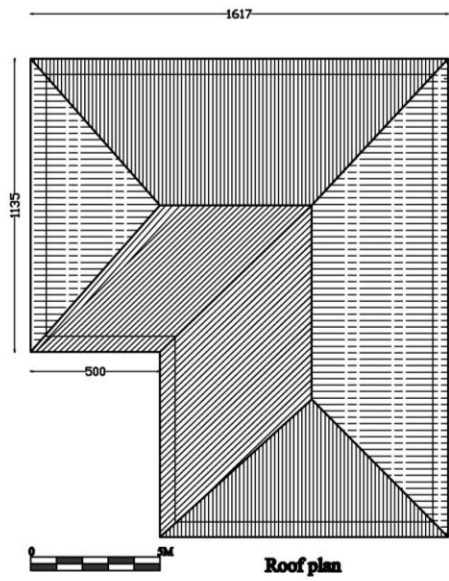
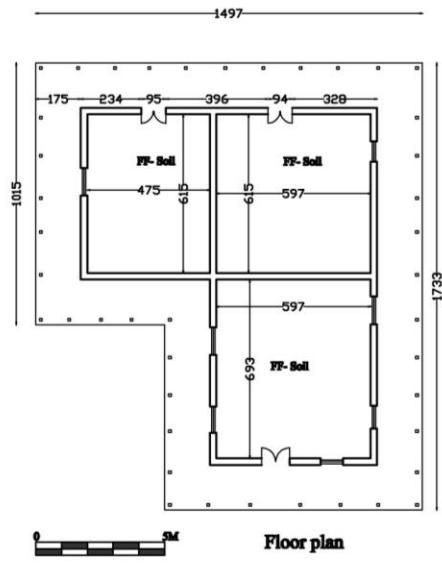


Internal parts of Western wall

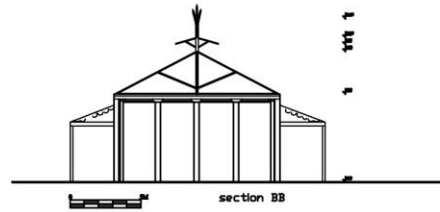
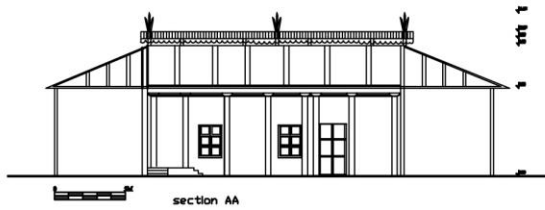
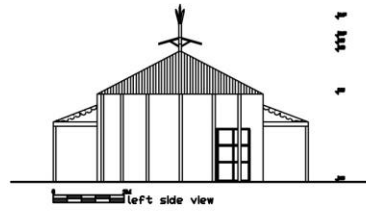
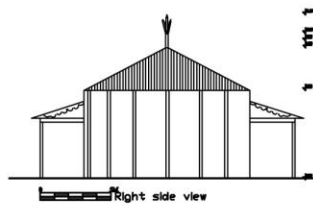
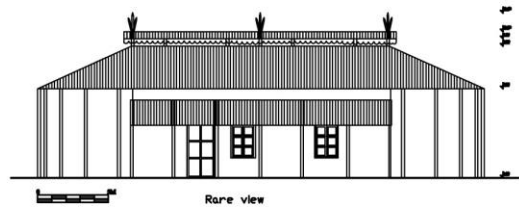
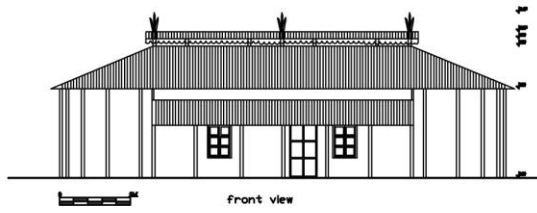
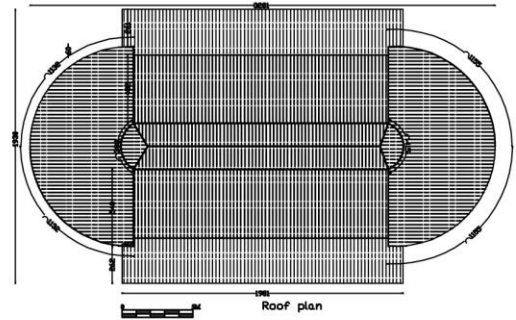
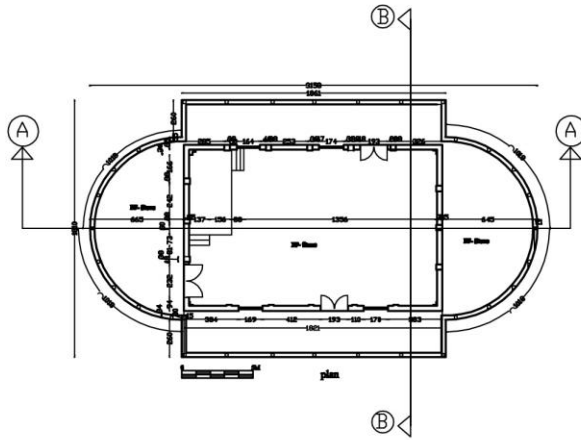
Annex III plan and elevations of architectural heritages



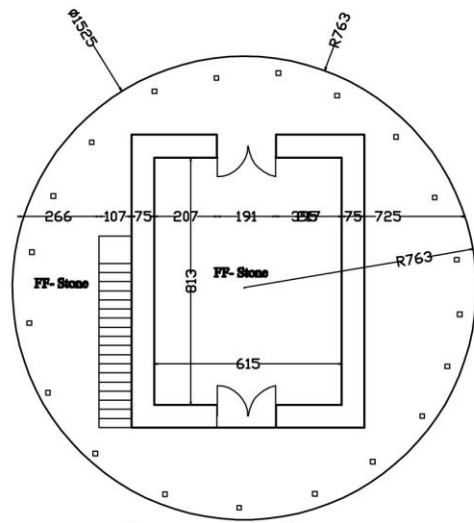
School 2



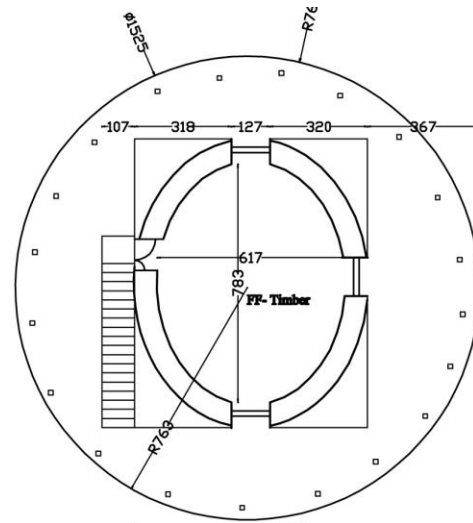
School 1



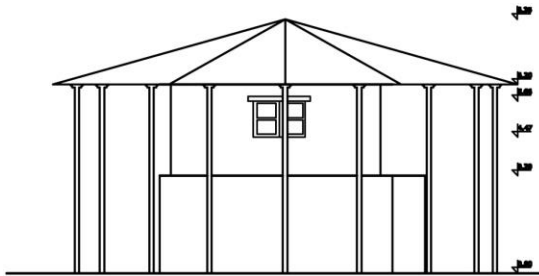
Decorative hall



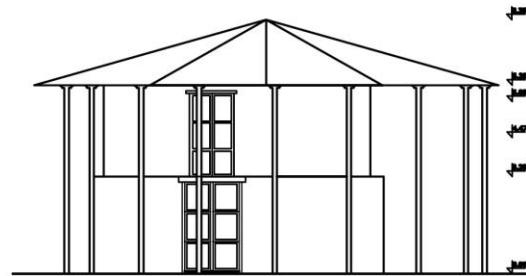
Ground plan



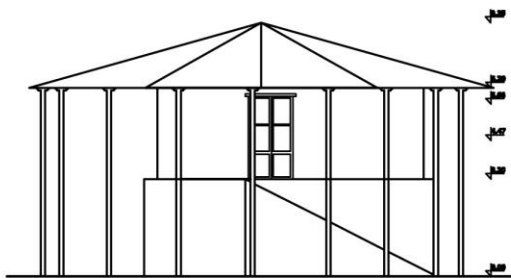
First floor plan



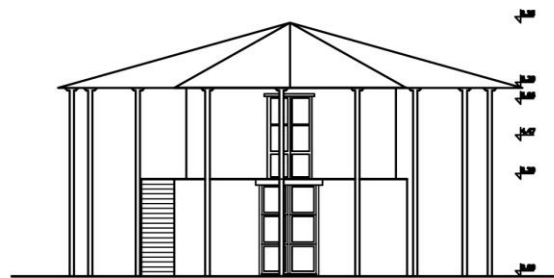
Left Elevation



Rear Elevation



Right Elevation



Front elevation

Zewditu/Dej selam building