

NEW STUDENT UNION: REVIVING THE HISTORIES AND MEMORIES OF THE UNIVERSITY  
OF YANGON



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จุฬาลงกรณ์มหาวิทยาลัย

บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)  
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การออกแบบสโมสรมนักศึกษาแห่งใหม่: การรื้อฟื้นประวัติศาสตร์และความทรงจำของมหาวิทยาลัยอย่าง  
กุ่ม



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสถาปัตยกรรมศาสตรมหาบัณฑิต  
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ปาเล อิตซาร์ จอร์ : การออกแบบสโมสรมักศึกษาแห่งใหม่: การรื้อฟื้นประวัติศาสตร์และความทรงจำของมหาวิทยาลัยย่างกุ้ง (NEW STUDENT UNION: REVIVING THE HISTORIES AND MEMORIES OF THE UNIVERSITY OF YANGON) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: ดร. ชมชน พุสินไพบูลย์, หน้า.

งานวิจัยนี้ศึกษาการออกแบบสโมสรมักศึกษาแห่งใหม่ของมหาวิทยาลัยย่างกุ้งแทนที่สโมสรเดิมที่มีความสำคัญทางประวัติศาสตร์ด้านการเมืองของประเทศมาเป็นอย่างสูง แต่ถูกรื้อลงโดยรัฐบาลทหารเนื่องจากวิทยาเขตและอาคารของมหาลัยย่างกุ้งเป็นสถานที่แห่งประวัติศาสตร์และความทรงจำสำคัญของเหล่านักศึกษาในหลายช่วงเวลาตั้งแต่อดีตจนถึงปัจจุบัน ผู้วิจัยจึงได้ทำการศึกษาเชิงลึกในเรื่องคุณค่าทางสังคมการเมืองและวัฒนธรรมของอาคารในอดีตรวมถึงความสำคัญทางประวัติศาสตร์ของมหาวิทยาลัยย่างกุ้ง ยิ่งไปกว่านั้นคุณค่าและความทรงจำสำคัญเหล่านี้จะได้รับการฟื้นฟูผ่านการออกแบบอาคารสโมสรมักศึกษาแห่งใหม่นี้

การวิเคราะห์วิทยาเขตและอาคารของมหาวิทยาลัยจะใช้ระเบียบวิธีวิจัยที่ผสมผสานการทบทวนวรรณกรรม การค้นคว้าเอกสารจดหมายเหตุ ภาพวาด ภาพถ่าย ภาพร่าง และสำรวจพื้นที่จริง นอกจากนี้กรณีศึกษาสถาปัตยกรรมร่วมสมัยที่เกี่ยวข้องกับประวัติศาสตร์สำคัญและกรณีศึกษาของโครงการสโมสรมักศึกษานี้ล้วนได้รับการคัดเลือกเพื่อเข้าใจแนวทางการออกแบบร่วมสมัยได้ดียิ่งขึ้น งานวิจัยชิ้นนี้จะสามารถฟื้นฟูประวัติศาสตร์และความทรงจำล้ำค่าที่กำลังจางหายไปของมหาวิทยาลัยย่างกุ้งและสโมสรมักศึกษา เพื่อคนรุ่นปัจจุบันและรุ่นต่อไปในอนาคตผ่านการตีความคุณค่าทางประวัติศาสตร์ของสโมสรมักศึกษาชิ้นใหม่ ระเบียบวิธีวิจัยที่ใช้ในงานวิจัยชิ้นนี้สามารถนำไปประยุกต์ใช้กับโครงการร่วมสมัยชิ้นอื่นๆที่มีประวัติสำคัญได้เช่นกัน

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This research focuses on redesigning the demolished student union building located at the University of Yangon, which has a significant political history. As the University of Yangon campus and its buildings hold important histories and memories of student lives at various points throughout time, the social and cultural values that students possessed in the past and the historical significance of the University of Yangon are studied in-depth. Further, these values and significant memories are revived in the new, contemporary student union design. Literature reviews, archival materials, drawings, photos and on-site observations are used to analyze the campus and its buildings. Additionally, case studies of contemporary architecture that deal with important past histories and case studies of student union projects are chosen to better understand contemporary design approaches. By reinterpreting the past historical values in the new student union during the contemporary period, this study will revive its fading significant history and memories of the University of Yangon and student union for both current and future generations. The methodologies used in this study can also be applied in other contemporary projects with significant histories.

Field of Study: Architectural Design

Student's Signature .....

Academic Year: 2017

Advisor's Signature .....

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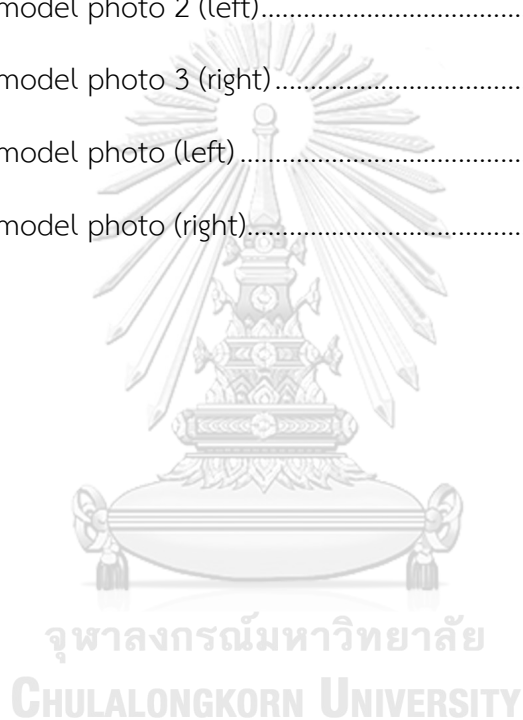
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## Notes for transliteration

In references, the literatures in Myanmar language are transliterated into Roman alphabets. For transliteration, I followed the system designed by Stephen Nolan (Ph.D), the writer of ‘Periplus Pocket Burmese Dictionary’. The writer uses standard educational materials and reduces the use of unfamiliar symbols.



## CHAPTER 1

### INTRODUCTION

#### 1.1. Problem statement and research significance

Nowadays, the construction industry in Myanmar has been progressing at an increasingly rapid rate and new buildings are replacing old architecture. Although contemporary architecture in Myanmar mainly deal with current issues, the new project that will build within historical compounds should consider the importance of the history of the surrounding contexts, climate and geographies, etc. As the new, contemporary buildings are focusing mainly on modern developments, most of the contemporary buildings have less consideration towards these contexts.

One of the most controversial architectural projects in Myanmar, which should address the importance of historical significance, is the new student union inside of the University of Yangon campus. The University of Yangon has a significant and important political history of student activism and the history of modern Myanmar cannot be written without mentioning the histories of the student activists. In conjunction with the events of student activism, the University of Yangon campus and the buildings inside it have empowered and supported students to think and learn about society and in turn, have created an important history and memories of modern Burma. One of the most significant buildings, which was an iconic figure of student activism, was the student union.

The student union was built in 1930 and it became the ground for students' nationalist activities ever since the colonial period. At the time, the building was lively with students' discussions, activities and the meetings of young future leaders of Myanmar. In 1962, a military coup occurred, along with the establishment of a military socialist government. After students protested this military rule, the student union building was demolished on 7 July 1962. Since then, the site where the student union existed has become a historical site and the demolished building became an important memory for the democracy of Myanmar.

During the military regime, student activism continued within the University of Yangon campus. Thus, the military government closed down the University of Yangon and they banned the student union site from public entering. Moreover, the site had been left without proper care and the important histories and memories faded and were forgotten by younger generations.

Even though some students have been requesting a new building since 1988, their requests were neglected during the military government. After the NLD (National League of Democracy) won the election in 2015, Myanmar has been moving towards a more democratic country, and students of all generations have requested a new building that reflects the site's historical significance. Moreover, to rebuild a new student union is one of the government's plans in restoring the University of Yangon's glory.

Thus, to design a new building with an important historical past, the question about what kind of connections and design considerations should be reflected in the contemporary design becomes the major factor.

## 1.2. Purpose of the study

The aim of this research is to develop a design for the new student union building that exists within the university campus and that has an important historical past. As the old student union building had a strong history and held memories of Myanmar, the new student union should not be created with new architecture that does not have a relationship with the histories and memories of the people and the places of the school. It must deal with past events, the historical campus, memories and the surviving old buildings.

The University of Yangon used to have a meaningful and active student life before the student unions were banned by the military government. When student unions were banned, the social integration of student's lives were neglected. Nowadays, students can reform student unions and the social interaction between students' needs to become stronger. Further, while going forward, students need to participate in more vibrant social activities.

Therefore, in this research, the history of the University of Yangon campus and the historically significant architecture inside of the campus will be documented and analyzed to better understand its histories, memories and the active lives of previous students. By understanding these factors, the social, political and cultural values of the past can enhance the new student union design. The new student union will consider the current student life and future generations by reviving meaningful social, political and cultural values and memories from the past.

### 1.3. Scope of the study

For the scope of the study, apart from the old Student Union building, the university's campus and other important structures built within the 1920s to 1960s will be studied, as this was the period where the university was first established and before the military coup occurred. Although these buildings were created during different periods, they also hold important histories and memories of the University of Yangon and students.

The university's campus will be analyzed and studied in terms of background significance, zoning, as well as the historical transformation of the campus. The buildings will be studied in relation to their background and physical composition.

For the buildings, the shared facilities buildings will be chosen, as the student union will also be a shared facility building. These buildings include Convocation Hall, Yangon University library, the university's gymnasium and Rangoon Engineering college. Moreover, the original student union building was designed by architect Thomas Oliphant Foster, while the Rangoon Engineering College was designed by architect Raglan Squire. The choice of these buildings also depends on the significance of the building and permission by the University of Yangon for accessibility.



Figure 1. 1. Student union building (1930) (left)



Figure 1. 2. Convocation Hall (1930) (right)



Figure 1. 3. University library (1930) (left)



Figure 1. 4. University gymnasium (1930) (right)



Figure 1. 5. Rangoon Engineering College, Library (1956) (left)



Figure 1. 6. Rangoon Engineering College, Assembly Hall (1956) (right)



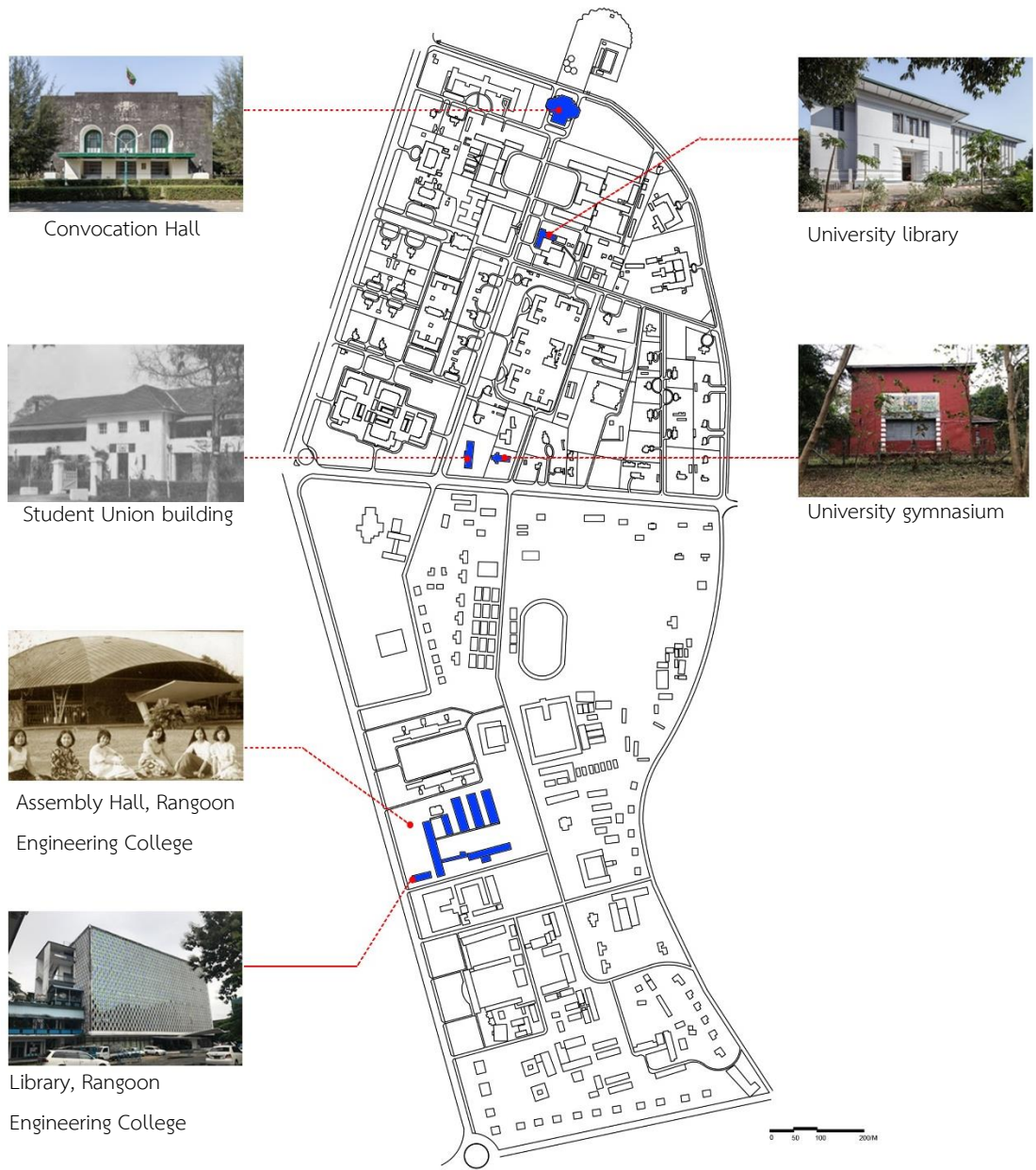


Figure 1. 7. Location Map for the buildings

#### 1.4. Methodology

The new student union is a contemporary project and is meant for contemporary society and future generations. However, it should also focus on the history and memories of the old student union, as well as other significant buildings and the university's campus.

In this research, a methodology of literature reviews, data collections through archival visits, case studies and architectural analysis will be applied.

The first part of this research will study the important history and memories of the University of Yangon campus, the old student union and the buildings. These important histories and memories will be collected through literature reviews on the background of the university, the historical transformation of the University of Yangon's campus and the political significance of the student movements. These historical documents will be collected through books, newspapers, the university's yearly magazines, as well as unpublished records from both online sources and visiting the University of Yangon library and the National Archives Department of Yangon. These historically significant buildings will also be analyzed physically to understand how previous social and political history shaped these architectural spaces and architectural elements, as well as how they played an important role in the memory of the University of Yangon. For buildings where the historical drawings are not available, measure drawings, sketches and historical photographs and current photographs will be used for analysis.

In the second part of this research, other contemporary architectural projects that deal with past important histories and memories are chosen as case studies. These case studies will help in understanding the design approaches for contemporary society and future prospects.

Field observations will be carried out to understand the current conditions of the site. In the last section, the findings from the first and second part will be applied to the design program, as well as the concept of the new student union design, which places consideration on the important histories and memories of the university and is suited for contemporary users.

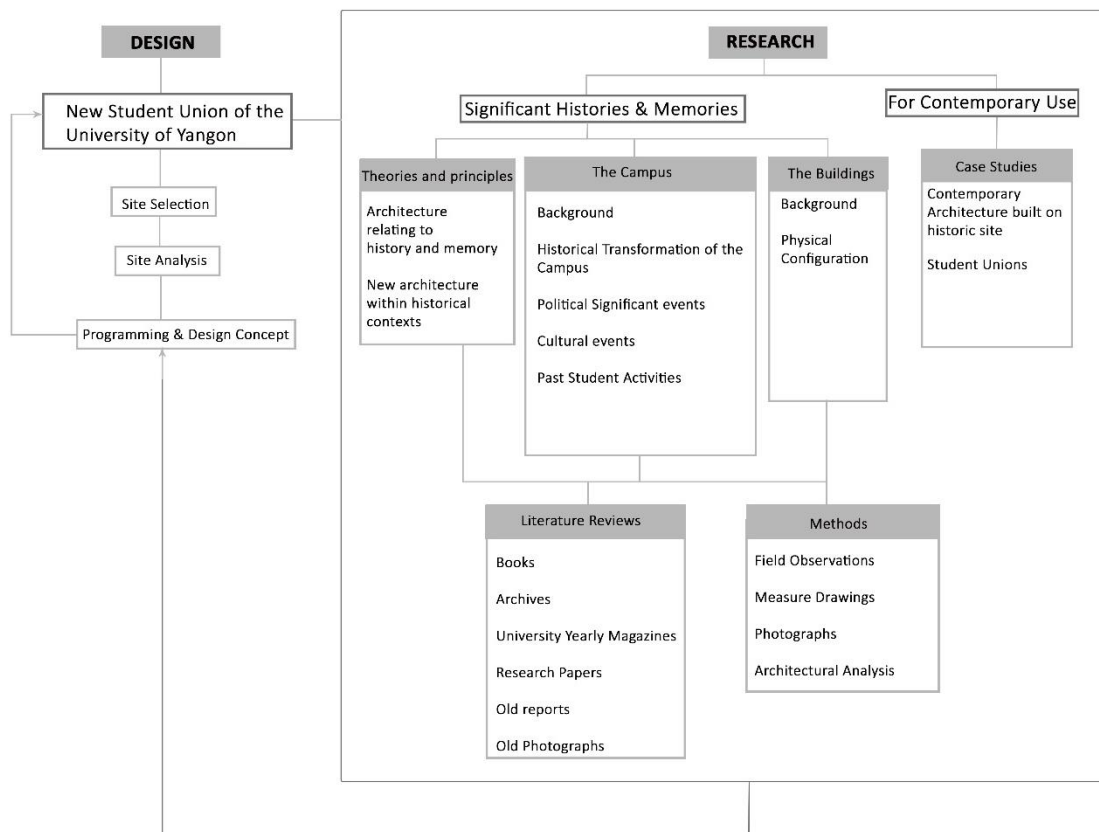


Figure 1. 8 Summary of Research Methodology

### 1.5. Benefit of the study

The benefit of this study will be a new student union with a contemporary design, which engages with the history and memories of the University of Yangon, the old student union and the surrounding buildings. By understanding the important history of the University of Yangon campus in terms of social, political and cultural matters, it will represent the values and roles of student life during the glory days of the school. These socio-cultural values will be reinterpreted in the new student union design.

Studying the surrounding relevant buildings in both a historical and physical context would give a clear understanding of their physical configuration and the use of these spaces, both in the past and in their current use. Learning from past events and spaces, the new student union will provide and revive spaces that will be suited

to the current democratic environment, where students can feel the value of freedom and autonomy. Moreover, the new student union will restore the historic site with a new and vibrant student life. By revitalizing the fading histories and memories of past events, current contemporary society and future generations will remember the remarkable history that transformed modern Myanmar.

Moreover, this study will provide the methodology of finding the linkage between meaningful history and contemporary architecture. Thus, this study will also benefit contemporary projects that need to consider the historical significance of the area and surroundings.



## CHAPTER 2

### ARCHITECTURE IN RELATION TO HISTORY AND MEMORY

In this chapter, literature reviews of theories relating to history memory and architecture are reviewed. Literatures of architectural principles for designing new building within historical contexts are also studied. Additionally, case studies of contemporary projects dealing with past histories and memories and new architecture which built within historical contexts will be studied to understand contemporary design approaches.

#### 2.1. Memory and history

The terms ‘memory’ and ‘history’ is closed associated to each other, however, there are different meanings for them.

According to French historian Pierre Nora, he claimed that memory is a tie between the past and the eternal present. Memory originates from spaces, images, objects and gestures. He mentioned, ‘memory is constantly in our lips because it no longer exists’ (Rothberg, 2010). For Daniel Abramson, he stated that memory is composed of personal recall and reconstruction of past events and the stage of forgetting is also part of the memory. Abramson also argued that memory is private, plural, emotional, subjective, and sacral. Memory can be personal and collective, but it cannot be dictated (Abramson, 1999). As memory is based on personal and self-contentedness, memory can be imprecise and uncritical (Abramson, 1999).

For Pierre Nora, history is a reconstruction and representation of the past. He asserted that history is ‘intellectual and secular production’ which needs analysis and criticism (Rothberg, 2010). For Abramson, history is official explanation of the past. History is rational and official. However, history is not always complete and there are exceptions and omission of some past events. He emphasized that using only memory

as a tool for monument making can lead to failure in engaging the present and past with the future (Abramson, 1999).

To maintain the equilibrium between the past and the present, Nora introduced *Lieux de memoire* theory which give the sense of historical continuity between past, present and future (Rothberg, 2010). His theory 'lieux de memoire' (sites of memory) emphasizes the connection between memory and places (Tanovic, 2015). With the attachment of memories and spaces, spaces of remembrance are formed. According to Pierre Nora, there are three levels in forming these spaces: physical, symbolic and functional (Dimković, 2016). The main purpose of these spaces is to prevent forgetting and serve the function of documentary (Dimković, 2016).

With the aid of history's tools and aims and the obsessions of memory of our contemporary era, monument making should deal with the criticism, coherence and debatable connections between past, present and future (Abramson, 1999). 'History is memory critically tested and imaginative engaged' and history should be used to create a collective memory productive for the future (Abramson 1999).

Aleida and Jan Assmann introduced the concept of cultural memory that emphasizes the relations between the memory and spaces (Isidora, 2015). People's memories used to attach to objects, spaces or places. If memories are not maintained in these objects or spaces, they become 'silent witnesses' of the past and the stories and vivid memories attached to these objects and spaces will disappear (Isidora, 2015). If these objects can maintain vivid memories, they became the realm of cultural memory (Isidora, 2015). Material objects and edifices such as visual arts, films and literatures are also conveyors of cultural memory (Tanovic, 2015).

French sociologist Maurice Halbwachs (1877-1945) introduced the term 'collective memory' that endurance of memory can only maintain with specific social arrangements by social groups (Tanovic, 2015). The commemorations and memorials serve as the connectors of collective memory. As commemorations and memorials need participations of society, such events can evoke the emotions of the participants. The celebrations of such commemorations of collective memory can even become the personal memory (Tanovic, 2015).

Therefore, those scholars highlighted that memories mainly attached to spaces, objects and society. To prevent the important memories from forgetting, the spaces of remembrance should be created with objects and spaces that evoke cultural and collective memory of the people. These spaces of remembrance should be symbolic, physical, functional and beneficial for the future as well.

## 2.2. Architecture and memory

Spaces, places, landscapes and buildings gives people moments, experiences and they create meaningful memories in human memories. Buildings can give narratives of personal, cultural and collective memory.

Juhani Pallasmaa expressed buildings serve as 'mnemonic devices' in three ways. First, they materialize and preserve the course of time and make it visible; second, they concretize remembrance by containing and projecting memories; and third, they stimulate and inspire us to reminisce and imagine (Pallasmaa, 2009). The relationship between the buildings with its surroundings and landscapes is major factor in creating special locations and memory-gathering spaces (Lyndon, 2009).

For Gregory Dowell, the built environment and the existence of the buildings play vital role not only in memory but also in human identity. Human interacted with the spaces inside the buildings and social, political meanings of people link to the aesthetic beauty and physical form of the buildings (Dowell, 2008). As buildings become major sources of memory and identity, they are targeted to destroy when humans want to erase a particular identity or memory. For the destruction of the World Trade Towers and Stalin's destruction of churches, destroying the memory and identity happened with the one of the aims (Dowell, 2008). However, although the buildings were destroyed, memories relating to these buildings still embodied in people's mind.

After the World War II, destruction of buildings happened all over the world and many devastated environments appeared. The war created tragic and memories that people want to forget the horror of these terrifying moments. Because of the war, heroes were appeared for every nation. However, preserving these memories are

important for revealing the historic crimes, remembering the endeavors of heroes and giving educational knowledge for younger generations (Dimković, 2016).

Memorial architecture has been existed in human history since ancient civilizations. After the World War II, the memorial became places that hold the national memory. Memorials, monuments, museums and cemeteries were established all over the world as memorial places. Memorial places became communicators and representation of the past. In contemporary era, memorials turn out to be the requirements of this era and many memorials emerged across Europe, the United States and spread to Asia as well.

### 2.3. New architecture within historical contexts

When designing memorial places relating to past history and memory, the question of how to reinterpret history and memory become the major challenge for this contemporary period.

When recalling the past places, abstracted ways can be used such as referring to typologies or memory forms (Meyer, 2009). Even though the physical form of the original places is not existed anymore, memories can be recalled by typologies such as customs, social and economic history, building trades or climate of the cities (Meyer, 2009). These typologies persist and create urban memory that gives explanation about the interaction between the society specific places and architecture (Meyer, 2009). Senses such as touch, sound, olfaction and taste can serve as connectors with human emotions and the forgetting past (Meyer, 2009) .

The author, James strikes, mentioned various concepts for new architecture within historic contexts in his book. In his concept of ‘connection by association’, he mentioned about the concept that new architecture can have similar characteristics as the historic site. In this concept, perception of the observer is important in terms of how he perceives the new architecture and how he perceives the references from the old buildings to the new architecture (Strike, 1994). Buildings can be perceived as symbols and the type of construction, materials, details, structural systems can even act as symbols according to the perception of the observer (Strike, 1994). By



incorporating these symbols in new architecture, it can make a connection between the new architecture and the historical significance of the specific site. Another way of developing connection is using rather than another building, objects outside of the field of architecture can also be used as abstracted idea for the new architecture (Strike, 1994).

In another concept called 'connection by assimilation', the new architecture is created by assimilating the existing elements of the site. Assimilation of shape and proportion of the existing buildings is one way of referencing the historic site (Strike, 1994). Another way is that the new architecture is generated by understanding the various parts such as sizes, arrangements and interaction of the existing surrounding buildings (Strike, 1994). The new design responded and assimilated into the existing buildings and the new parts can be inserted inside of the old buildings. In another technique, the old structure can be perceived as mother and the new structure can be acted as child (Strike, 1994). However, the old structure has to be more dominant than the new design. Another way is assimilation of the construction details of the old structure using the modern techniques. Modern use of historical classic details is also one method of assimilation (Strike, 1994).

James also mentioned about the concept of 'opposites' between old and new architecture. In this concept, various architectural features can be used to develop this concept, such as, using lightweight architecture in opposition to heavyweight masonry or using transparency in contrast to the old opaque existing buildings (Strike, 1994).

Paul Spencer Byard, an architect and a lawyer introduced four concepts for new architecture within historical contexts. They are architecture of imitation, architecture in the shape of things, architecture of appropriateness and the architecture of possibility (Byard, 1998). Architecture of imitation is designing new building by imitating the style of the old buildings (Byard, 1998). Byard mentioned it has commercial values, however, the difference period between old and new buildings cannot be differentiated in this concept. Architecture in the shape of things is opposite to architecture of imitation but the new architecture should harmonize with the old building (Byard, 1998). For architecture of appropriateness, the new architecture fixes

the weakness of the old structure and adds positive values (Byard, 1998). Architecture of possibility aims at modern technologies, giving new evolution in combination with the old architecture (Byard, 1998).

Therefore, for creating new architecture within the historical contexts, it can be created by following the continuing social and economic customs, climate conditions and sensory connections to the places can be reapplied in new architecture. To have connections with the surrounding historical contexts, symbolic integration, the relationships with the shape and proportion of the surrounding buildings, construction details and historical classic details of the old structure can be considered in the new design. The concept of opposites can also apply. Imitation of the old architectural style can lead to confusion between the original old building with the new building. Moreover, the new building can add positive values to the old structure.

#### 2.4. Case Studies for architecture dealing with past memory and history

For the criteria for choosing case studies, architectural projects which dealing with important histories and memories and new architecture that rebuilt on the original, authentic sites are selected. This will help in understanding the architectural interpretation of the authenticity of the original site, the revival of the past moments and the prospects for the future in the new design.

##### 2.4.1. World Trade Center master plan and Memorial Museum

The World Trade Center is a project that was rebuilt on the original site of the World Trade Center complex, which was attacked on September 11, 2001 in Manhattan, New York. The original complex was comprised of the two twin towers, surrounded by five other buildings. The two twin towers held office space for about 35,000 people and 430 companies. At that time, they were the tallest buildings in the world.

Terrorists attacked the World Trade Center and its surroundings and almost 3,000 people died in that event, including office workers, police officers and fire fighters. It became a site of memory and a site of mourning, where people's sadness and emotions remain (Sturken, 2015). Further, the area had been called 'Ground Zero,' and it holds symbolic meaning and significance of that event (Hajer, 2005). Thus, it is an important project that has a complex relationship between the memories of the tragic event and future possibilities.

Studio Daniel Libeskind designed the master plan of the whole complex, which included four towers, a memorial area and museum, a visitor pavilion and transportation hub. Various architectural firms were involved in the design of these different buildings throughout the complex. In this case study, the master plan, the memorial and the memorial museum will be analyzed.

#### (a) Master Plan

In Libeskind's speech at the Architects of Healing Ceremony, he mentioned that the Ground Zero project is embedded with 'the value of America', 'the value of freedom and liberty', and a 'society of tolerance'. It became a site of remembrance for the people who lost their lives and heroes who gave their lives. The memorial area is the main area that holds the memories of the tragic event and most of the areas of the site have been left as a memorial area. The other four towers and the transportation hub surrounds the memorial area (Fig 2.1).

Libeskind also incorporated symbolic integrations of America, such as the embodiment of the height of 1776 ft, which is the year that America signed the Declaration of Independence. Further, the placement of the four towers is inspired from the torch of the Statue of Liberty (Fig 2.2). As a contextual response, the towers followed the grid of New York. Thus, the buildings are divided into five buildings so that the buildings will not be so high as to interfere with the street view. The complex faces the Hudson River, linking it to many neighborhoods nearby ("AIA Architects of Healing: Daniel Libeskin, AIA," 2012).



Figure 2. 1. Site plan of World Trade Center

(Vinnitskaya, 2012), edited by author



Figure 2. 2. Design Inspiration

(source: google image)

## (b) The Memorial

The memorial area was designed by Michael Arad of Handel Architects. It was designed as a space of contemplation and healing for New York and is mainly composed of two large square pools and a visitor pavilion that connects to the memorial museum. These two large pools exist at the two void spaces, which are footprints of the old WTC towers (Fig 2.4). The architect used voids to reflect on the absence of the two towers and in turn, gives a feeling of emptiness. Moreover, water cascades were provided in the middle of each pool, the sound of the water screening the noises from the city. Oak trees also provide a perimeter of the twin towers. In memory of the people who lost lives during the attacks, the names of victims are engraved on the parapet of the two pools. They were inscribed on bronze panels and they illuminate at night. On the design of the bronze panels, the voices of the families who lost their loved ones were listed and the names are grouped together according to the people who used to work together, which created a meaningful adjacency of their names.

Therefore, the memorial area is not only physical and functional but also symbolic at the same time. As people can touch the inscriptions of name of the victims on the bronze panels, it gives sensory connection to the past memories and history of the tragic event.



Figure 2. 3. Pool at the footprint of old world trade center (left)



Figure 2. 4. Inscription of the lost lives (right)

(Rosenfield, 2012b)

## (c) Memorial museum

The Memorial Museum of the World Trade Center is designed by architect Davis Brody Bond. The Memorial Museum is located under the memorial pools and can be accessible through the visitors' pavilion. The museum reaches until the bedrock level, where the foundation of the World Trade Center and the slurry wall still exist. There are four main conceptual concepts, including the memory, the authenticity, scale and emotion of the people (Fig 2.5).

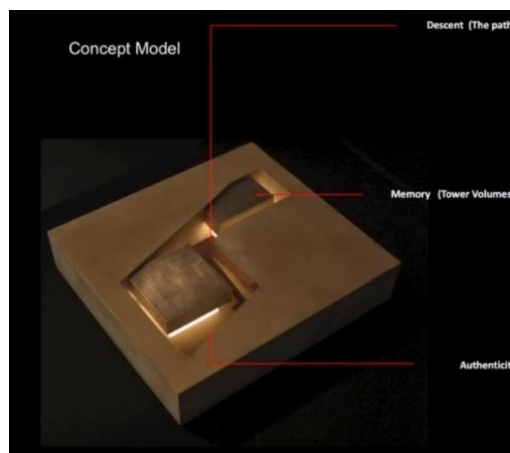


Figure 2. 5. Concept model of Memorial Museum

(source: ("The Architects of the National 9/11 Memorial Museum/ The New School for Public Engagement," 2014))

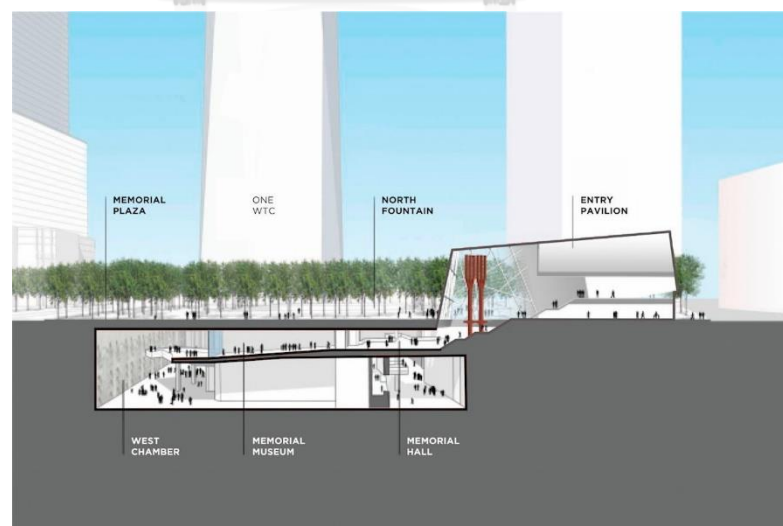


Figure 2. 6. Section of Memorial Museum

(Rosenfield, 2012a)

As the site of the museum is the original site, which has the value of authenticity, architects preserved the authenticity of the site by preserving the slurry wall at the bedrock of the World Trade Center as artifact (Fig 2.7). The two remaining structural columns are also exhibited at the museum entrance from the visitor pavilion (Fig 2.8). Moreover, the existing column bases and many remaining elements were maintained as artifacts, which told the history and stories of the event.

In terms of memory, the existence of the two towers have stayed inside the minds of people, even though the two towers are gone. In the museum, the abstracted floating tower volume defined by the existing column base gave the sense of the existence of the two old towers (Fig 2.10). The volume and form of the two towers were perceived as symbols to incorporate in the new design. Thus, the scale of the new volume is also shaped by the old column bases. Per the architects, they wanted these volumes to give the people a sense of ‘specificity and ambiguity’, which ‘the space can recall or evoke a sense of place or memory but not do so in an overly explicit or literal way’. They wanted to give people a sense of place, which people can interpret with their own personal experiences.





Figure 2. 7. The remaining slurry wall (left) (Rosenfield, 2012a)

Figure 2. 8. Entrance to the museum (right) (Rosenfield, 2012a)

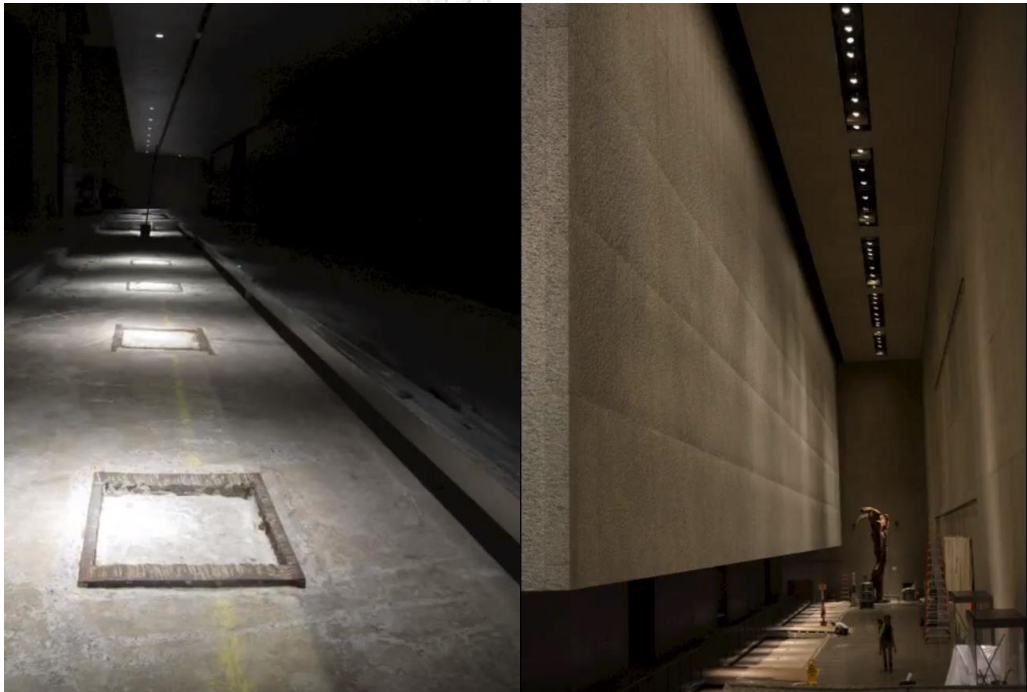


Figure 2. 9. Existing column bases (left) (Rosenfield, 2012a)

Figure 2. 10. The volume of the old tower (right) (Rosenfield, 2012a)

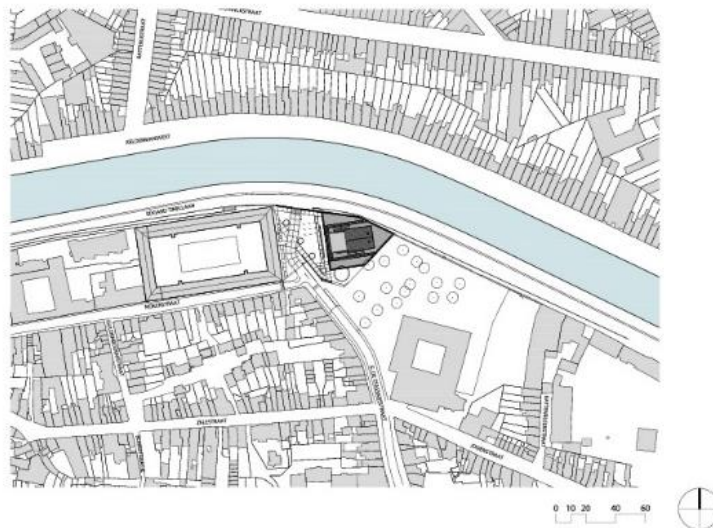
Thus, the World Trade Center project is a project that has various interpretations of architecture spaces, dealing with important histories and memories. It is a project that has symbolic integration, space recalling, preservation of the authentic elements of the original site, keeping memories of the lost lives and the involvements of the families who lost their loved ones.



#### 2.4.2. Holocaust Memorial Museum in Mechelan

The holocaust memorial museum is located in Mechelan, Belgium. It is also named as Kazerne Dossin. The Holocaust Museum is a memorial museum on the history and memory of murdered Jews and gypsies who died in the 1940s. The aim of the museum is to exhibit the painful memories of the Holocaust so that this kind of history will not be repeated again. At that time, the old barracks in Belgium were used as transit camps, which deported Jews and gypsies to concentration camps in Auschwitz-Birkenau. The new museum is not located at the old barracks but on the other side of the old barracks, where the former remand center existed. The remand center was previously where deportation occurred (Tanovic, 2015).

It was designed by Bob Van Reeth and his 'awg architects' firm. It was opened in 2012. The site also has authentic value, as the old remand center was part of the transit camps. Thus, symbolic integration and interpreting past feelings can be seen in the new museum.



*Figure 2. 11. Aerial View of Kazerne Dossin and old transit camps  
("Kazerne Dossin/ awg architects," 2013)*

In terms of the size of the building, the museum has five storeys and it is taller than the surrounding buildings. The domination of the museum around its surroundings is inspired by a Jewish synagogue. The shape of the building is based on the old

remand center boundaries. At first, the winning design for the museum was a dark grey color. However, because of the local people protesting under the campaign, ‘Museum Yes, Mausoleum No’, the museum finally changed the color to white (Tanovic, 2015).



*Figure 2. 12. The museum and its surroundings (Tanovic, 2015)*

The museum entrance faces the old Dossin barracks building. There is an open space, which serves as a linkage between the two buildings. The façade facing the site of the old building is treated with plain white walls, which is four storeys tall. Further, there is no connection with the neighborhood. Windows were created on the side facing the street and the white walls give a feeling of loneliness, which depicts the feelings of past people (Fig 2.13). Only the top floor, which housed a temporary exhibition, is open-air and the view of the area can be seen in a wide perspective. This space is designed as the space of ‘decompression,’ which is also a symbol of future hope and prospect (Tanovic, 2015).

In terms of symbolic integration, there are 2,5000 bricks to symbolize the number of deportees from the transit camps. On the inside of the building, 12 cast iron columns are integrated in the lobby area to symbolize the 12 tribes of Israel (Fig 2.17). Moreover, at the entrance gate, the remaining architectural remnants of the old remand center is added to the design (Fig 2.15). The recessed hidden windows on the plain white wall represent tombstones for people who never returned.



Figure 2.13. The white wall (left)

Figure 2.14. Perspective of the museum (Right)

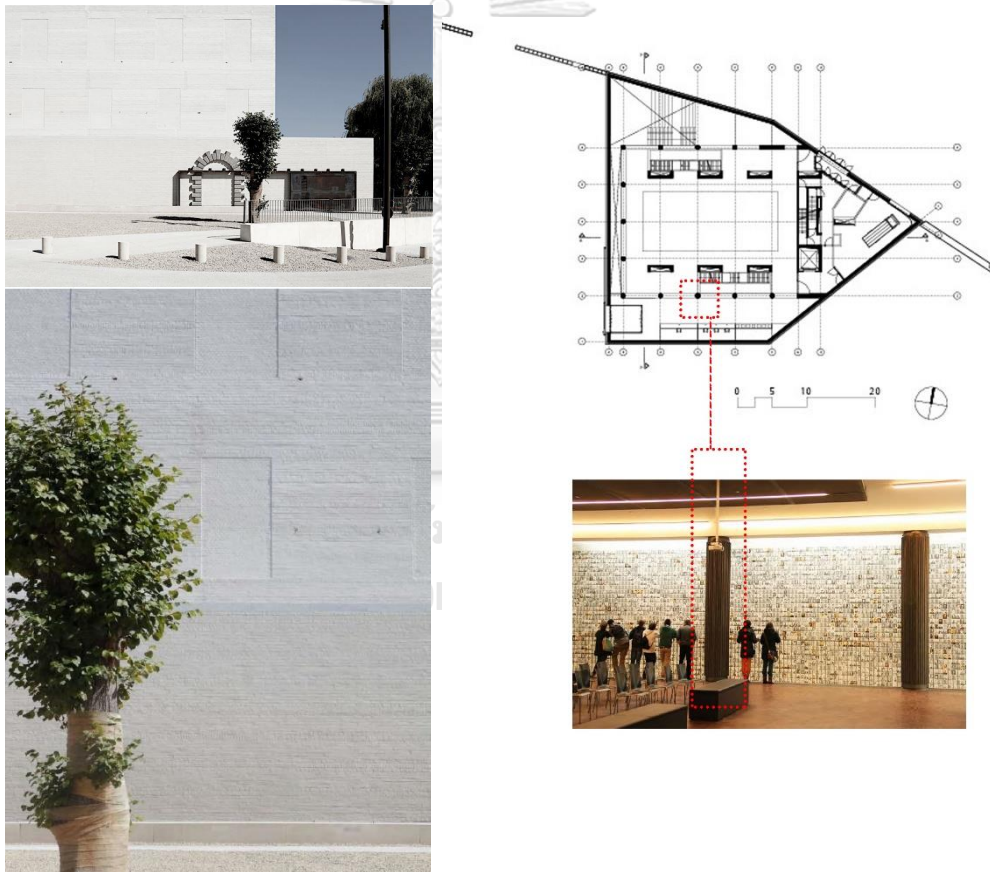


Figure 2.15. Museum entrance (upper left)

Figure 2.16. The hidden windows (lower left)

Figure 2.17. The symbolic columns (right)

Source: ("Kazerne Dossin/ awg architects," 2013) (edited by author)

Therefore, the Kazerne Dossin museum is also designed with the primary consideration of the tragic history and memories of the Holocaust, as well as future prospects. In Kazerne Dossin museum, the architects used abstracted way to hold the history and memories of the past. The architectural elements were inspired from the past history, memory and emotion such as the use of 25000 bricks and the white wall as a representation of loneliness feeling of the victims. In terms of symbolic integration, architects used 12 columns as symbolizing of the number of Israel ethnic groups. Historical detail of the old structure is also emphasized on the entrance of the new building.

## 2.5. Case Study for architecture within historical contexts

Contemporary student union project which existed in historical contexts is studied as a case study to understand the functional configuration and the relationship between the new building and surrounding historical contexts.

### 2.5.1. The University of British Columbia Student Union

The University of British Columbia student union is located at the University of British Columbia, Canada. It is a project that was formed by the request of the UBC students and the building was created by a fund from the students. Therefore, the students were the client of the project as well, as they wanted a building that had sustainability in social, environmental and economic benefits.

The UBC student union was designed by B+H architects. For the building's design, they listened to the students' voices about their desires for the project through the creation of a Facebook page, organized workshops and charrettes. By understanding the aspiration of the students, architects decided to create the student union as a 'miniature city,' which also had a 'living room' like environment (website). The main design principles in the project were (a) transparency and visibility, (b) easy vertical circulation and differentiation of spaces (c) high performance buildings for



higher performance and (d) measurement and verification, which are the systematic studies for the building's performance (Architects, 2017).

Based on these principles, architects also considered the surrounding contexts. The new student union building would be situated adjacent to the old student union building on the north side of the campus. To the west, there was a small hill, which is used as a gathering place for both relaxation and demonstration. This small hill has existed at the university for decades. To the east, there is an aquatic center and war memorial gym, as well as new alumni building to the south (Fig 5.1).



Figure 2. 18.. location of surrounding buildings  
(Architects, 2017)

The first design driven element from the contexts is the small hill. The shape of the hill is integrated into the interior space of the building in the form of a curved terraced seating (Fig 5.2). This space is also the area where the main atrium exists. The main atrium gives transparency, visibility and vertical connection to all of the floors inside and opens up to the sky-light roof (Fig 5.3). The black box theatre is in the middle of the atrium and the vertical fins of the black box theater reflect the concrete strips on the old student union building. The vertical strip glass patterns on the west façade resonate with the glass pattern of the alumni building. Moreover, the volume of the south part of the building echoes the form of the nearby memorial gymnasium.

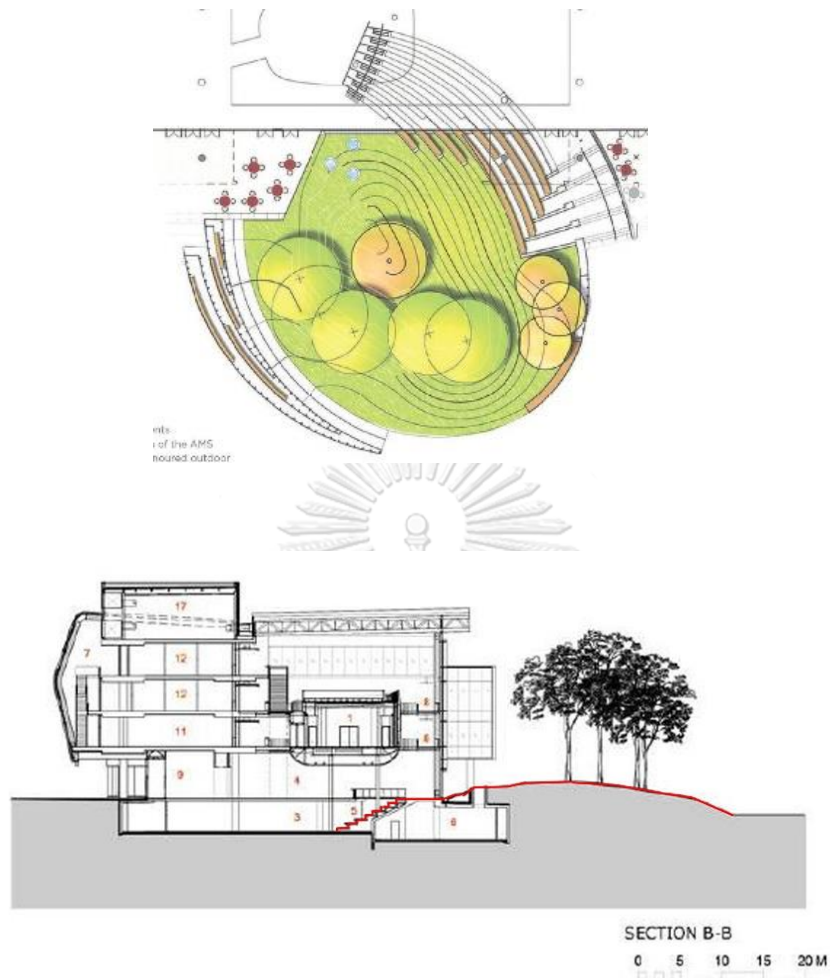
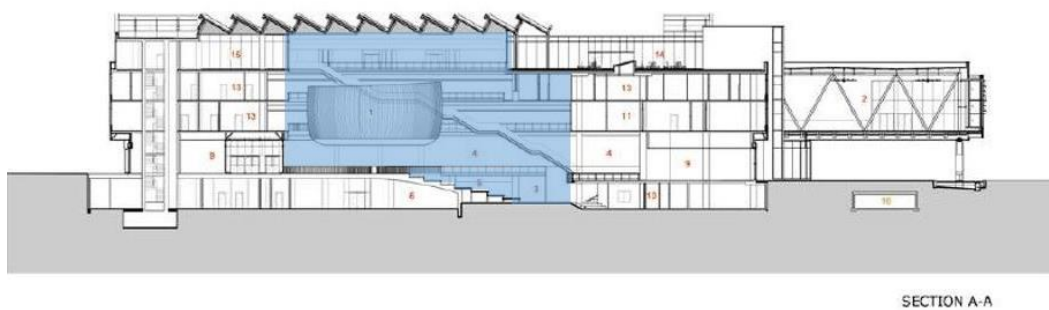


Figure 2. 19. Plan and section showing the integration of the shape of the hill into the building



(Architects, 2017) (edited by author)

Figure 2. 20. Section showing the central atrium space

(Architects, 2017) (edited by author)

In terms of function, the UBC student union comprises of the central atrium area, lounges, gallery, food services, restaurants, pub, commercial-retail units, bookable rooms, club rooms, offices, radio room and the newspaper room. Spaces that are meant for socializing and communal areas face towards the central atrium spaces. Quiet study areas are located on the west side of the building, where there is more intimacy.

For material usage, concrete and steel were used for the primary structure and wood was used for the interior to give the feeling of a living room environment.

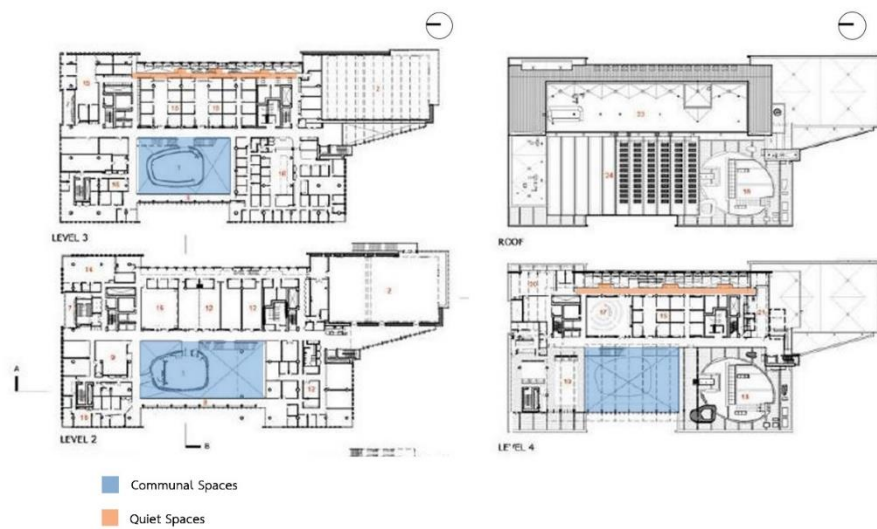


Figure 2. 21. Layout Plans of UBC student Union  
(Architects, 2017)



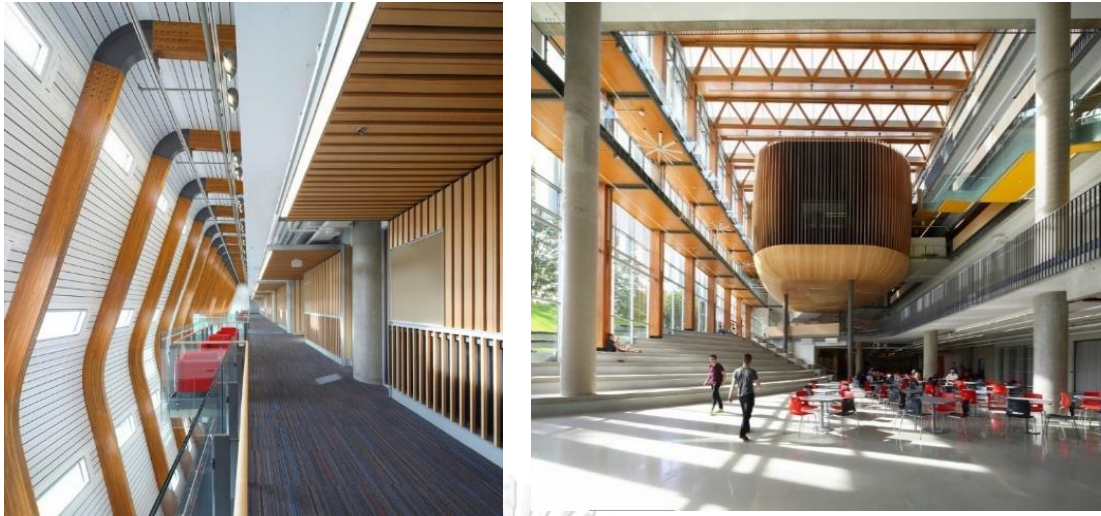


Figure 2. 22. The central atrium with the black box theatre (left)

Figure 2. 23. Quiet study Areas (right)



Figure 2. 24. Seating terraces at the existing hill (left)

Figure 2. 25. Interior of living room environment (right)

(source:("AMS Nest/ Dialog+ B+H Architects," 2015))



## 2.6. Comparison between case studies

Case Study	Design Concepts	World Trade center	Holocaust Museum
Architecture dealing with past memory and history	Memory	-the old tower's form is maintained as the pools in memorial area -Inside the museum, the volume of the two towers can be seen	- the new building's shape is formed by the site boundary of the old remand center
	Authenticity	-the old slurry walls and remaining elements of the old towers are maintained as artefacts	-some of the elements of the old remand center is applied at the entrance
	Scale	-the scale of the old building form is maintained inside the memorial museum	- the scale is different from the old building
	Emotion	-in memorial area, the voids are used to evoke the feeling of emptiness	-At the entrance, the plain wall is used to give a feeling of loneliness of the past concentration camps
	Symbolic Integration	-the placement of the towers symbolizes the torch of the Statue of Liberty	-12 columns are used to symbolizes 12 tribes of Israel -2,5000 bricks to symbolize the number of deportees from the transit camps

Case Study	Design Concepts	The University of British Columbia Student Union
Architecture within historical contexts	Connection by assimilation	-the shape of the existing small hill on the site is assimilated into the interior of the new structure. -the shape of the new building is formed by referencing the shapes and proportion of the old building

*Table 2. 1. Comparison between case studies*

From these case studies, for designing new architecture for the old historical building, the new building can be designed by referencing to the old building's form as the symbol, integrating authentic materials on the site and referencing to the old building's scale. By deeply understanding the important historical events, architectural elements and spaces can be created to give meaningful emotion and feelings. Moreover, symbolic integration is one major concept in maintain the important memories of the place.

The existing elements of the site can be assimilated into the new building. The form and volume of the new structure can be formed by assimilating the shape and proportion of the old surrounding buildings. As well, the shapes of the architectural elements of the old surrounding building can be reflected in the new design.

## CHAPTER 3

### UNDERSTANDING THE HISTORY AND SIGNIFICANCE OF THE UNIVERSITY OF YANGON

The new design of the student union is not only related to the contemporary period but also, is very much associated with the important history and memories of the whole campus. This chapter will provide a deeper understanding of the significant history and remarkable memories of the university by reviewing various literatures, including books and archival resources.

#### 3.1. The background of the University of Yangon

##### 3.1.1. The establishment of the University of Yangon

The University of Yangon (formerly the University of Rangoon) was the first modern university of Burma and originated from the determinations and requests of the colonized local people.

Before the university was established, there were only colleges for higher education and these colleges were under the control of Calcutta University. Moreover, students had to take exams according to the rules and laws regulated by Calcutta University. As some of the laws were not suited to Burma, in 1892, the Burma Education Syndicate and Burmese leaders requested an independent university. The colonial government neglected this request until 1907. However, in 1913, the British government of India pronounced that a new independent university would be established in Burma. Because of that announcement, the British government of Burma had to submit drafts of the University Act to the British government of India. However, these drafts were neglected until 1915 and 1916 because of World War I. Thus, the requests for a new university continued and the British government finally formed a

committee for the establishment of the new university in 1918 (Ministry of Education, 1995) (ပညာရေးဝန်ကြီးဌာန၊ ရန်ကုန်တက္ကသိုလ် ခုနစ်ဆယ့်ငါးနှစ်ခရီး အစီရင်ခံစာ၊ ၁၉၉၅) .

In 1920, after almost 30 years of consistent requests, the University Act created by the committee was approved by the British government of India and the University of Yangon was established on the 1<sup>st</sup> of December 1920. It was done by merging two colleges, the University College and Judson College, which were former affiliate colleges of Calcutta University. University College was the largest college at that time and dated from 1878 until 1920. Judson College, dated from 1894 to 1920, was managed by the American Baptist Foreign Mission Society. Although the University of Yangon was meant to follow a unitary system at first because the American Baptist Missionary society did not want to abolish the Judson College that they established, the university finally followed a collegiate system.

When the university was first established in 1920, it had 12 departments, an English department, mathematics department, Oriental studies, European literature, physics and chemistry department, biological sciences, philosophy, history, economics, teacher training, law and medicine departments. Moreover, when the university first opened, there were 692 students at Judson College and 137 students at University College, totaling 829 students for the University of Rangoon (Ministry of Education, 1995) (ပညာရေးဝန်ကြီးဌာန၊ ရန်ကုန်တက္ကသိုလ် ခုနစ်ဆယ့်ငါးနှစ်ခရီး အစီရင်ခံစာ၊ ၁၉၉၅) .

### 3.1.2. The location of the University of Yangon

The designated area for the university's estate was the 400 acres of land situated 5km from downtown Rangoon and located on the Pyay (Prome) Road, which connected to Pyay (Fig 2.1). Initially, the British government decided to build a residential university, and only University College and Judson College were constituted in 1920. Even though the two colleges already had original buildings in the downtown area, new buildings were built, and the colleges were relocated to a new designated site. Thus, the students had to live and learn inside the university's campus.

On the north side of the university estate, Inya Lake and Inya Road existed. Inya Lake was also named Victoria and Kokkine Lake. It was a man-made lake that was

built by the British in 1882-83 to support the water supply network for the rapidly developing colonial downtown Rangoon (Downing, 2016). Inya Road was also constructed in 1928-1929 (Zaw, 2014) (ခင်မောင်ဇော်၊ တက္ကသိုလ် မြေကျွန်းသာ၊ ၂၀၁၄)၊ together with the establishment of the university. Students usually used Inya Road to go to Shwedagon Pagoda, near the exam seasons. The University Avenue (Victoria) Road was also finished in 1928.

The area was originally a dense forest with wild animals and lots of big and small trees. One of big thit pote (*tetrameles nudiflora*) trees still exists in front of University College. The forestry department professors and students started to plant flowers and decorated trees from 1928 to 1931. Forestry officers from Burma also provided seeds, sprouts and donation money. Therefore, the university land transformed from a deep forest into a big garden, with flowering trees and especially Gangaw (*Mesua ferrea*) trees (Ministry of Education, 1995) (ပညာရေးဝန်ကြီးဌာန၊ ရန်ကုန်တက္ကသိုလ် ခုနစ်ဆယ့်ငါးနှစ်ခရီး အစီရင်ခံစာ၊ ၁၉၉၅) . As the scent of the Gangaw tree gave a pleasant smell, it created a sensory connection and Gangaw flowers became one of the symbols of the university. The University of Yangon was also called ‘the land of blossoming Gant gaw trees’.

As it would take a significant amount of time to clean the land and to build buildings for the school, University College and Judson College were temporarily located near the downtown area. However, it took almost 10 years to finish the new buildings of the university’s estate.

From the location of the University of Yangon, it can be seen that the colonial government carefully probably chose the land to ensure that the University of Rangoon was completely under colonial control. Therefore, they chose one designated area, which was far from the downtown of Rangoon. The site can only be accessible from the Prome (Pyay) Road. As well, the site could easily be controlled by the British authorities, as the Cantonment was also located along Prome Road, situated between the downtown of Rangoon and the University of Rangoon (Fig 3.1).

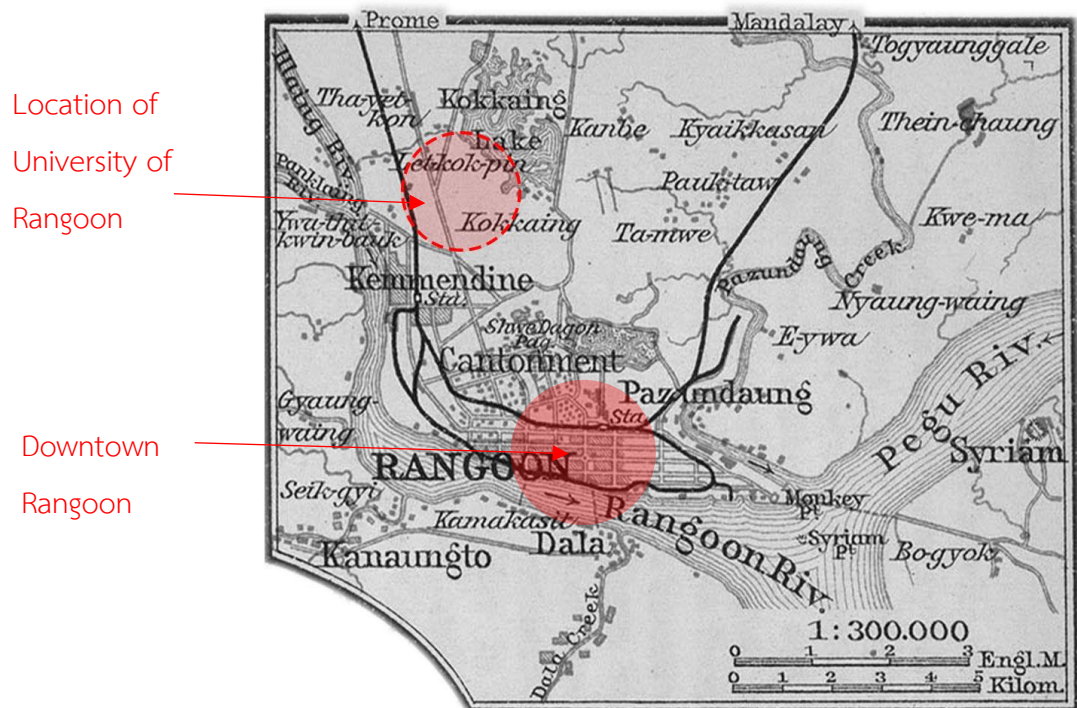


Figure 3. 1. Map of Rangoon (1914)

(source: <http://legacy.lib.utexas.edu/maps/burma.html>) (edited by author)

### 3.1.3. Endowment fund

Although the university was established in December of 1920, there were no buildings for the University of Rangoon. To establish many buildings inside the estate, the university needed funds to build and could not just depend on the colonial government's funds. Sir Spencer Harcourt Butler, the second Governor of Burma and the university's chancellor, wanted to build one of the biggest modern universities in Southeast Asia before he went back to his country (Zaw, 2014) (ခင်မောင်ဇော်၊ တက္ကသိုလ် မြေကျွန်းသား၊ ၂၀၁၄).

The cost of the establishment of the university, including the purchase of the 400 acres of land and a few buildings erected before the main building scheme, was commenced for approximately 165,00,000 Rupees (£1,237,500). The British government of Burma paid approximately 143 lakhs of Rupees (£1,072,500). Because the amount of money that the government provided was not enough, Sir Harcourt Butler celebrated festivals all over Burma (Zaw, 2014) (ခင်မောင်ဇော်၊ တက္ကသိုလ်

မြွေ့နိုးသာ၂၀၁၄). These festivals were called “our day” festivals, including gambling games to earn funds for the university. He also requested donations from the rich Burmese, Chinese and Indian people for funding. The buildings that were built as gifts from the donors included:

1. The Burmah Oil Company College of Mining and Engineering, with a donation of (£100,000) from the Burmah Oil Company Ltd.
2. The university library; a donation of Rs. 2,00,000 from a wealthy Indian man, Rao Bahadur S. Ramanatha Raddier and his wives.
3. The students’ union, from the gift of Rs. 1,70,000 from Dr. U Nyo.
4. The university’s Boat Club House, Rs. 30,000 from Dr. U Nyo.
5. Gymnasium and squash courts, which were the gift of Rs.1,00,000 from Mr. Chan Chor Khine and;
6. Judson College paid Rs. 12,33,666 for its buildings and its municipal services (*University of Rangoon: New Buildings, 1932*).

Other small amounts of donations were also received from the local people. A big wooden board was put at the old building where the Convocation Hall exists today. That board pronounced to the public the amount of donation money that was received day by day (Zaw, 2014) (ခင်မောင်ဇော်၊ တက္ကသိုလ် မြွေ့နိုးသာ၂၀၁၄). Some of the dedications to donors can be seen on the façade of some buildings, such as the university library and the gymnasium.

Thus, the existence of the University of Yangon was not only due to the effort of the colonial government but also, the involvement of local people of various classes and ethnic groups.



## 3.2. Historical transformation of the University of Rangoon Campus

### 3.2.1. The University of Rangoon during the colonial period (1920-1948)

To build the necessary buildings inside the university, the Rangoon University Building Trust was established by an act of the Burma legislative council in April of 1925 (*University of Rangoon: New Buildings*, 1932). The trust hired Thomas Oliphant Foster, a British architect who designed the majority of the buildings inside of the university compound. He went to England and brought a team to Rangoon for drawing the design for the buildings (Historian Committee, 1995) (ရန်ကုန်တက္ကသိုလ်သမိုင်းရေးသားပြုစုရေးအဖွဲ့ ၊ ရန်ကုန်တက္ကသိုလ်သမိုင်း ၊ ၁၉၂၅-၁၉၉၅ ).

Being a residential university, the colleges on the university's estate provided accommodation for 1,400 men and 350 women (*University of Rangoon; New Buildings* 1932). As the university was far from downtown Rangoon and services at that time, it was provided with its own water, sewage, electric, road and other services. These services included a hospital, post office, telephone exchange, book shop and the servants' village, with a village school and recreation grounds, as well as a clerks' village and recreation grounds. Further, because the university was located on the margins of a lake, the swimming and rowing clubs were also developed. Other student activities were offered, including running tracks, fifty tennis courts, squash-rackets and five courts, a gymnasium that was convertible for indoor or outdoor entertainments, a student union, as well as a group of buildings for the University Training Corps, including instructors' quarters, offices, armory, store-rooms and a miniature range (*University of Rangoon: New Buildings*, 1932).

University College, Judson College, and most of the main administrative buildings and facility buildings were located on the northern side of University Avenue. The B.O.C Engineering College and Teacher Training college, servant quarters, clerk quarters and some sports fields were located on the southern side. As the southern land was left with many open spaces and vacant lands, it was probably meant for future extensions at that time (Fig 3.2).



Chancellor Road (Adapati) is the main axis of the whole campus and the Convocation Hall was located at the end of the road as the center of campus. Most of the main buildings located on the Chancellor Road were oriented towards this road. Further, most of the college buildings were rectangular shapes that were connected in various u-shaped courtyards. Most of the students' halls were also u-shaped and all of the halls' courtyards were oriented and connected to the dining halls. Some of the students' halls had square rectangular shaped courtyards in the middle (Fig 3.3).

During the second war, many buildings were damaged, including the Convocation Hall, the university library and some student halls (Ministry of Education, 1995) (ပညာရေးဝန်ကြီးဌာန၊ ရန်ကုန်တက္ကသိုလ် ခုနစ်ဆယ့်ငါးနှစ်ခရီး အစီရင်ခံစာ၊ ၁၉၉၅) .



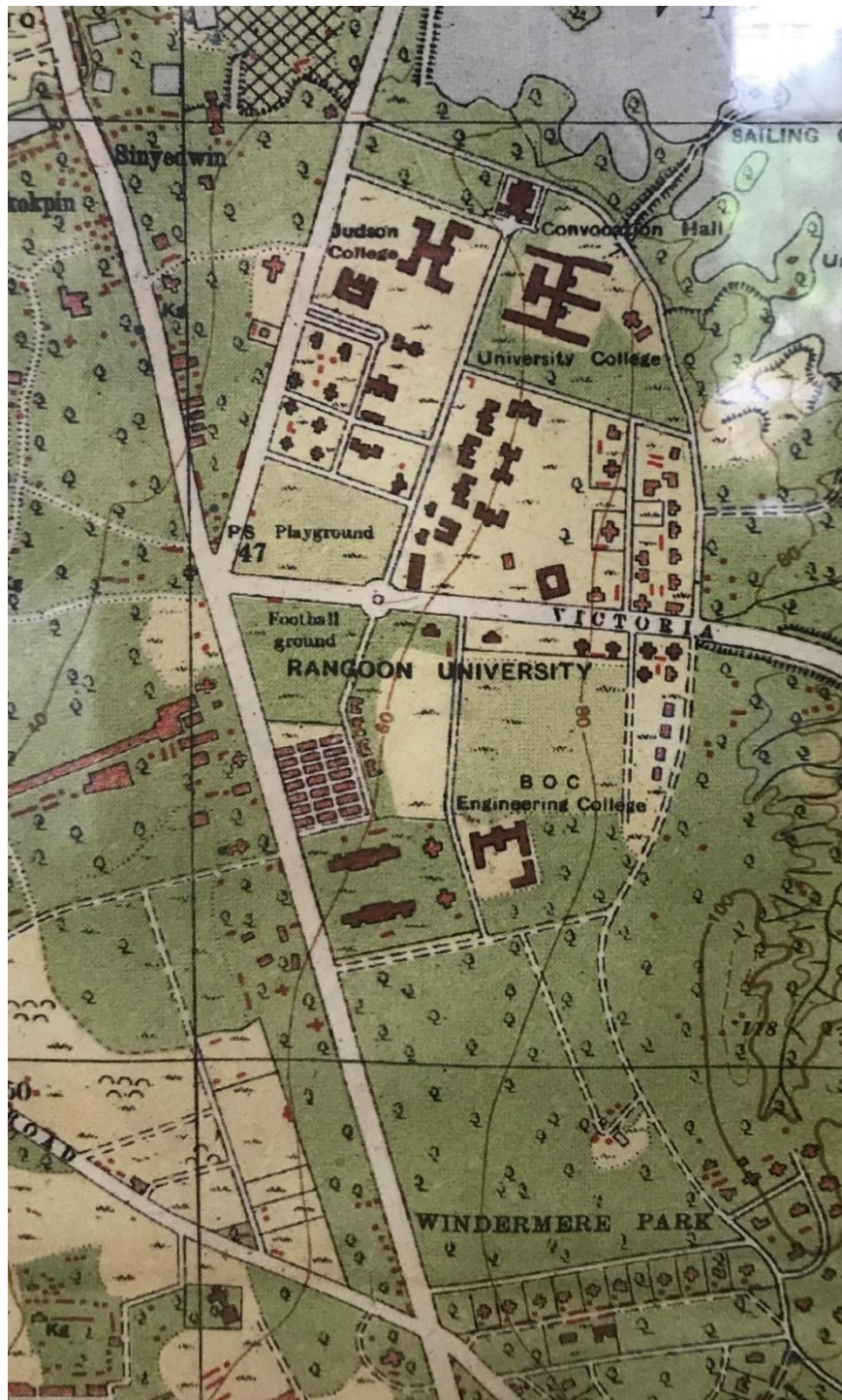


Figure 3. 2. Site plan of University of Rangoon (1930)

(source: Yangon heritage Trust Gallery)



Figure 3. 3. University of Rangoon, General layout plan (1932)  
 (University of Rangoon: New Buildings, 1932) (edited by author)



### 3.2.2. The University of Rangoon after independence (1948-1962)

Due to the increasing number of students, Yadanar Hall, Taungoo Hall, Mandalay Hall, Amaraya Hall, and Yamanya Hall were built as student hostels on the playing field in front of the student union building in 1954. In 1964, Taungoo Hall and Amaraya Hall were converted into classrooms, while Yamanya Hall was transformed into the lecturers' accommodations. In 1955, Malar Hall was built on vacant land, which exists on the west side of Judson College. A new building for social sciences was built on the west side of Convocation Hall in 1955 and it became the University of Economics in 1964. The Rangoon Engineering College was built near the Teacher Training College in 1954 and was finished in 1956. In 1956 and 1957, the main gate was built. In 1959, the new Bagan hostel and recreation center were built. The recreation center was finished in 1962. In addition, new accommodations for the university's lecturers and staffs were also built. As Convocation Hall and the university library were damaged during the war, they were also renovated during that period (Ministry of Education, 1995) (ပညာရေးဝန်ကြီးဌာန၊ ရန်ကုန်တက္ကသိုလ် ခုနစ်ဆယ့်ငါးနှစ်ခရီးအစီရင်ခံစာ၊ ၁၉၉၅)။

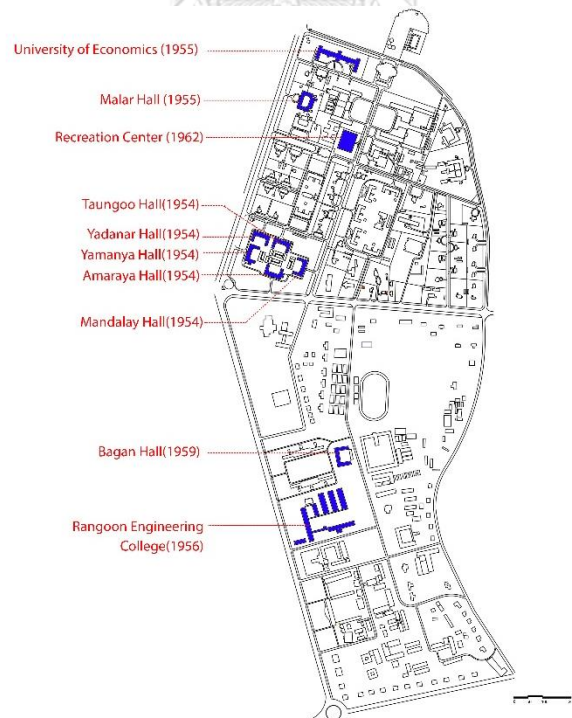


Figure 3. 4. Location of new buildings built after independence

(Source: University of Yangon Engineering Department, edited by author)

### 3.2.3. The University of Rangoon during military regimes (1962-2015)

The military government also built new buildings during their regime. In 1973, they built a swimming pool to the north of the Convocation Hall, on the bank of Inya Lake. New, three storey buildings were built near Taungoo Hall in 1992. The new university central library was built in 1980. In 1994, 4 research buildings were built near the university's swimming pool. In 1995, new buildings for classrooms were built to the east of University College's student hostels. For the commemoration of the 75th anniversary of the University of Yangon, the Diamond Jubilee Hall was built in 1995 (Ministry of Education, 1995) (ပညာရေးဝန်ကြီးဌာန၊ ရန်ကုန်တက္ကသိုလ် ခုနစ်ဆယ့်ငါးနှစ်ခရီးအစီရင်ခံစာ၊ ၁၉၉၅) . Undergraduate courses were reoffered, and students were allowed to live in student hostels again, as of 2013.

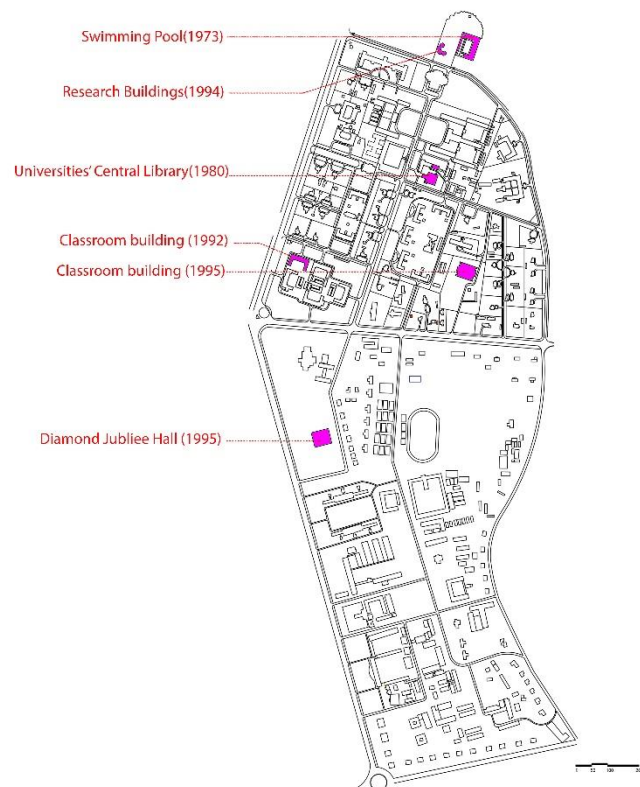
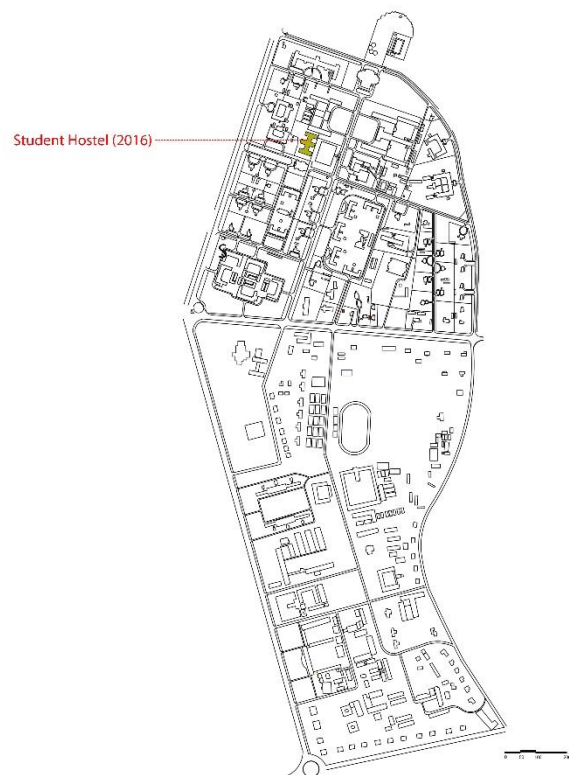


Figure 3. 5. Location of new buildings built during military regimes  
(Source: University of Yangon Engineering Department, edited by author)

### 3.2.4. The University of Rangoon during the current government (2015-2018)

One of the ambitions of the current government's goals is to revitalize the vibrant campus culture of students, which they have lost over previous decades. Nowadays, the government has plans to renovate the old buildings inside the campus and also, to rebuild the student union building. In 2015, a new student hostel was built to the west of the recreation center and was finished in 2016.



*Figure 3. 6. Location of new buildings built during current government*

*(Source: University of Yangon Engineering Department, edited by author)*

### 3.3. Political significance of the University of Yangon

The University of Yangon played a major role in the political transformation of Burma's history, including both the colonial and military governments. Although the colonial government established the University of Rangoon in an attempt to generate a new middle-class elite who would devote and serve the colonial government, the young students learned modern nationalist ideas that gave birth to new Burmese elites. These elites were actively involved in Burma's politics and have fought for freedom and democracy for the people of Burma since the colonial period. Various political leaders, such as Aung San, U Nu and Ne Win were all alumni of the University of Rangoon.

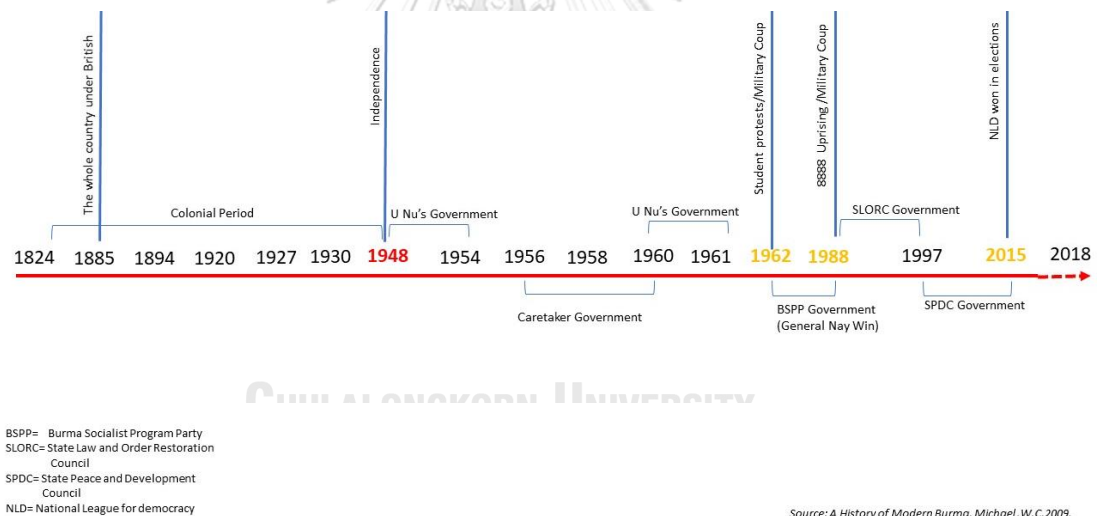


Figure 3. 7. Timeline of political transformation of Burma (drawn by author)

### 3.3.1. Student strikes during the colonial government

#### 3.3.1.1 *The first student strike, 1920*

Although the Burmese were pleased with the emergence of the first university and were involved in the funding of the university's buildings, they were not satisfied when the University Act was pronounced in 1920. Many Burmese were unsatisfied by the act and they believed that the University Act, which was drawn by the colonial government, only considered their colonial rule and aimed to create a new middle-class society that would only be devoted to the colonial government. Students were not satisfied that the university entrance exams would be in English, which was difficult to understand for local Burmese and Indian students. Students wanted national colleges that promoted Burmese literature and history, as well as Buddhism. As the university was a residential university, most of the poor Burmese could not afford to pay for the accommodation fee and in turn, it was believed that the university was only aimed for wealthier groups. Moreover, attending preliminary courses in English made the length of studies longer and there were additional costs and study fees. Further, the Burmese also complained that the chancellor had absolute power to assign professors (Historian Committee, 1995) (ရန်ကုန်တက္ကသိုလ်သမိုင်းရေးသားဥုစုရေးအဖွဲ့ ၊ ရန်ကုန်တက္ကသိုလ်သမိုင်း ၊ ၁၉၂၀-၁၉၉၅ ). All of these discontents led to the first student strike.

Students set up a boycott committee and went on strike on December 5, 1920 to challenge the University Act. This resulted in a political awakening for the Burmese people against colonial rule. From that movement on, national schools and national colleges, such as Myoma high schools, were emerged in Rangoon. However, the colonial government ignored the Burmese's requests and proceeded on with the University Act bill in December 1920 (Charney, 2010).

#### 3.3.1.2 *The second student strike, 1936*

The second student strike began from the Rangoon University Student Union (RUSU). In 1935, U Nu was selected as the president of RUSU and Aung San was editor of the *Oway* (the sound of the peacock), the RUSU's magazine. At that time, students



and the university's authorities had many conflicts, as students were suppressed for many reasons. They celebrated debates and wrote articles about unsatisfactory practices for the authorities. In a debate that was held by the RUSU in January 30 1936, Nu delivered a speech about the university destroying the students' independence, courage and the principal being involved in the student's personal matters (Historian Committee, 1995) (ရန်ကုန်တက္ကသိုလ်သမိုင်းရေးသားပြုစုရေးအဖွဲ့၊ ရန်ကုန်တက္ကသိုလ်သမိုင်း၊ ၁၉၂၀-၁၉၉၅) . In *Oway* magazine, one of the anonymous student authors wrote "Hell Hound at Large", which was a sarcastic article about an unnamed Burmese member of the university's administrative staff who took sexual advances towards female students. When the principal, D.J Sloss, asked for the author's identity, Aung San refused to reveal it. Thus, the principal expelled both Nu and Aung San from the university (Charney, 2010). The expelling of these two student leaders became the reason for the second student strike. The student union leaders held a meeting in the Student Union Hall and the second student strike started on February 25, 1936. Students requested the reinstatement of the expelled students, changes of the University Act and a student role in hostel management (Charney, 2010) . The University Committee met with the student leaders and finally agreed to follow some of the requests. In turn, the strike finished on May 10, 1936.

As a result of the second student strike, all Burma Federation of Student Unions (ABFSU) had been formed. Moreover, *Dhobama Asi Ayone*, a political party, also helped in the strike and thus, this strike gave a sense of the unity of the Burmese people as a way to oppose colonial rule and to achieve independence.

### 3.3.1.2 *The third student strike, 1938*

The third student strike was initiated from the arrest of the two student leaders of RUSU, Ba Hein and Ba Swe, by the colonial government. The two student leaders were arrested because they gave a speech to the nationalist oil field workers. Because of this arrest, the students performed demonstrations at the Government Secretariat building on 20 December 1938. The students stood around the building so that the people inside could not leave. After four hours of demonstrations, the students went

back to the University of Rangoon and on the way back to the university, the police dispersed the crowd by beating the students. Many students were injured and Aung Kyaw, a student from Judson College, died from serious injuries on December 22, 1938. He became the first student who was killed by the police in Myanmar's history and he was considered a martyr for the Burmese nationalist movement (Zaw, 2014) (ခင်မောင်ဇော်၊ တက္ကသိုလ်၊ မြန်မာ့နန်းသာ၊ ၂၀၁၄) . His name was entitled with 'Bo,' which means 'General,' and the street in front of the Secretariat building was named Bo Aung Kyaw Street. Additionally, students built a monument for Bo Aung Kyaw inside the student union building.

### 3.3.2. Student strikes during military government

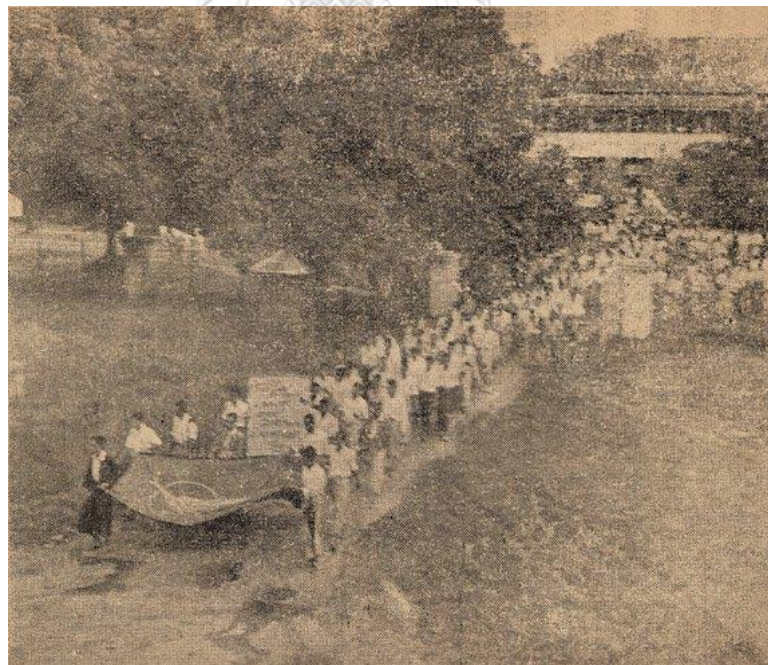
#### 3.3.2.1 Student strike, 1962

General Ne Win's military coup occurred in Burma on 2 March 1962. He believed that politics and education should be separated and students should not discuss politics after the coup (Koon-Hong, 2014). The Revolutionary Council of General Ne Win took over the Administration on University Education and Campus Control on 9 May 1962. They made a new Campus Act, which forced hostels to close at 8.p.m and student's groups and gatherings were banned. As students were unsatisfied with these regulations, RUSU led the students to do a one-hour protest. Approximately 2,000 students were involved in the meeting for the abolition of the new act (Koon-Hong, 2014). On 7 July 1962, the student union building was bombed, the military arrested at least fifty student leaders and one hundred students were killed (Koon-Hong, 2014). The university was closed for four months after that strike.



*Figure 3. 8. Students peaceful march from Convocation Hall on Chancellor Road (7 July 1962)*

(source: <http://archive-1.mizzima.com/gallery/photo-essay/5558-historical-photographs-july-7-1962>)



*Figure 3. 9. Students exited from Student Union Building (7 July 1962)*

(source: <http://archive-1.mizzima.com/gallery/photo-essay/5558-historical-photographs-july-7-1962>)

### 3.3.2.2 8888 Uprisings, 1988

1988 is the year that was momentous for Myanmar and when the biggest uprisings happened in Myanmar's history, which was led by university students. Because of the mismanagement of economics and the corruption of General Nay Win's socialist government, people were unsatisfied with government rule and in turn, there were pro-democracy nation-wide demonstrations. Initially, the protests were started by university students from the Rangoon Institute of Technology (RIT) and the University of Rangoon in August 1988 (*Myanmar: The Role of Civil society*, 2001). Later, the demonstrations scattered to people from all over Burma, including doctors, civil servants, labourers, housewives and even some military personnel. The main demand of the protest was to create a democratic government against authoritarian rule. However, these demonstrations led to another military coup on 18 September 1988 by the State Law and Order Restoration Council (SLORC). Soldiers shot and seized many demonstrators and an estimated 10,000 people had been killed by the end of 1988. Moreover, almost 10,000 students fled to areas controlled by nationalist ethnic groups (*Myanmar: The Role of Civil society*, 2001).

After 8,888 uprisings, the military closed the dormitories in the 1990s and moved undergraduate students to newly built universities that were away from town (Holland 2014). Students were completely banned from politics and the word '8888' became sensitive symbolism and was banned by the military government.





*Figure 3. 10 .8888 uprisings in Yangon, 1988*

(source <http://burmese.dvb.no/wp-content/uploads/2014/09/882.jpg>)

#### 3.4. Celebration of commemorations

Since 1962 and the demolition of the student union, students celebrated commemorations inside the site of the demolished student union. On 14 January 1963, students built the 'Yarkyaw, Student Movement Monument'. 'Yarkyaw' means 'more than hundred lives,' which was for the lost lives of the students. The height was 7 feet 7 inches and the width was 62 inches to represent the day 7 July 1962. This monument was also later demolished by the military (Mornement, 2015).

After the uprisings in 1988, commemorations were not allowed during the military regime. Nowadays, commemorations are allowed again, and people have started to celebrate commemorations for important historical events.

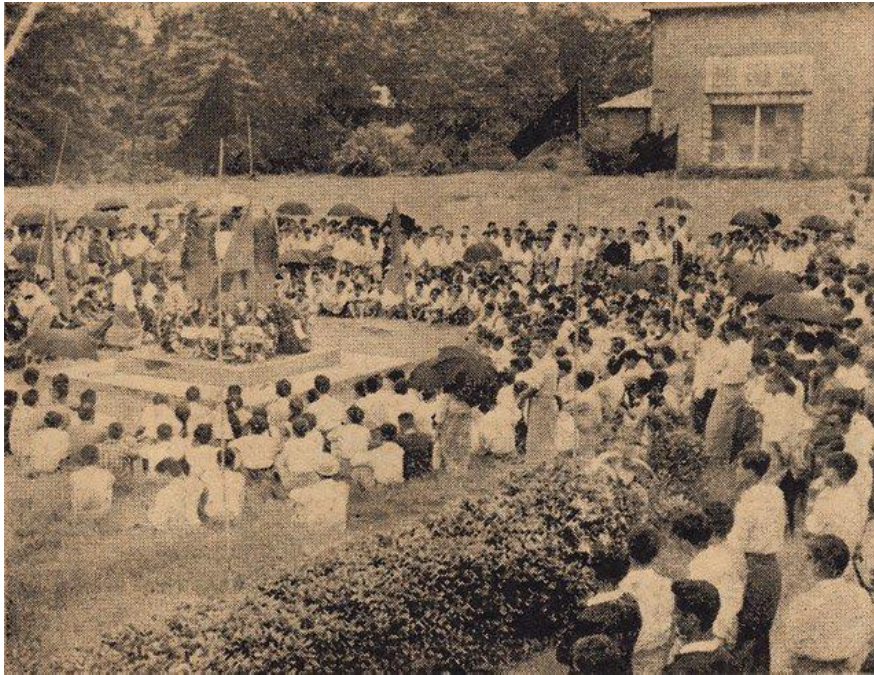


Figure 3. 11. Opening ceremony of YarkyawMon Monument (7.2.1963)

(source <http://archive-1.mizzima.com/gallery/photo-essay/5558-historical-photographs-july-7-1962>)



Figure 3. 12. Memorial service in front of Yarkyaw Student Movement Monument, who were killed in 7 July student strike

(source <http://archive-1.mizzima.com/gallery/photo-essay/5558-historical-photographs-july-7-1962>)





*Figure 3. 13. 28<sup>th</sup> Anniversary Commemoration for 8888 uprising, A man wearing a white sheet to act as a ghost of late democracy students*

(source <https://www.efe.com/efe/english/life/hundreds-of-people-in-yangon-commemorate-1988-student-uprising/50000263-3007052>)

### 3.5. Memories of the University of Yangon

Not only do important political and tragic events hold important memories and legacies of the University of Yangon, but also, the campus, buildings and cultural and social activities have created important collective memories for the students.

#### 3.5.1. Architecture as symbols of the University of Yangon

The planning of the university, along with the linkage among buildings and their architecture make the campus more meaningful, creating social connections and memories. Various artists and writers at that time expressed these memories through their artworks and articles. Through these, it is found that the buildings inside the compound are part of the important memories of the University of Yangon. These buildings also became icons and symbols for the University of Yangon.

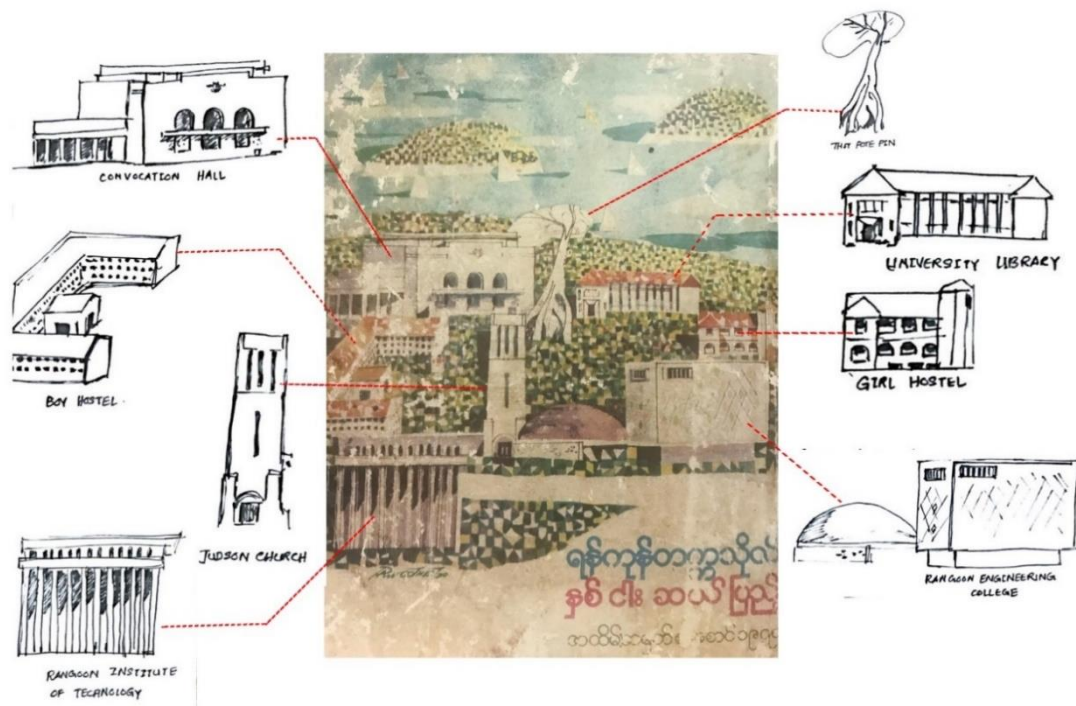


Figure 3. 14. University of Yangon 50 Anniversaries periodical cover, Artist Paw Oo Thet, 1970.

(Source: (Ministry of Education, 1970) ပညာရေးဝန်ကြီးဌာန ၊ ရန်ကုန်တက္ကသိုလ်နှစ်ငါးဆယ်ပြည့် အထိမ်းအမှတ်စာစောင်၊ အပိုင်း (၂)၊ ၁၉၇၀) (adapted by author)

The above magazine anniversary cover is drawn by the famous modern artist, Paw Oo Thet in 1970. From this painting, the artist chose various significant buildings inside of the University of Yangon campus and also, the Rangoon Institute of Technology (RIT) campus. These two campuses are historically related to student movements. Although there are many buildings inside the campus, the artist chose Convocation Hall, the university library, two student accommodation halls, Judson church, the assembly hall, the library building of the Rangoon Engineering College and the main buildings of RIT. As the artist used a lot of green and blue as background color, it can be seen that the university used to have a pleasant environment on the border of the Inya Lake.



The artist also drew a Thit Pote (*tetrameles nudiflora*) tree in the middle of the picture. This tree has existed since the university was first established. It is in front of the University college building and it is also one of the important symbols of University of Yangon. An author wrote that, “the life of this tree is resembling the life of the university’s semesters.” During the early monsoon season, when the semester starts around June, the tree is full of fresh leaves and the campus is also full of fresh students. When the exams are near, around December and January, the leaves are falling from the tree as a warning that exams are getting nearer day by day. When all the leaves fall off in the summer, the students go back to their hometowns. Thus, this tree shows the life cycle of the university (Oo, 1970) (ကျော်ဦး ၊ နှစ်ငါးဆယ်တက္ကသိုလ် ၊ ဓါတ်ပုံမှတ်တမ်း၊ ၁၉၇၀) .Today, this tree still exists (Fig 3.15).

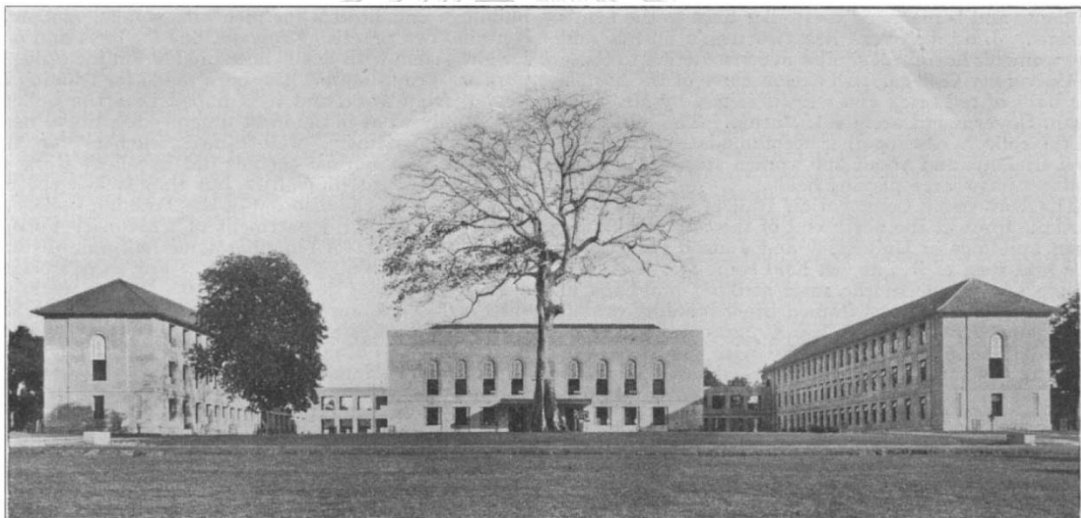


FIG. 1.—University College, Rangoon.

*Figure 3. 15. Thit Pote Tree in front of University college  
(Peacock, 1932)*



Figure 3. 16. Painting for Art exhibition titled 'Land of Blossoming Gant Gaw' dedicated to reconstructing the Student Union Building, artist Unknown, 2012 (source <http://www.kaungkin.com/jupgrade/index.php/english/895-poem297>)

This other painting was drawn during the contemporary period and is meant for the art exhibition that raised funds to reconstruct the student union building. In this painting, the historically significant buildings, such as the Judson church and Convocation Hall, were chosen by the artists due to some of their architectural elements. Architectural elements, such as the entrance of the library, the entrance of the recreation hall, the windows of University College, the entrance gate of Chancellor Road, and the two posts in front of student union building were drawn. The iconic peacock, Gant gaw flowers and Thit Pote tree are also included.

### 3.5.2 Architecture as memory holder

Architecture inside the University of Yangon campus are not only just for functional purposes but also, they hold the memories of different periods of time. The buildings became part of the lives of the students and they created important memories, which told the stories of different eras. Students still choose to take photographs of some of the architectural elements as part of the memory of their student life (Fig 3.20).

One example is the entrance of the old student union building. The student union committees of different periods used the same entrance to take a committee photo. Another example is the unique roof shape of the assembly hall of Rangoon Engineering College. The concrete blocks at the Rangoon Engineering College is still popular among young generations today.



*Figure 3. 17. Student Union Committee, 1936 (left)*

*(Lewis, 2016)*

*Figure 3. 18. Student Union Committees, 1959-1960 (right)*

*(source: Oway Magazine, 1959-1960)*

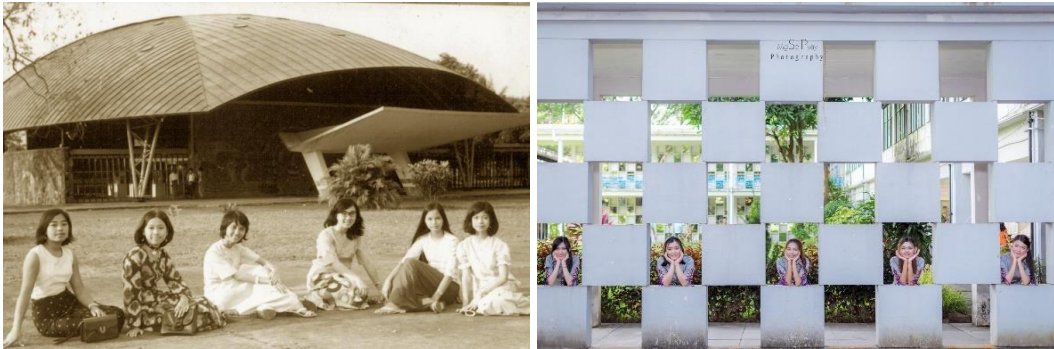


Figure 3. 19. Assembly Hall, Rangoon Engineering College (left)

(source: [class1976-82im1yangon.org](http://class1976-82im1yangon.org))

Figure 3. 20. Rangoon Engineering College (right)

(source: (W. L. Phyu, 2016))

### 3.5.2. Social events and student activities

Another important memory were the cultural events and social activities celebrated in the past. One of these famous cultural events was the celebration of ‘a-nyeint pwei’. These ‘a-nyeint pwei’ were theater performances that were very popular in Burma at that time. These performances were all-night performances with lead female performers and clowns. These performances were celebrated on stage, both indoors and outdoors. At every university, ‘a-nyeint pwei’ were incorporated because they were entertainment for university students at that time. Today, students still include ‘a-nyeint pwei’ in some events but they are not as popular as in the past because there is a greater diversity of entertainment.

Debates and free discussion among students were also very popular in the past. Students could discuss and debate freely about politics, the educational system, literature and many other issues (Zaw, 2014) (ခင်မောင်ဇော်၊ တက္ကသိုလ် မြေကျွန်းသား၊ ၂၀၁၄). Thus, previously, students were more interested in the various issues happening in Burma. During the military regime, these free discussions and debates were not allowed; however, nowadays, these activities are fading.





Figure 3. 21. 'A-nyeint-Pwei' in the past (left)

Figure 3. 22. 'A-nyeint-Pwei' nowadays (right)



## CHAPTER 4

### DOCUMENTATION AND ANALYSIS OF SIGNIFICANT BUILDINGS INSIDE THE UNIVERSITY OF YANGON CAMPUS

This chapter is the study of the significant buildings inside the University of Yangon's campus to understand the architecture of these buildings in relation to social, political and cultural aspects. By understanding these aspects, the tangible and intangible values of University of Yangon campus are apprehended. The chosen significant buildings are student union, Convocation Hall, the university library, the university gymnasium and Rangoon engineering College. The buildings are analyzed in terms of background and physical configurations.

#### 4.1. Student union

##### 4.1.1. Background and significance

The Rangoon University Student Union (RUSU) was established as a student organization in the 1920s for improving campus life. The student union building was built in 1929 and finished in 1930. It was established by the donation money of a wealthy Burmese man named U Nyo (Zaw, 2014) (ခင်မောင်ဇော်၊ တက္ကသိုလ်၊ မြန်မာ့ပြည်သူ့တက္ကသိုလ်၊ ၂၀၁၄).

The establishment of a student union building played a major role in the political transformation of modern Myanmar. Throughout the history of Myanmar, students were the prominent figures of the political force who created the nationalist movement. It became the main place where Burmese leaders discussed students' activities and political issues. Although the colonial government built the student union building for social integration, it became a place where major political student movements took place in opposition not only to British rule, but also, to the military. Since the first establishment of the student union building, student leaders perceived the building as the central place of the nationalist movement for independence. In

1931, the first election for choosing the president of the student union was held. During the ceremony, the elected president, U Tun Sein, stated in his speech that;

*“In the past, there was no student union building and no student union like this. It is a marvelous moment that a core place for the nationalist movement is available for all the people of Burma. I strongly believe that the student union will give birth to young student leaders who will bring independence to Burma one day”* (Tun, 2007) (အောင်ထွန်း၊ မြန်မာနိုင်ငံကျောင်းသားလှုပ်ရှားမှုသမိုင်း၊ ၂၀၀၇) .

During all the student strikes that changed the history of modern Myanmar, the student union building became the prominent figure for justice, freedom and democracy. Since the colonial period in 1936, anti-colonial nationalist activities were initiated from the student union building. During the military government, students continued to request freedom and autonomy. Further, during General Ne Win’s regime of the Revolutionary Council in 1962, the students were perceived as great political threats and the student union building was destroyed on 7 March 1962. This was because of the students’ protest against educational policies (Huynh, 2017) .

Although the student union was demolished in 1962, the legacy of the site never died. In 1974, U Thant, a former UN Secretary and an important Burmese figure on the international stage, was a hero for the nationalist movement and was respected by many Burmese people and students. When U Thant died in November 1974, General Ne Win refused to give him a formal state funeral. Ne Win admitted that Thant’s body should be buried at the cemetery park near the Shwe Dagon Pagoda. However, students wanted to bury his body at the site of the demolished student union building. This led to a major conflict that caused intense protests. Students brought the coffin to Rangoon University and placed it in the Convocation Hall so that thousands of people could pay their respects. Architectural students built a small brick mausoleum using materials found on the site (Mornement, 2015). However, before the interment was carried out, Ne Win ordered the military to storm the campus on December 11, 1974. The military seized the coffin and buried it at the site near Shwe Dagon Pagoda (Seekins, 2006). Many students were killed and arrested, while demonstrations and riots emerged throughout the city and hundreds of protesters were also killed (Seekins, 2006).

After the 1988 uprisings, the universities were closed, and student unions were also banned. During the 1990s, new campuses were built on the outskirts of town so that students could not be united and protest. Since that time, social integrations among students were eradicated, the education system in Myanmar had been degraded and students were not allowed to discuss politics anymore.

#### 4.1.2. Location

The location of the student union can be considered a central part of the whole campus. It was located at the intersection of Chancellor Road and Victoria Road (Fig 3.1), while the building was oriented towards Chancellor Road. Although it was on the corners of the two roads, the main accessibility was from Chancellor Road. The building was surrounded by the university gymnasium to the east, sports playing fields to the west, the warden's quarters to the north and the sanatorium to the south (Fig 4.1).

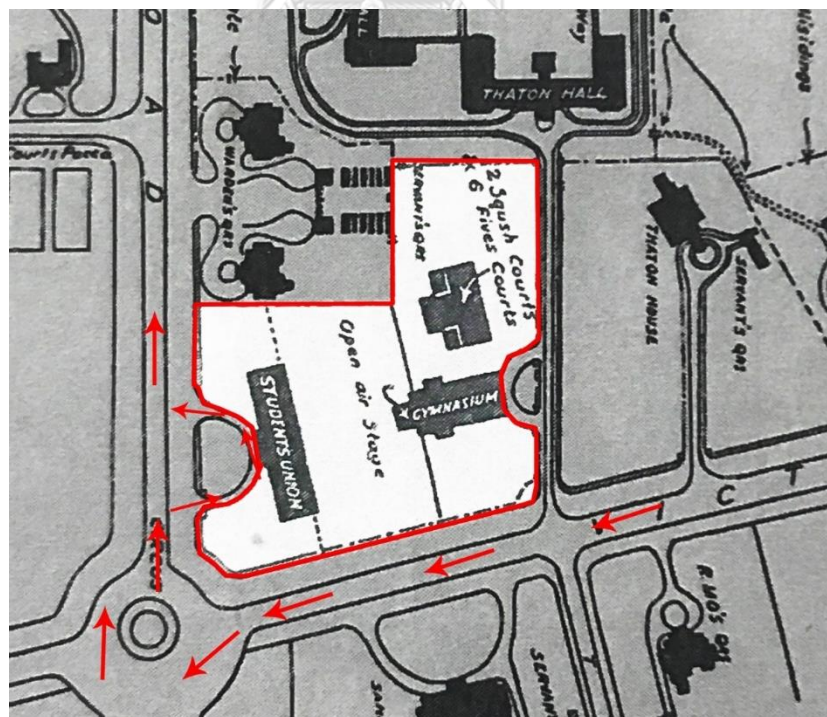


Figure 4. 1. Location of the Student Union



#### 4.1.3. A brief biography of the architect Thomas Oliphant Foster

The student union building and most of the buildings inside the University of Yangon campus were designed by British architect Thomas Oliphant Foster. He was born in 1881 and died in 1942. Foster passed the qualifying exam in 1912 and became ARIBA on March 1913. Thereafter, he began his practice in 1906 and formed the partnership of Foster Lovell & Lodge in 1910. He also spent six months working under Edwin Lutyens (Rooney & Architects, 2012) From 1914- 1915, he began his career as an assistant consulting architect to the government of India and the was appointed to Rangoon as an assistant architect of John Begg, a consulting architect of the government of India (Rooney & Architects, 2012). After retiring from his government job in 1920, he opened a private practice in Rangoon. He also designed the Port Authority (1928) and New Law Courts (1931) in Rangoon (Rooney & Architects, 2012).

#### 4.1.4. Physical study

As the architectural drawings of the old student union building are unavailable, the author will use old photographs and sketches to analyze the physical combinations of the student union.

The student union was comprised of the debating chamber, restaurant, reading and writing rooms, billiards room and dressing rooms ('University of Rangoon', 1930). According to U Myint, the economic advisor of the Burmese president Thein Sein, he mentioned in his letter for restoring the University of Yangon that the old student union also had a small reading room, a library, a barber shop, meeting rooms and a recreation room with a ping-pong table (Myint, 2012).

It was a two storied building, which had a symmetrical composition and simple configuration. The building had a rectangular shape and was oriented to the west. Verandahs, the important feature of colonial architecture, were provided for protection of the sun from the west. Originally, the balcony on the upper floor was left open without a roof until 1932 (Fig 4.4). Later, the eaves were added, possibly because of not having enough sun shade and rain protection (Fig 4.5). The windows and doors used in the student union had a complete rectangular or square shape. At the

entrance, there were three square shaped windows on the upper floor and a big entrance was located at the center. Besides the entrance, there were two fixed windows located side by side. The main entrance door was made of metal bars, which allowed for the ventilation inside of the building. The name of the donor, U Nyo, was in-scripted on the entrance's metal door (Fig 4.2).

Currently, there is only one concrete memorial monument of Bo Aung Kyaw, a student leader killed during an anti-colonial protest in 1938 (Fig 4.9). As well, the two gate posts of the old student union remain (Hui Yee, 2017) .



Figure 4. 2. Entrance door of Student Union (left)



Figure 4. 3. Students taking photo in front of the union building



Figure 4. 4. Student Union building (View from the Chancellor Road) (1932)



Figure 4. 5. Student Union building (View from the Chancellor Road) (1962)

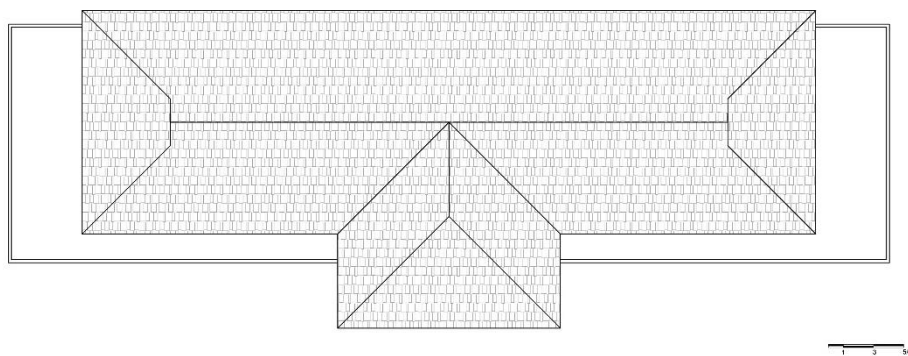


Figure 4. 6. Roof plan of student union  
(Drawn by author referenced from old photographs and site plan)

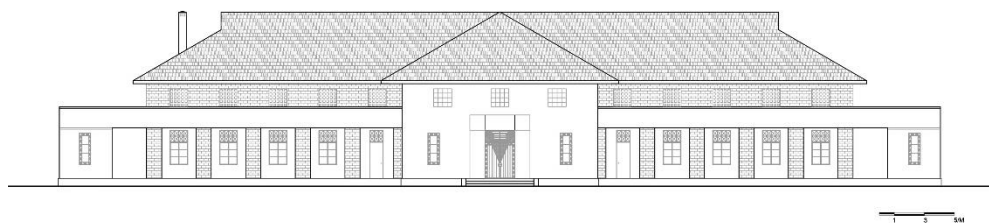


Figure 4. 7. Front elevation of student union  
(Drawn by author referenced from old photographs)

(Note: For the above drawings of roof plan and elevation of the demolished old student union, the author can only reference the old photographs and site plan drawings of the University of Yangon due to the limitations of the original drawings. Therefore, the dimension and proportion may differ from the original building.)

#### 4.1.5. Current debates for reconstruction

Since 1988, there were demands to reform student unions and rebuild the student union building (Seekins, 2006). However, after 8,888 uprisings, these demands were not considered, as the formation of a student union would provide a chance for the students to engage in political activities against the military rule. After the NLD (National League of Democracy) party won the election in 2015, people requested to rebuild the student union building again. The reconstruction project of the student union building is also conceived as a project for reconciliation with the military

Due to the long history and legacy of the student union, the reconstruction of the student union created controversy among various people. Although most of the students wanted the student union building to be rebuilt, there were different opinions among students that some students wanted the building to remain at the original site and some wanted to leave the historic site as it is. ABFSU (All Burma Federation of Student Unions) claimed that the site of the student union building should be preserved as a symbol of the anti-dictator student movement (E. S. Phyu, 2017). They were afraid that the legacy of the site would die because the new building would cover the historic crimes of the military government.

The reconstruction project was approved, and the preparation work for construction started on January 2017 at the old site. However, the design of the building and the plans were not issued to the public. In February, the project was halted due to the opposition of ABFSU to build on the old site. Although the university already got the budget to rebuild the new building, the project was halted until now.





*Figure 4. 8. Student Union after it was demolished (July 1962).*



*Figure 4. 9. The remaining Bo Aung Kyaw Monument*

## 4.2. Convocation hall (1930)

### 4.2.1. Background

The Convocation Hall was established as a new, functional need, as the two colleges were merged into a university. It was the main building of the University of Yangon until now and accommodated the Convocation Hall, the university offices, the council chamber and the committee rooms. The university's Convocation Hall was built in 1930 and it was the most striking building in Rangoon at that time. It is situated near Inya Lake, at the north end towards the university's estate, with the main buildings of the university and Judson College to the east and west of it. It was also designed by Thomas Oliphant Foster and was built to hold two thousand people.

### 4.2.2. Location

Being the main administrative building of the university, Convocation Hall was located at the center of the university, towards the end of the Adipati Road. The location of the convocation showed the colonial's control over the university's compound (Fig 4.10).

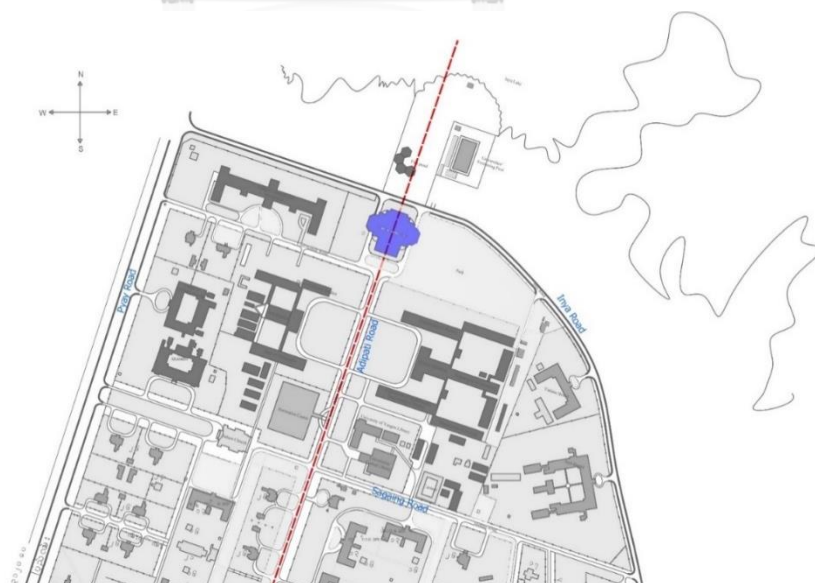


Figure 4. 10. Location of Convocation Hall

#### 4.2.3. Physical study

The convocation has a symmetric form, following the central axis of Adipati Road. It was built in an art deco style, with bold geometric shapes and less ornamentations. The Convocation Hall was comprised of the main convocation hall, the university offices, and the council chamber and committee rooms.

From the architecture of the Convocation Hall, the superiority of the political power of the colonial government can be seen in the rooms' layout. As the chancellor was the most powerful person at that time, the location of the council chamber faced directly towards the main road and the main convocation hall was situated behind the council chamber room. Three main, grand entrances were provided for the council chamber, while the main convocation hall could only be entered using the side entrances.

The three huge curved windows at the front façade were the most dominant architectural elements of the building. These windows allowed lighting inside the council chamber, with the central convocation space receiving lighting from the sky light.

The walls were load-bearing, with bricks coated with cement plaster. The floors were parquet flooring of Burmese padauk and were paneled with yinma, lighter-coloured Burmese hardwoods. The main doors were of bronze and opened to marble steps, which were covered by a bronze marquise.

On the façade of the Convocation Hall, the use of symbolism shows both the colonial government's desire for university students to devote themselves to their government and the rise of nationalism amongst the local people. As the main aim of the establishment of the university was to give birth to middle-class elites who would devote themselves to the colonial government, the symbol used on top of the Convocation Hall included the words, "with truth and loyalty proved this aim" (Fig 4.11). However, in the local people's eyes, the building was similar to a Chinese Temple, as the symbol contains two Chinese dragons and a small peacock in the middle.

Thus, a local Burmese elite, U Tun Sein, and the second president of the student union, requested to include a statue of ‘Chinthe’ (the mythical lion), which is also one of the national symbols of Burma (Fig 4.14). He also requested to use local wooden doors in the buildings inside of the university instead of using iron doors that were made in England. Inside the building, some bronze doors were also decorated with the symbol of a peacock, so as to satisfy the local students (Fig 4.15). This demonstrated the rise of nationalism and the resistance towards the colonial government, which can be seen in the architecture of Convocation Hall.

The architecture of Convocation Hall also showed the negotiations between the colonizers and the colonized local people. Moreover, although the university was governed by the colonial authorities, the symbol of the university at that time used the Burmese national figure with the peacock and a motto with four Pali language written in English alphabets, namely “Natti; Samam, Vijja-, Mittam.” This means, “There is no true friend as knowledge”, which is the moto still used today as the logo of the University of Yangon (Fig 4.12 & Fig 4.13). Additionally, the figure of ‘the ear of the paddy’ is also used, which is the national symbol. However, the Pali words have been changed into the Burmese alphabet.



*Figure 4. 11. Symbol at Convocation Hall*





Figure 4. 12. Logo of the University of Yangon (1932) (left)



Figure 4. 13. Logo of the University of Yangon nowadays (right)



Figure 4. 14. Chinthe Statue (left)

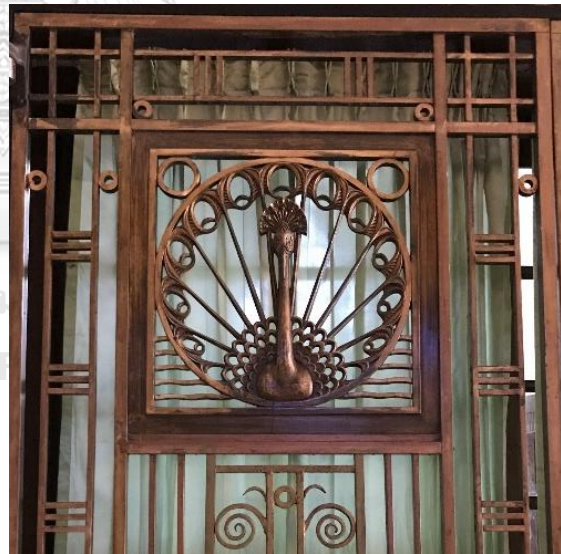


Figure 4. 15. The peacock figure on the metal door (right)

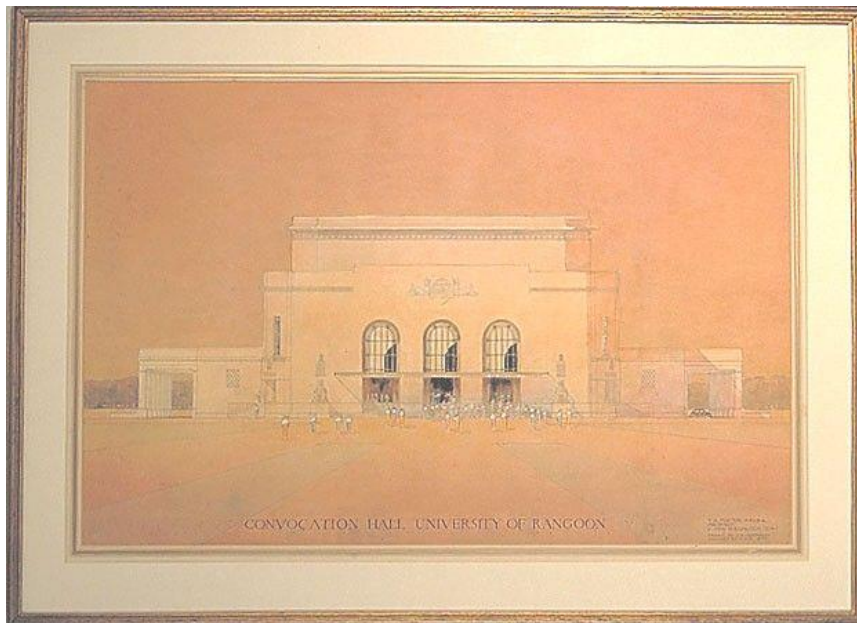


Figure 4. 16. Perspective of Convocation Hall (Artist: J.H. Greenaway, Architect: T.O. Foster) Source: The Wolfsonian-Florida International University, Miami Beach, Florida, The Mitchell Wolfson, Jr. Collection



Figure 4. 17. Convocation Hall (1932)

Source: University of Rangoon: New Buildings, Rangoon University Press

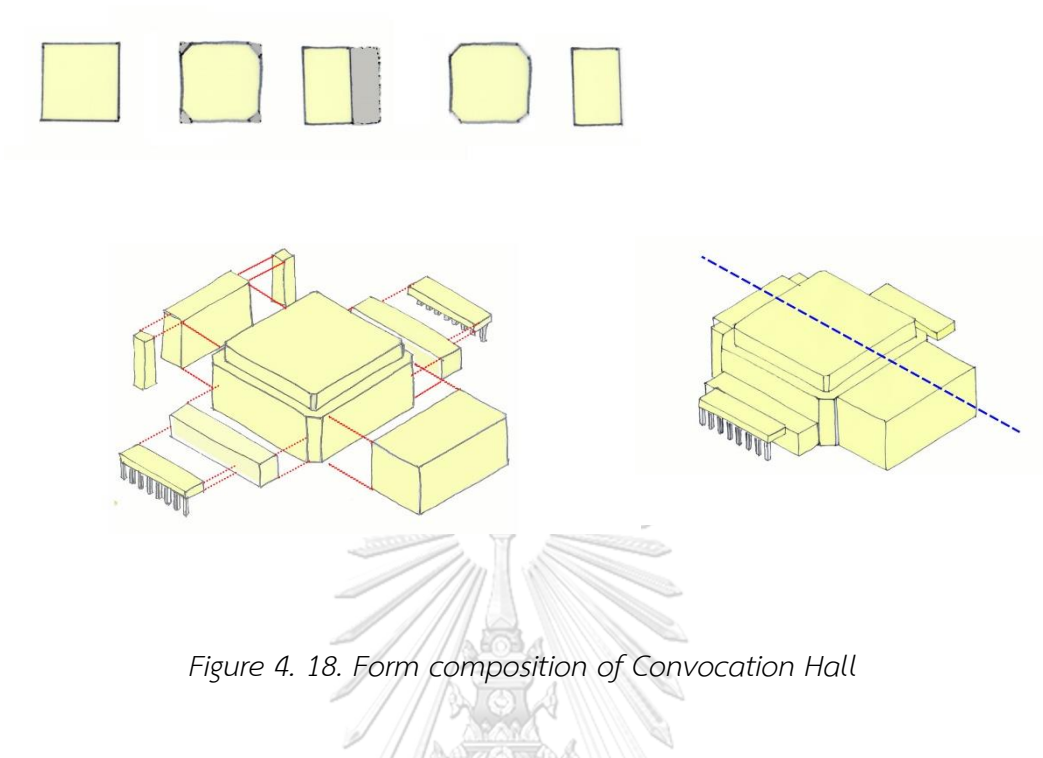


Figure 4. 18. Form composition of Convocation Hall

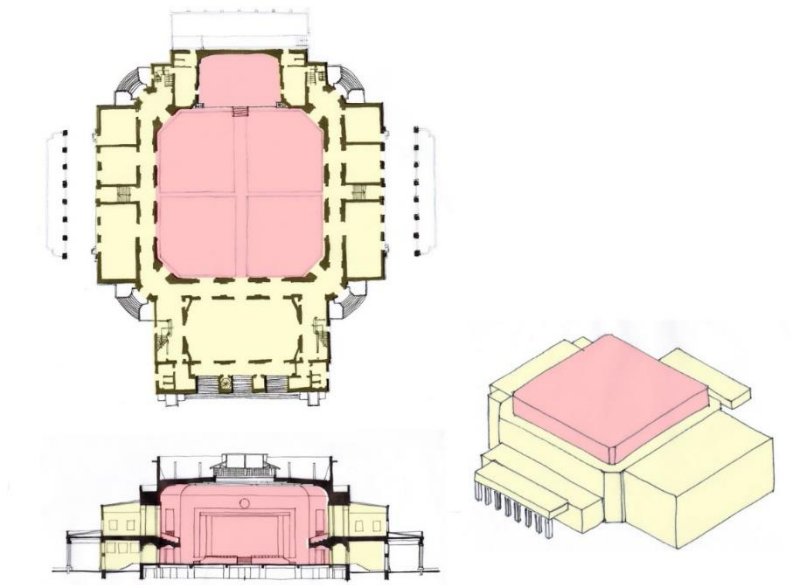


Figure 4. 19. Hierarchy of spaces

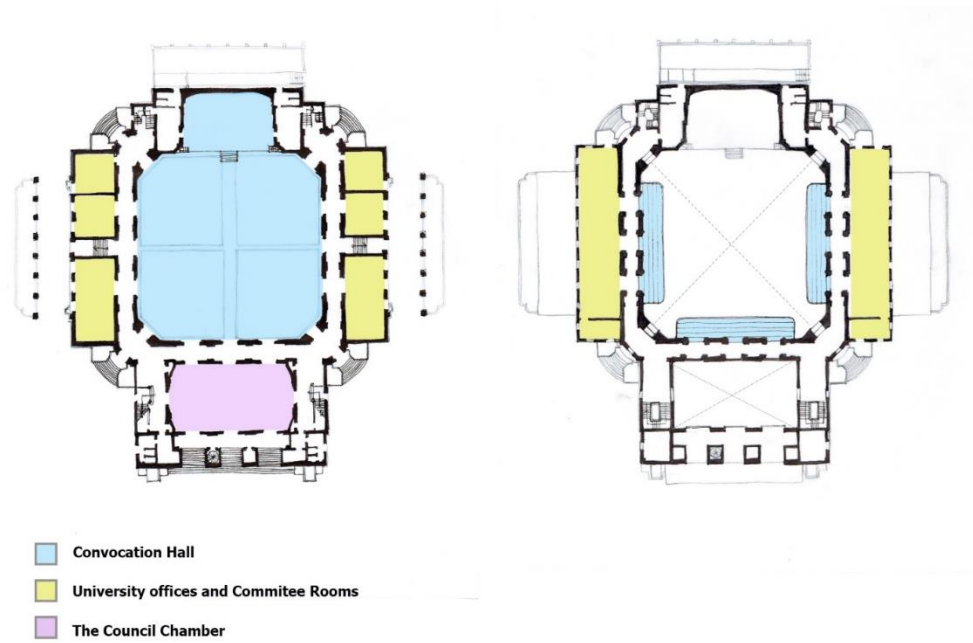


Figure 4.20. Layout and function analysis

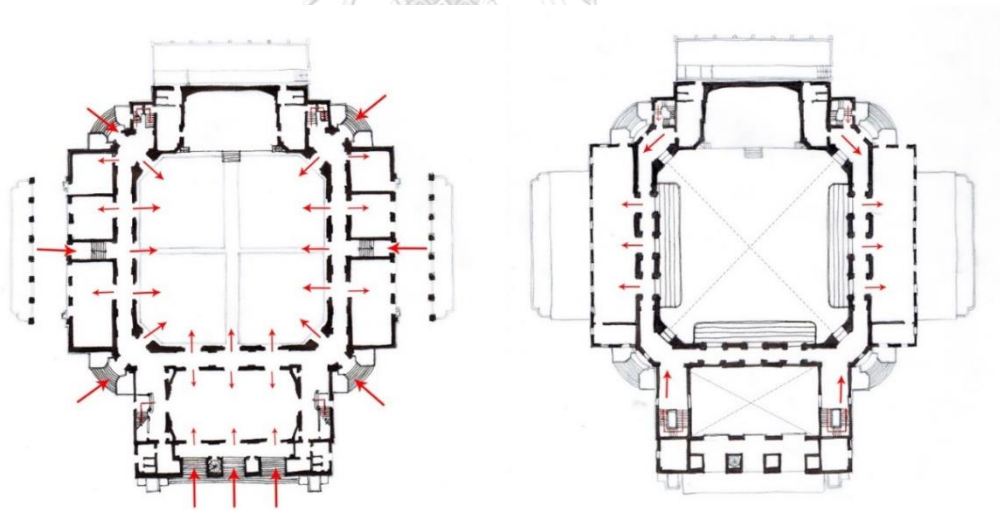


Figure 4.21. Accessibility analysis



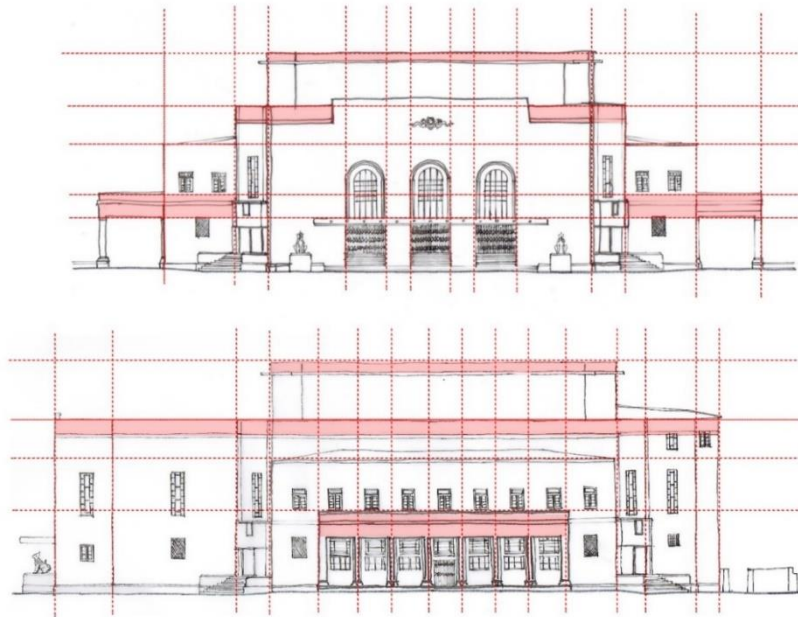


Figure 4. 22. Vertical and horizontal composition

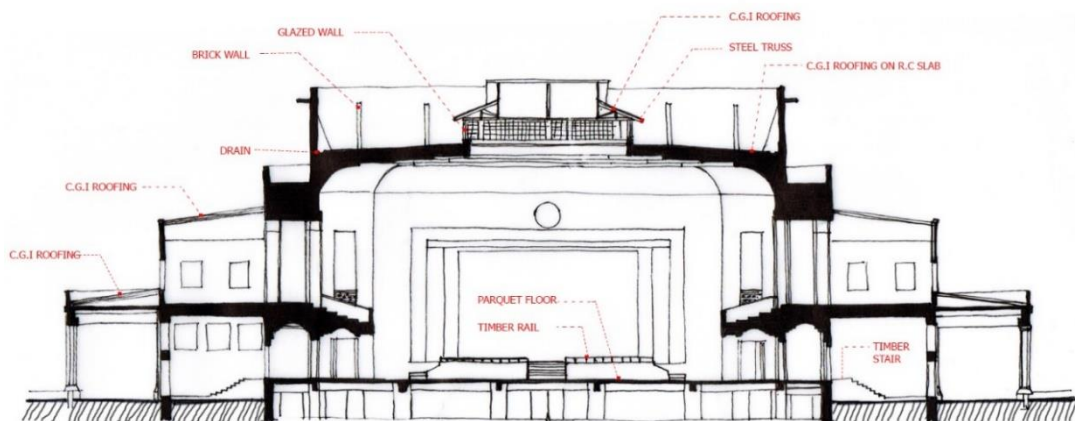


Figure 4. 23. Material usage

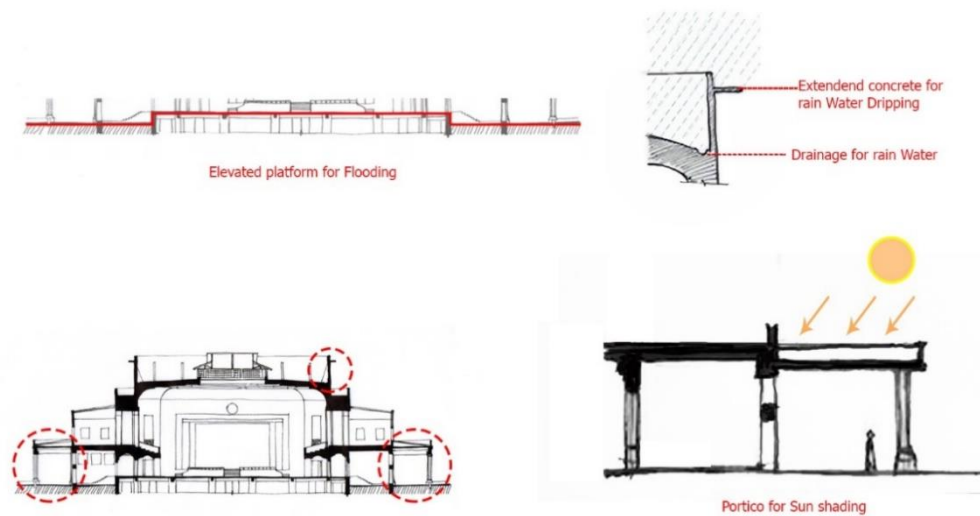


Figure 4. 24.Climatic responsiveness

### 4.3. The University of Yangon library (1930)

#### 4.3.1. Background

Before the establishment of the University of Rangoon library, there were only two college libraries relating to Rangoon College and Judson College. The stone foundation of the building was laid on 8<sup>th</sup> December 1927 by Sir Hercourt Butler, who was the British governor of Burma and also, the chancellor of the university. The building was also designed by Thomas Oliphant Foster. The library was established by the donation money of a wealthy Indian man, Rao Bahadur S. Ramanatha Raddier and his wives, Pavathi Ammal and Nallammamal.

The main purpose of the library was for research purposes. Thus, the main collections of the library were manuscripts and rare books of Burma and neighboring countries, as well as inscriptions and scientific periodicals (Oo, 1970) (ကျော်ဦး ၊ နှစ်ငါးဆယ်တက္ကသိုလ် ၊ ဓါတ်ပုံမှတ်တမ်း၊ ၁၉၇၀). The library also displayed antiques from the Pyu and Mon dynasties and thus, it became one of the best libraries in Southeast Asia during that time. However, after World War II, all of the rare and valuable collections

and library buildings were severely damaged. Nonetheless, in 1946, the library was restored. Today, the library still functions as the library of the University of Yangon.

#### 4.3.2. Location

The library is located between the University College building and the students' accommodation halls. The main entrance faces Chancellor Drive Road, while the façade of the building orientates to the west (Fig 4.25).

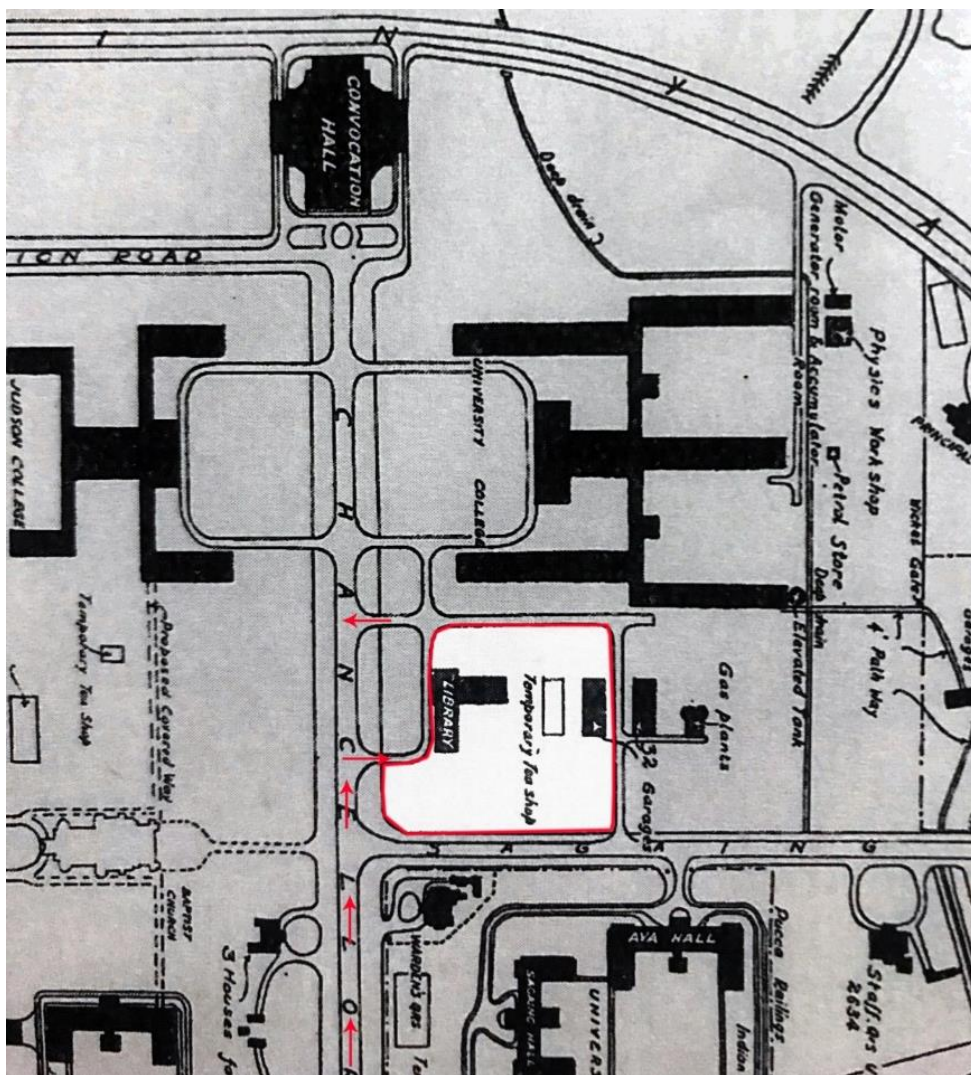


Figure 4. 25. Location of the University of Yangon library

#### 4.3.3. Physical study

The library is a two storey building. Although most of the buildings inside the university's estate have symmetrical compositions, the library is in an L shaped building. Having a bold shape figures with the composition of clean lines and minimal decoration, as the library is indeed an art deco style building. It was comprised of a stack room, reading rooms, librarian's office, entrance lobby, information counter and processing room. The library also contained a basement for storage. The ground floor was composed of the lobby, main reading area, and a close stack room. On the upper floor, open stacks, a reading area, librarian's office, processing room and close stack room were provided.

The close stack room fully occupied one wing of the L shape. The stack room was divided into four levels by metal floors and was designed to hold 250,000 volumes. Long vertical windows provided lighting and ventilation and perforated metal floors with built-in book racks allowed the air to flow from the ground level to the upper level (Fig 4.36 & Fig 4.37). All floors were connected by metal stairs. Additionally, an air-conditioning plant was equipped in the stack room. However, the use of metal floors and book racks were quite unique and modern at that time. The reading room was located on the ground floor and casement windows provided lighting and ventilation (Fig 4.34). Moreover, ventilation blocks were used in some openings as a response to the climate conditions of Rangoon. The librarian's office and processing room were located on the first floor and a verandah was created to the south. Nowadays, the verandah is also used as an outdoor reading area (Fig 4.35).

The building façade was elegant, with vertical, long striped windows. The curved recessed entrance was decorated with horizontal stripes and made the entrance more dominant and welcome. Moreover, as a credit to the donor of the library fund, the name of Rao Bahadur S. Ramanatha Raddier can be seen on the entrance door (Fig 4.32).





Figure 4. 26. University of Yangon Library (1930)

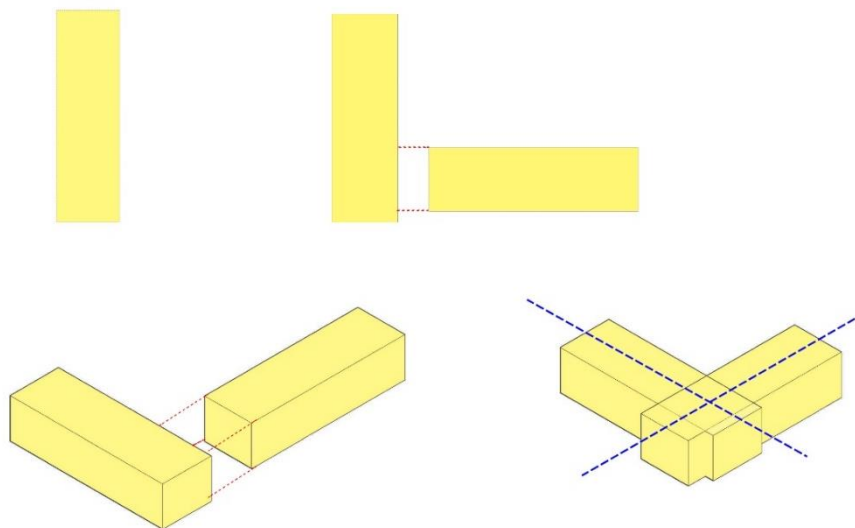


Figure 4. 27. Form composition of the university library



Figure 4. 28. Layout and function

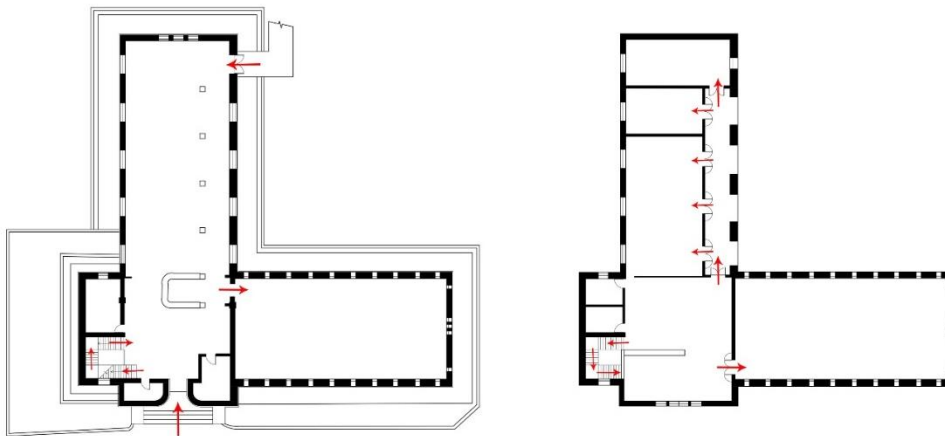


Figure 4. 29. Accessibility



Figure 4. 30. Hierarchy of shapes



Figure 4. 31. Vertical and horizontal composition



Figure 4.32. Library Entrance (left)



Figure 4.33. Front façade (right)



Figure 4.34. Reading room (left)



Figure 4.35. Outdoor reading area (right)



Figure 4.36. Vertical striped windows



Figure 4.37. Perforated floor at stack room



#### 4.4 The university gymnasium (1930)

##### 4.4.1. Background

The university gymnasium was also the design of Thomas Oliphant Foster. The gymnasium was built in 1929 and was finished in 1930. The building was established by the donation money of Hokkien-Burmese, and Mr. Chan Chor Khine, who was the son of Chan Ma Phee and Khoo Ee Khwet, prominent residents of Rangoon (Y. Li, 2017). Chan Chor Khine was also one of the heads of the Leong Sun Tong Clan Association and one of the elected Chinese members in the Burma Legislative Council, from 1923-1935, in the Rangoon west region (Yi Li, 2016). Starting from 1928, weightlifters emerged in Rangoon due to western training. They could train at the gymnasium due to the equipment at the university's gymnasium. At that time, weightlifting competitions were celebrated yearly, and it became one of the most famous competitions in Burma.

##### 4.4.2. Location

The university's gymnasium is located on a secondary road, linking to Thaton Hall and the main Victoria Road. Instead of facing the main road, the building's axis followed the axis of the student union building in front. Nearby buildings included the student union and the building for squash-rackets and five courts (Fig 4.38).

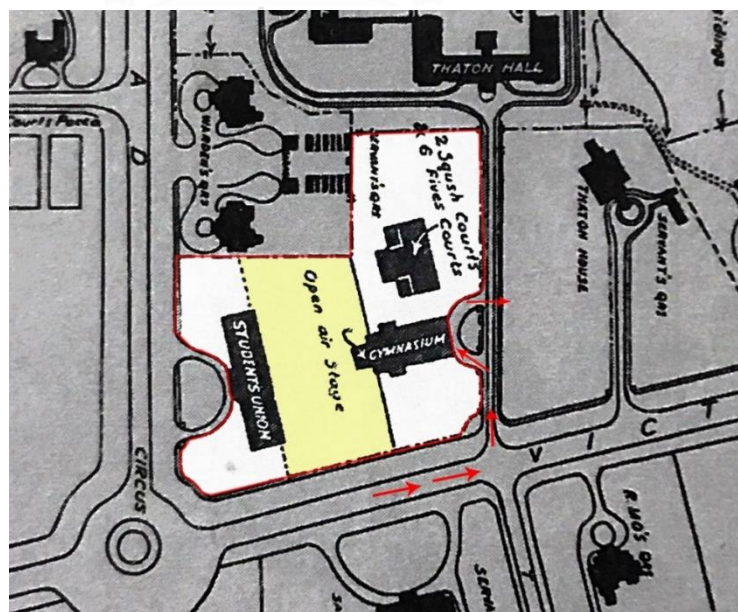


Figure 4. 38. Location of the university gymnasium

#### 4.4.3. Physical study

The purpose of the building was not only for a gymnasium, but also, a theatre for indoor and outdoor entertainment. The gymnasium was located at the back of the student union building, while the main entrance of the building was located on the secondary route from the University Avenue Road (Victoria Road). Today, as the student union site is gated and separated from the site, the open space between the two buildings and the open stage for cultural events is not functional anymore.

The building was a symmetrical, art deco style building, with a combination of bold rectangular shapes. In terms of function, there was a weightlifting hall and a stage for both indoor and outdoor cultural events (Fig 4.39). The weightlifting hall could be transformed into a hall for indoor events as well.

The building is a one storey building with a brick load bearing structure. Metal trusses were used for the gable roof in the weightlifting hall and the ceiling was attached to the roof (Fig 4.45). The architect used high ceilings and large windows to let the lighting and ventilation in. On the façade of the building, the dedication to money donors can be seen, while the figures of the cultural activities of the Burmese, such as the *anyeint* dancing figures, the *chinlone* caneball sports and the wrestling sports, were depicted (Fig 4.46). However, the façade of the main entrance has no ornament.



Figure 4. 39 The University Gymnasium (1930)



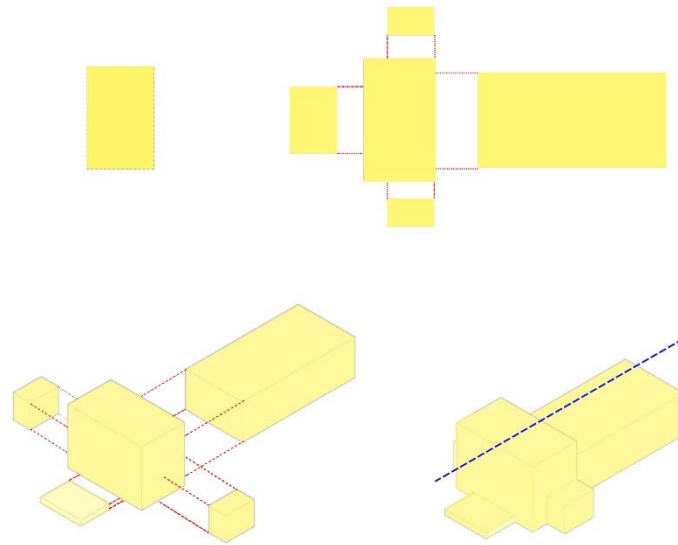
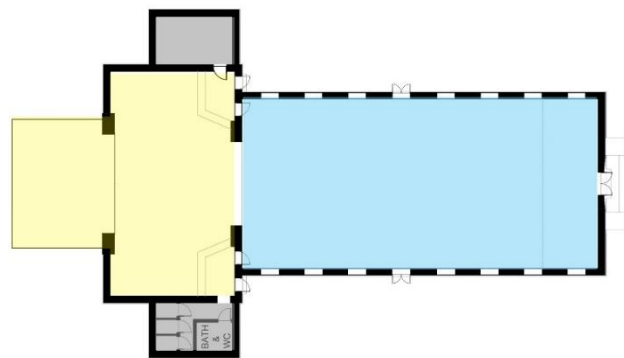


Figure 4. 40. Form composition of the university gymnasium



Floor Plan

- Weightlifting Hall
- Stage
- Service Areas

Figure 4. 41. Layout and function

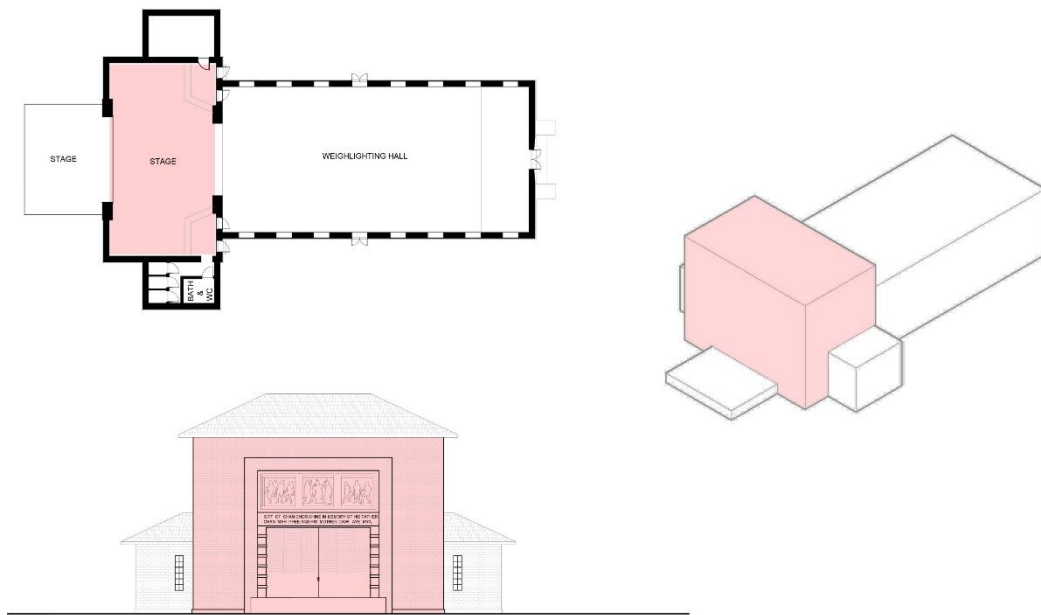


Figure 4. 42. Hierarchy of spaces

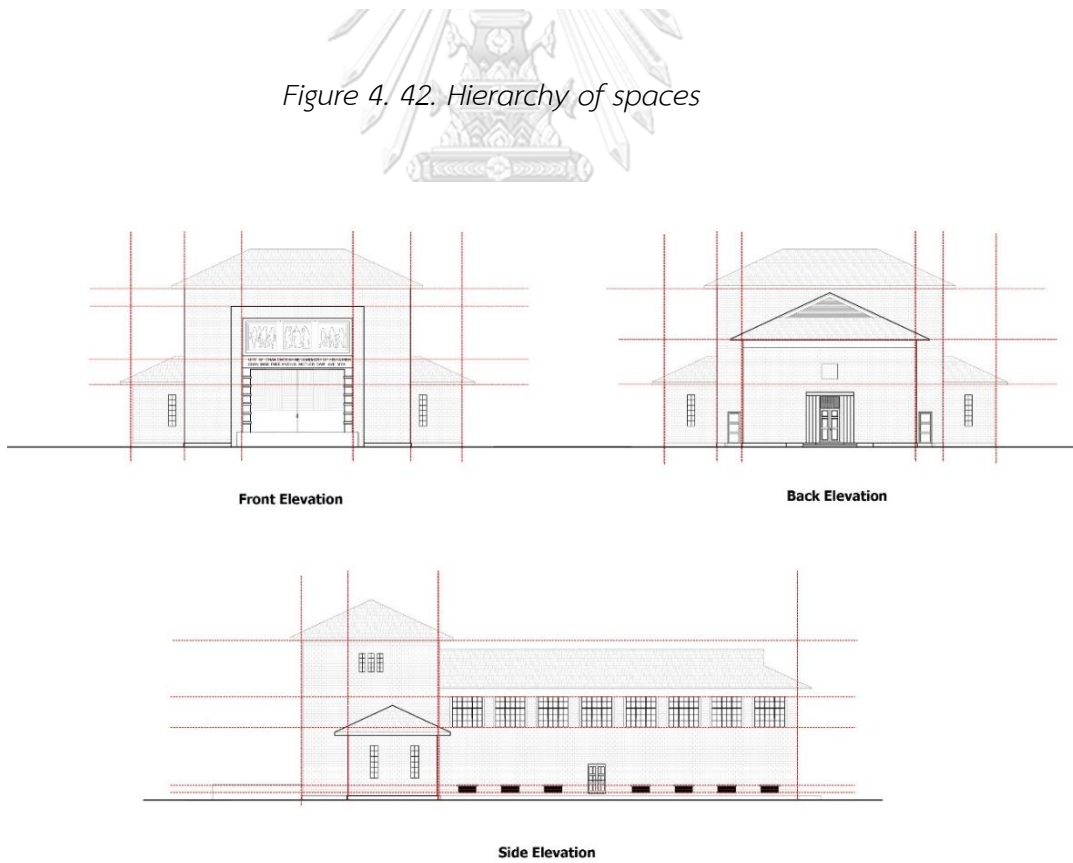


Figure 4. 43. Vertical and horizontal composition

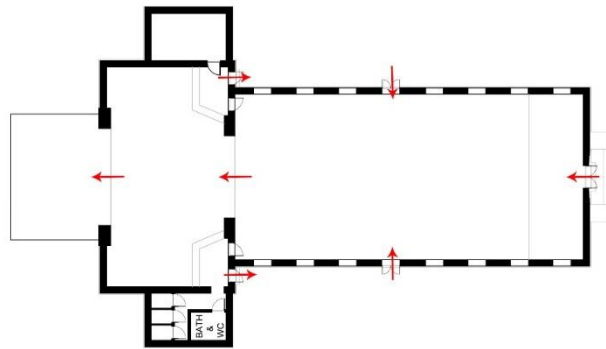


Figure 4. 44. Accessibility



Figure 4. 45. The gymnasium hall (left)



Figure 4. 46. Murals showing traditional dancing and sports (right)



Figure 4. 47. The University gymnasium (left)



Figure 4. 48. View from the open area (right)

## 4.5. Rangoon Engineering College (1956)

### 4.5.1. Background

The Rangoon Engineering College was established in 1956 as a new engineering college, attached to the University of Yangon (Bansal et al., 2015). After Burma gained its independence in 1948, Burmese leaders made changes to their economic planning and political systems.

In its transformation into a new, modern nation, Burma had many relations with various countries, such as the United States, Great Britain and China. The Burmese government received aid from the U.S. to recover economically and they also hired an American firm, Knappen Tippetts Abbott McCarthy (KTA), to develop a new economic plan (Lockwood, Winslow, & Korbonski, 2013). The name of the new economic plan was entitled 'Pyidawtha', which means 'Prosperous Royal Country'. One of the main aims of this plan was to produce technical professionals for the country. This aim led to the building of new technical schools and colleges. The Rangoon Engineering College was built due to the requirements of a new technical college. During the reconstruction, the Burmese government used its remaining Burmese' sterling, which was held in banks in the UK (Squire, 1984).

The Rangoon Engineering College project was formed with collaborations of both international and local people. Due to their relations with the UK and U.S., the Burmese government hired British architect Raglan Squire. The consulting engineers for the assembly hall were Messrs, Ove Arup and Partners, while the contractor was Taylor Woodrow Construction, who worked together with the United Burmese Engineers Ltd. While working with international firms, Burmese builders also gained experience from this project ("Rangoon University Engineering College," 1957).

As the Rangoon Engineering College was the first overseas project that was very far from London and located in a country with a tropical climate, Squire was worried about finding sufficient senior architects and assistants (Squire, 1984). At that time, there were only a few people who had experience working in this region of the world, and this worry made him open an office in Rangoon, along with a total of thirty expats,

including architects, engineers and quantity surveyors. Their families also travelled to live with them (Squire, 1984).

Raglan Squire was also incorporated with people from the Burmese government. The head of the mission was U Tin Pei, the Secretary of Ministry of Planning. He was of Indian descent and who took a Burmese name and nationality after its independence. After the war, when the Indians were treated as aliens and the Burmese government introduced the Burmanisation of public services during the 1950s, some Indians applied for Burmese citizenships (Chaturvedi, 2015). Because Indians had worked in administrative and government jobs in Burma since the colonial period and the Burmese probably had less experience compared to the Indians, he became the head of the mission of the project. Indeed, U Tin Pei was the person who asked Raglan Squire to undertake the project. Further, he was a client who maintained good social relations with Raglan Squire. U Tin Pei also accepted and supported the suggestion of the architect for hiring professionals from London for the project. Thus, the stone foundation was laid by the president of Burma, U Nu (Squire, 1984). As the architect wanted to incorporate local art into the buildings, he also collaborated with some famous local artists, including U Ba Shaw, U Nan Wai, U Aung Soe and U Own Lwin.

#### 4.5.2. A brief biography of the architect Raglan Squire

Raglan Squire was born in 1912. He graduated from the University of Cambridge and set up his practice in 1936 in London. During World War II, which took place from 1936-1945, he worked in the Corps of the Royal Engineers and helped in the Royal Institute of British Architects. Moreover, he assisted in setting up the Reconstruction Committee, which studied the pressing issues of the architectural profession, prepared recommendations and reported on these issues. When the war was over, these recommendations were put into practice in rebuilding London ("Raglan Squire," 2004). In 1945, he was also incorporated in a group practice, named the 'Arcon Group,' with other modernist architects (George) Edric Neel and Rodney Thomas. Arcon was a new type of research organization, designing 'temporary prefabricated houses' by using

modern industrial techniques. These prefabricated houses were also meant to solve the housing shortage in the UK (Squire, 1984). His projects were not only in London but in many parts the world, including tropical countries such as the Middle East, Caribbean and South Pacific. His projects were mainly housing, offices, factories, churches and hotels, especially the Hilton (Squire, 1984). Getting projects in Rangoon created his first chance for establishing offices in South East Asia.

#### 4.5.3. Location

The Rangoon Engineering College is located within the University of Yangon campus, which was established in 1920. It is situated on the southern part of the University of Yangon campus, facing perpendicular to the main Prome (Pyay) Road. At that time, the southern part of the campus had more vacant sites for a huge project, while the vacant area beside the Teachers' Training College was chosen as the site of the new engineering college. The location of the Rangoon Engineering College was considered an important location in Rangoon because it was easily accessible from Prome Road. Prome Road was one of the significant main roads in Rangoon, which linked to downtown Rangoon from the south and Prome (Pyay) to the North (Fig 4.49).

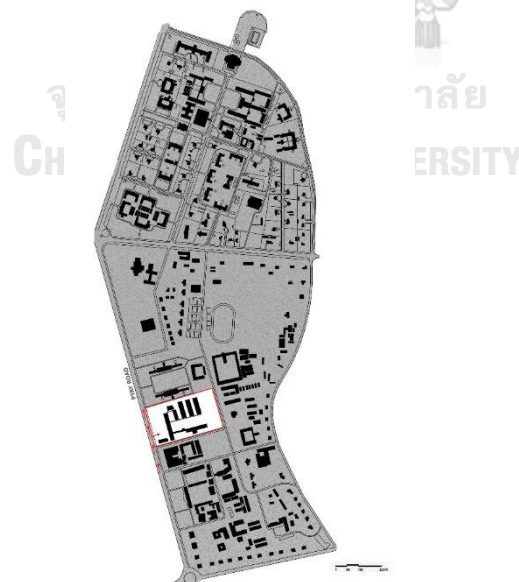


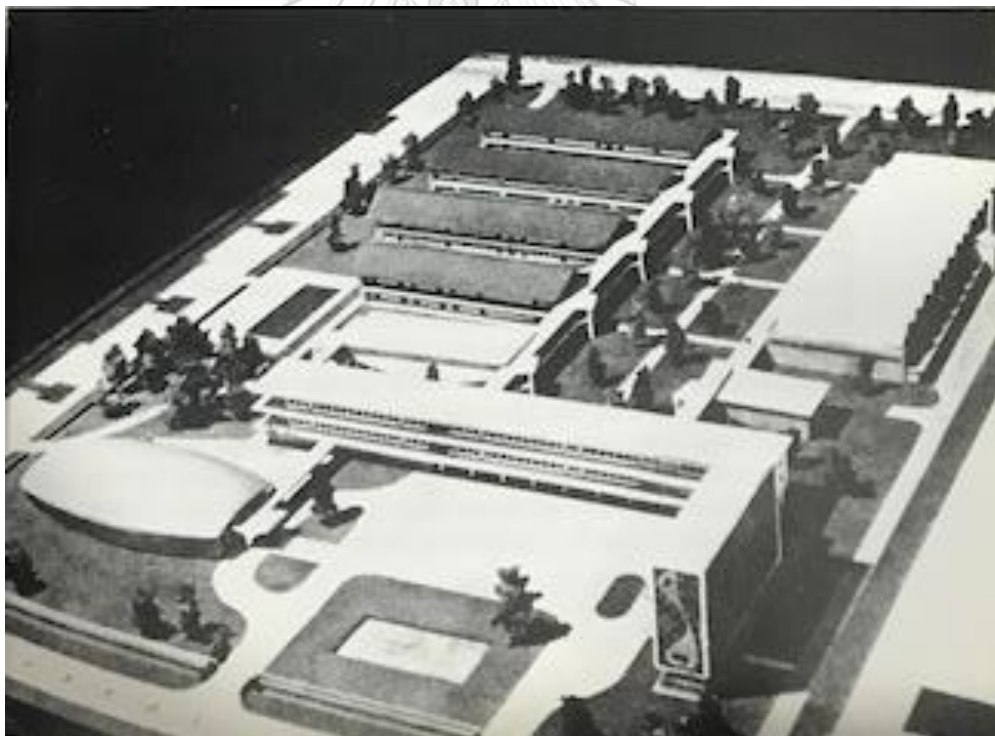
Figure 4. 49. Location of Rangoon Engineering College

*(source: University of Yangon Engineering Department,2017) (additional edited by author)*



#### 4.5.4. Physical study

Due to the unavailability of the architectural drawings, the author will only use photographs and sketches based on old photographs and building visits to analyze the buildings. The Rangoon Engineering College was one of the first projects in Myanmar that followed modernist principles, such as the use of pilotis, free plans, free façades, flat roofs and horizontal windows. In addition to these Western modernist principles, the architecture of the Rangoon Engineering College also responded to local culture and the traditions of Burma at that time. Climate consideration was also a major consideration in this project. Thus, spatial planning and the choice of architectural elements depended on local conditions.



*Figure 4. 50. Aerial view of Rangoon Engineering College  
(Source: Portrait of an architect, Raglan Squire, 1984)*

The program of the Rangoon Engineering College included the main assembly hall, the library, which also had an administrative function, workshops, laboratories and classrooms for mechanical, electrical, civil, and sanitary engineering, as well as architecture. As the site was facing the main Prome (Pyay) Road, the two main buildings, the Assembly Hall and the library building, were located at the front part of the site. The Assembly Hall was situated parallel to the Prome Road and the library building was perpendicular to the main road. Other buildings were positioned parallel to the main road. Therefore, the buildings were grouped together, leaving a huge courtyard in the middle and joined together by corridors (Fig 4.51). The library building was the highest building, with five storeys. The mechanical engineering building was three storeys high, while the other buildings were double storeyed. The assembly hall was only one storey.

Most of the buildings had a simple rectangular shape, which followed the concept of functionalism. In the mechanical engineering building, the principle of the pilotis was applied and left as an open space at the ground floor. By leaving the ground floor open, it gave access to the buildings behind it (Fig 4.52). This open space also functioned as a multipurpose space, where students performed various activities, such as social gatherings and discussions.

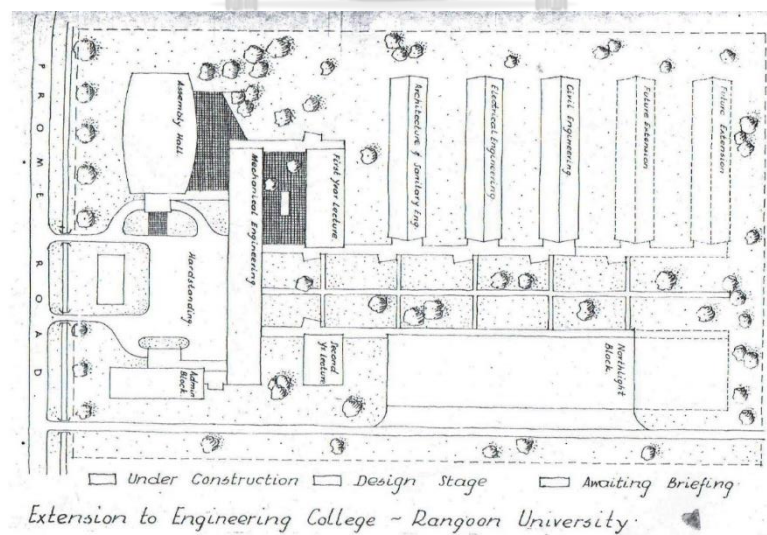


Figure 4. 51. Sketch of Site Plan

(source: Yangon National Archives Department, Raglan Squire & Partners Report.1955).

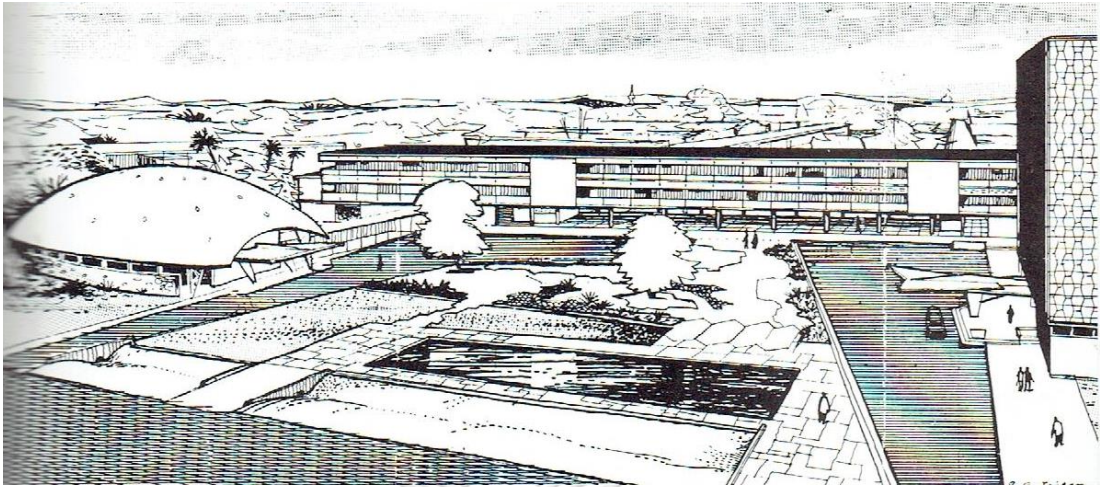


Figure 4. 52. Original sketch of front elevation: Assembly Hall on the left and Library building on the right, Mechanical engineering building in the middle  
(Squire, 1984)

As one of the major considerations of the project was to be suited to a tropical climate, every individual building on the campus was designed in response to the tropical climate.

The Assembly Hall was designed from the inspiration of the shape of an umbrella as protection from the rain and sun. In the eyes of the local people, it looked like the shape of the back of a turtle. Thus, it was named ‘Lake Khone’ Hall, which means, ‘the back shell of the turtle’ (Fig 4.53). Below this roof, there was an open assembly space that was to be used for multipurpose activities. In the past, even wedding ceremonies were celebrated in this space.



Figure 4. 53. Assembly Hall (Lake Khone Hall)  
(source: [class1976-82im1yangon.org](http://class1976-82im1yangon.org))





Figure 4. 54. Bird eye view of the Assembly Hall

For the library building, the building was clad with three thousand precast, coffin shaped panels. Inside these panels, red, green and blue colored ply-glass were fitted (Fig 4.55). Cross natural ventilation was provided through smaller, unglazed, openings (Fig .56).

Throughout the campus, detailed architectural elements, such as perforated walls, handrails and screen walls were designed as protection from the sun and at the same time, allowed for cross ventilation. At the pedestrian corridors linking to the classrooms buildings, the standardized concrete blocks were organized in alternative openings, which allowed for tropical breezes (Fig 4.57). For the classrooms, horizontal glass windows were used, and fixed louvers were provided on top of the glass windows to allow ventilation. Moreover, handrails were designed by promoting porosity so that the air could come in. When Rangoon got heavy rain during rainy season, the corridors of the mechanical engineering building and other classroom buildings were provided with rainscreens as protections from the heavy rain (Fig 4.58).



Figure 4. 55. Façade of library building with reflecting pool in front  
Source;(Yangon Heritage Trust Gallery)



Figure 4. 56. Interior photo of colored glasses  
(Squire,1984)



Figure 4. 57. Concrete perforated walls at corridors (left)



Figure 4. 58. Rain screens and handrails(right)

(source: Photos taken by author 30 Oct 2017)

In this project, the architect also tried to incorporate local cultures in terms of material usage, especially in the Assembly Hall and the library building. Although the roof of the Assembly Hall was built with concrete at first, the architect decided to use local teak wood, as teak was a famous local product of Burma. Teak was also one of the most important economies in Burma since the colonial period. It is very durable because it is resistant against termites and pests. It is also naturally resistance to water, as it contains natural oils, giving it a decay-resistance quality.

The roof of the Assembly Hall consisted of five layers of laminated teak. The roof weighed 140 tons and was the largest laminated timber dome in the world during that time. Various laboratory tests were also carried out to ensure its suitability to Burma's climatic conditions. After various testing, copper sheets became the final material for the surface treatments (Fig 4.59). Moreover, the walls, doors and window frames of the classrooms were also designed using teak wood in a modern way.

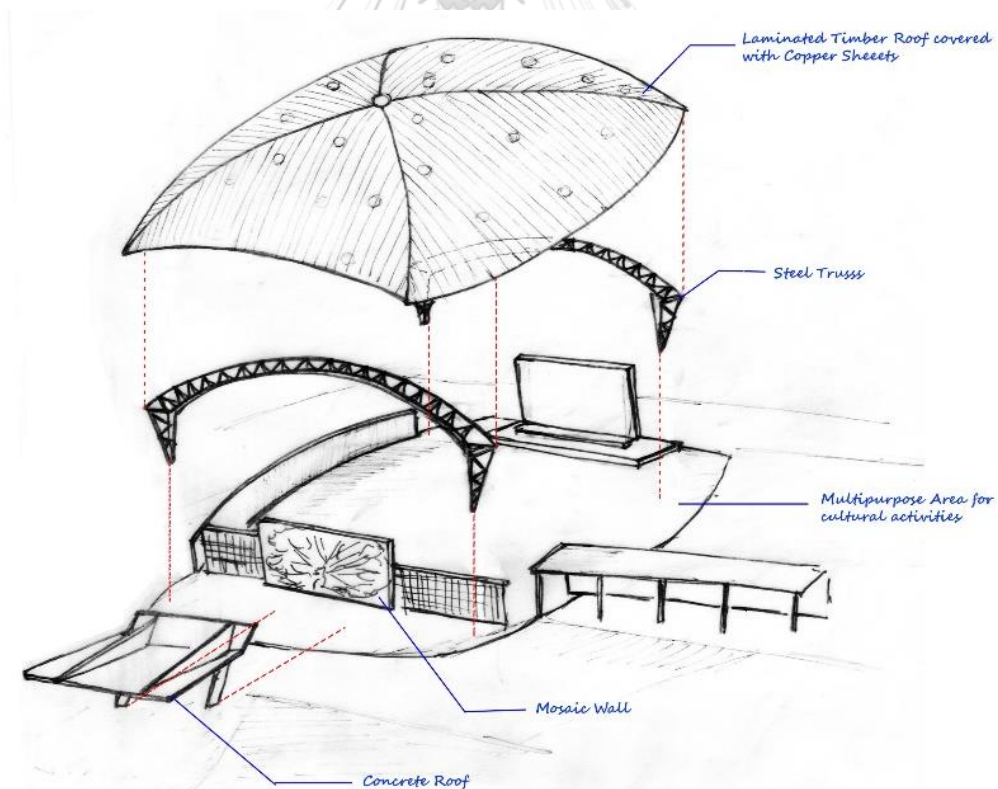


Figure 4. 59. Configuration of Assembly Hall

(Sketch by author based on old photographs)



Some of the architectural elements used in the project were inspired from the local culture and traditions. In his biography, Raglan Squire mentioned details about ‘Pweis’, a Burmese traditional theatrical performance that he saw when he visited Burma for the first time. These ‘Pweis’ are called ‘zat pwe’ in the Burmese language. These performances are all-night, outdoor theater performances, which was popular in Burma and are performed on a stage. In these performances, the male lead, the female lead and clowns play various stories, while traditional music is played in the background. The players wear colorful and sparkling costumes (Fig 4.60). Raglan Squire mentioned,

*“Fairy lights sparkled everywhere and the stage itself was brightly floodlit. Could this really be in the same world as the one we had left behind in fog-bound London only two days earlier? I fell in love with Burma and the Burmese that night”.*

He became inspired by the colorful dancing performances, which may be the reason why he got idea to use the colorful red, green and blue glasses in the library building (Fig 4.61). The pattern of the coffin shaped glasses was organized in a sequence similar to a traditional textile pattern of Kachin, one of the ethnic groups of Burma (Fig 4.64). Raglan mentioned that using different colored glass created “a kind of dappled day-light effect, like the lighting in a tropical jungle”. However, nowadays, as these colored glasses were replaced with green and blue reflective glasses, the pattern is not obvious anymore.



Figure 4. 60. Dancers at Zat Pwe

(Source: Google Image)

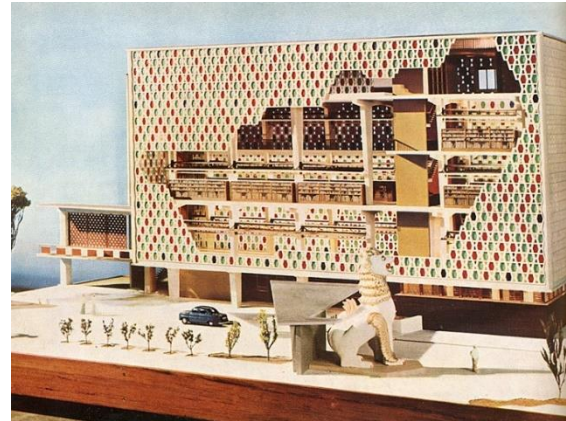
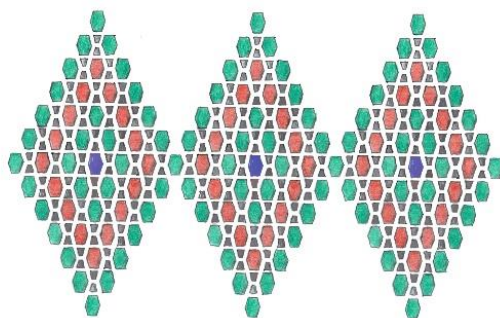


Figure 4. 61. View of Library building from another building, the man in the foreground wore a modern shirt and Longyi, a typical combination of modern and tradition in Burmese costume (left)

Figure 4. 62. Model of Library building (right)  
(Architectural Review v.120, Oct 1956,252)



Glass Patterns

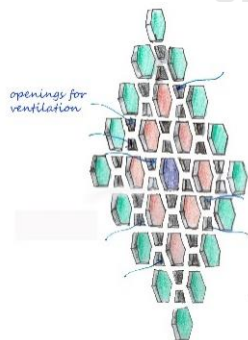


Figure 4. 63. Glass patterns and ventilation system of library building (left)  
(Sketch by the author)

Figure 4. 64. Traditional textile pattern of Kachin ethnic group (right)  
(source: Google image)

Since the beginning of the project, Raglan Squire decided to incorporate local art, such as murals, bas-reliefs and sculpture designed by local Burmese artists. The artworks of U Ba Shaw, U Nan Wai and U Aung Soe were installed in some major positions of the buildings inside the compound. Thus, the architect purposely left many blank walls to install mosaic murals and bas reliefs.

Bas reliefs were provided on the first-floor wall of the library building (Fig 4.65). The bas relief showed the traditional figures of ‘Burmese Bando’, a traditional martial art where two people display various forms of the movements of animals using weapons, such as knives and swords (Olavarria, 2014).



*Figure 4. 65. Bas reliefs of Burmese Bando at library building  
(Bansal, Fox, & Oka, 2015)*

The main staircase walls were decorated with large murals and various colors of small square shaped tiles were used to create them. There was a total of nine murals inside the campus and the artists’ names were provided in some of the murals (Fig 4.66). As these murals were created by various artists, the diverse styles of art to express the Burmese psyche of that time can be seen. The mural on the Assembly Hall showed the peacock figure, which is the symbolic animal of the University of Rangoon and also, Burma (Fig 4.67). Some of the murals emphasized Burmese traditions and cultures, while others represented a mixture of traditional characters and the modern technologies of an independent Burma (Fig 4.67 & Fig 4.68). As a representation of the engineering college, the murals at the staircases show industrialization and engineering education (Fig 4.70). These murals could also tell the history and memory of independent Burma, which not only promoted technical education but also, the tradition of Burmese cultures.



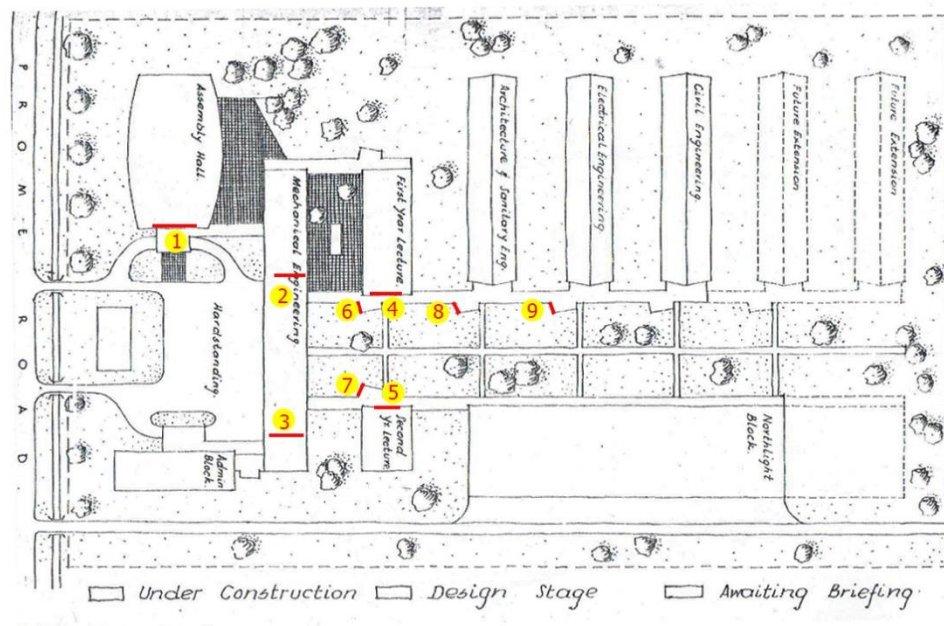


Figure 4. 66. Location of Murals

(Source: Yangon National Archives Department, Raglan Squire & Partners Report.1955) (additional edited by author)



Figure 4. 67. Mural at assembly Hall by Artist Nan Wai (Demolished)



Figure 4. 68. Mural showing tradition characters by artist Aung Soe (Left) and unknown artist (right) (Photos taken by author 30 Oct 2017)



Figure 4. 69. Murals showing a mixture of modern engineering and traditional characters by unknown artist (Photos taken by author 30 Oct 2017)



Figure 4. 70. Murals showing modern engineering by artist Own Lwin (Photos taken by author 30 Oct 2017)



## CHAPTER 5

### DESIGN PROCESS

This chapter is for the detail explanation for the design processes. In the first part, analysis of the site information, users' analysis and explanation for design programs are provided. The second part is elaboration of the processes of design concepts and design developments. Design drawings are included in the final part of this chapter.

#### 5.1. New student union for fade histories and memories

The student union building is not just a new building that is only dealing with contemporary contexts. It is a building that holds the history and memory of not only the University of Yangon but also, for the whole of Myanmar. It also represents important figures of democracy and freedom. The site of the student union should be considered as an important heritage for Myanmar. Therefore, because these important histories and memories were erased by the military government, these memories are fading for the new, younger generation. Thus, the new student union will be a design that will revive the old, important histories and memories.

#### 5.2. Site Information

Selected Site	
Address	University Avenue Road, University of Yangon, . Kamaryut Township, Yangon, Myanmar.
Land Owner	University of Yangon
Land Size	11312 sqm
Urban Zone	Government, Institute, Infrastructure areas
Height Limitation	Maximum 20 storeys

*Table 5. 1.Site Information*



### 5.3. Users and program

The main users for the new student union are students and the university staffs. As it is a building with notable history, outside visitors can also visit and use the building. The main activities of the students are commemoration events, seasonal festivals, university events, dining, studying, sports, chatting and chilling. For visitors, they can visit exhibitions and also utilize dining areas. The major activities of the staff are working and dining.

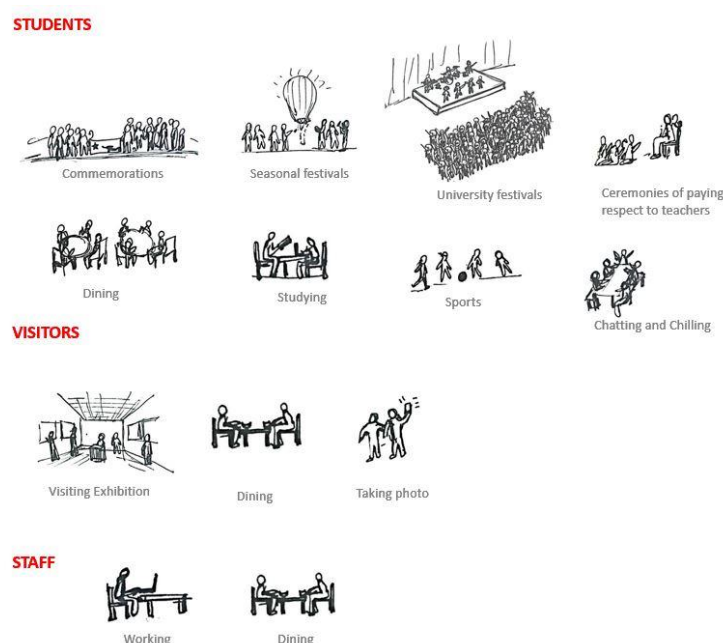


Figure 5. 1. Users and activities diagram

The program of the new student union building is based on the contemporary requirement of current students with the incorporation of the program of the old student union. The functional requirements are based on the students' votes surveyed by the students of student union, interviews with the university's committee, reviewing literatures for function the old building and field observations within the campus.

As the old drawing of the old student union building is not available, the program of the old student union is recalled by the historical documents and the written memory of the old student of University of Rangoon. The old student union had the debating chamber, Restaurant, reading and writing Rooms, billiard Room and dressing rooms (*University of Rangoon: New Buildings, 1932*). According to U Myint (

the chief economic advisor of former President Thein Sein and also an old student of University of Rangoon) mentioned in his open letter for restoring the University of Yangon that the old student union had a small reading room, a library, a restaurant, a barber shop, meeting rooms and a recreation room with ping-pong tables (Myint, 2012).

Other functions are based on the contemporary needs and activities of the current students.

	PROGRAM			
	SPACE	QUAN	AREA (sq-m)	USERS
Main Halls	Seminar Rooms	2	248.2	Students, Lecturers
	Permanent exhibition	1	193.9	Students, Visitors
	Temporary Exhibition	1	193.9	Students, Visitors
	Multipurpose Hall	1	268	Students, Visitors
	Gallery	2	330	Students, Visitors
Sub Total			<b>1234</b>	
Study Areas	Library	1	469.48	Students, Lecturers, Visitors
	Group study areas	1	130.37	Students
	Outdoor study	1	65.6	Students
Sub Total			<b>665.45</b>	
Students' activities Area	Students Lounges	2	482.11	Students
	Students seating Area	1	351	Students
	Students' activities area	1	376.72	Students
	Fitness center	1	138.53	Students
	Table Tennis and Billiard Room	1	84.55	Students
	Chess Room	1	59.9	Students
	Club Rooms	18	268.45	Students
	Club Meeting Room	1	38	Students
	Club Storage	1	26.55	Students
	Music Room	1	97.81	Students
	Art Room	1	72.7	Students
	Chess Room	1	59.92	Students
Sub Total			<b>2056.24</b>	
Food Areas	Dining Areas	1	840.23	Students, Lecturers, Staffs, Visitors
	Food Stalls	10	171.37	Food sellers
	Restaurant	1	131.2	Students, Lecturers, Staffs, Visitors
	Café'	1	125.3	Students, Lecturers, Staffs, Visitors
Sub Total			<b>1268.1</b>	
Administrative Area	Offices	2	150.73	Students, Staffs
	Meeting Rooms	2	228.38	Students, Staffs, Lecturers
Sub Total			<b>379.11</b>	
Miscellaneous	Stationary Store	1	75	Students, Visitors
	Book Store	1	75	Students, Visitors
	Bank	1	75	Students, Visitors
	Copy Counters	1	42.18	Students, Visitors
	Beauty Parlor	1	65.6	Students, Visitors
	Barber Shop	1	65.6	Students, Visitors
Sub Total			<b>398.38</b>	
Service areas	Mechanical room	1	15	Staffs
	Electrical room	1	6	Staffs
	CCTV control Room	1	7.2	Staffs
	Restrooms	6	337.94	Students, Lecturers, Staffs, Visitors
	Storage	2	25.4	Staffs
	cleaner's room	1	16.5	cleaners
Circulation			2105.67	Students, Lecturers, Staffs, Visitors
Sub Total			<b>2513.71</b>	
TOTAL			<b>8514.99</b>	

Table 5. 2. Programs

The old student union building hold remarkable memories of not only the University of Yangon but also for the whole political history of Myanmar. Significant historical and social values that played the vital part of Myanmar's democratic movement are embedded in the historic site of the student union. As the historic site has been neglected nowadays, building a new student union can revitalize the historic site with new active students' life. To revitalize the old gymnasium building, the relationship between the two buildings is reconsidered in the new design. Multipurpose social gathering spaces and exhibitions spaces are provided for reviving the social and historical values.

**Open Gathering Area & Memorial Place:** The open space & memorial area is the revival of the memory of the open space that existed in the past. The main purpose for the open area is for the students to celebrate many social events and commemorations on important days. Such activities and events need participations of students and society and they can create collective memory. The memorial place will also hold the memorial of the names of the student leaders who fought for democracy and freedom. The memorial space will not only hold the memory of the past but also create new collective memory for contemporary generation.

**Main Halls:** Main halls include Seminar rooms, permanent exhibitions, temporary exhibitions, multipurpose hall and gallery are included in the main halls. The main purpose of exhibitions is to serve as memorial places which connect to the past memories, tell the stories of the important histories and distribute knowledge to future generations. Therefore, a permanent exhibition room is provided to show the history of the University of Yangon student leaders who transformed the history of Myanmar. Temporary exhibitions are for displaying students' projects and research. In the galleries, students will get more freedom to install their artworks, photos, brochures and announcements. From these exhibitions and galleries, visitors can explore both the past lives of students and the current students' activities. Seminar

rooms are for lectures and conferences. A multipurpose hall is also provided for various kinds of events and activities.

**Study areas:** Study areas are provided based on contemporary needs. Study areas include a library, group study areas and an outdoor study area. The library will supply books related to the academic subjects that the University of Yangon provides. Further, the library will also have reading areas for group study, individual study and areas where contemporary journals can be read. The outdoor study area will also attach to the library. As the library is for students who want to study quietly, separate group study rooms are provided for student groups who want to talk and discuss. As the library will welcome outside visitors, it is placed facing the main road where people can see easily.

**Student Activities area:** As the old union building used to be lively with the memory of vibrant student activities, the new union building should also be a lively building in people's perception. Recreation areas such as table tennis and billiard room is programmed from the function of the old student union building as an attachment to the old memory. In addition, recreation areas such as student lounges, chess room, art and music room and fitness center are provided for having relaxing environment and promoting social bonds and creativity for this contemporary period. As students have many clubs, there are club rooms and club meeting rooms for individual clubs.

**Food areas:** The dining hall and food stalls are located facing the main road. To promote interaction between students and other people, dining halls can be accessible not only by the University of Yangon students but also, by other outside visitors, including office workers and students who use University Avenue Road.

**Administrative areas:** Administrative areas include staff and student union offices for student matters. Meeting rooms are for student union meetings and other meetings for the university's affairs.

**Miscellaneous areas:** Miscellaneous areas include commercial facilities, such as a stationary store, book store, beauty parlor, barber shop, a bank and copy counters, where students can easily use these services in the student union building.

**Service areas:** Mechanical room, electrical control and CCTV room are provided for the maintenance and security of the building. Restrooms are also provided for every floor for easy access.

#### 5.4. Site analysis

The site is located at the University of Yangon campus, where the previous student union building existed. The site is located at the junction of University Avenue Road and Chancellor (Adipati) Road. The area is around 11312 sq-m. The University Avenue Road is a busy road, which is used by both students and other people on a daily basis.

Currently, the site can only be entered from the Chancellor Road, as the side of the University Avenue Road is fenced off.

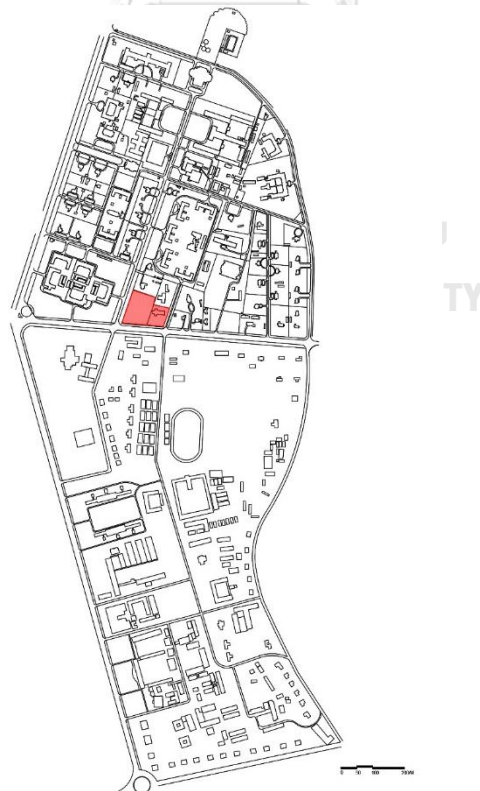


Figure 5. 2. Location of the site inside the campus





Figure 5. 3. Aerial view of the site  
(Source: Google Earth, adapted by author)



Figure 5. 4. Site photo 1 (left)

Figure 5. 5. Site photo 2 (right)

Source: *Yangon University, students and the state of national affairs, once again*, Diana Huynh, [teacircleoxford.com](http://teacircleoxford.com), May 8, 2017.



#### 5.4.1. Surroundings (macro Analysis)

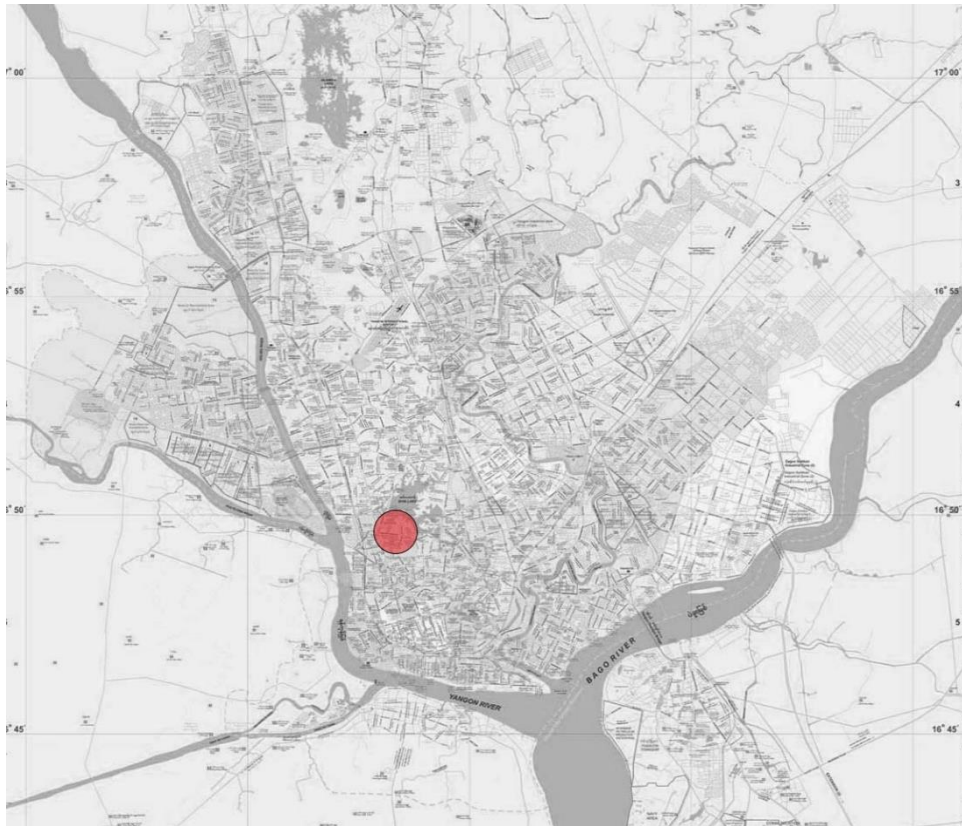


Figure 5. 6. Location of the University of Yangon

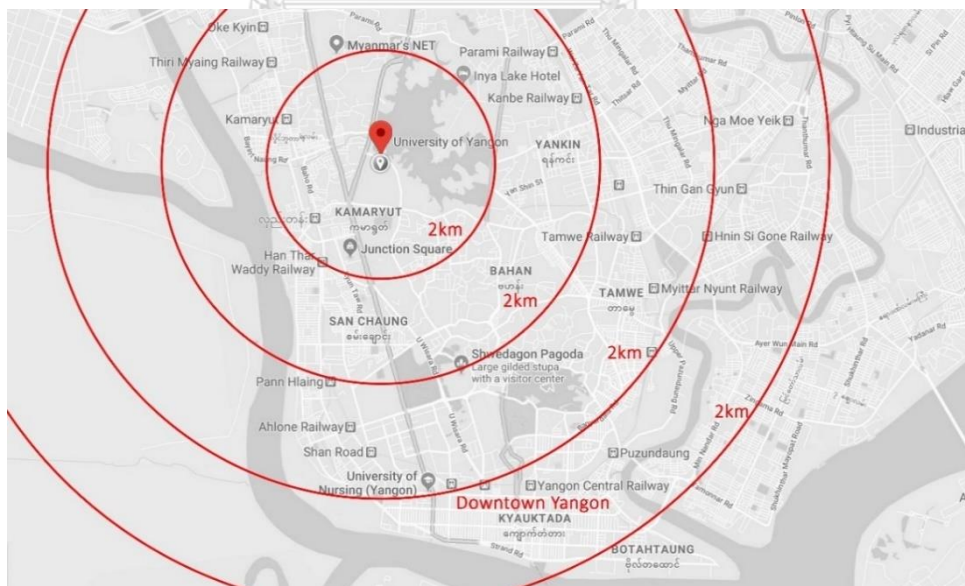


Figure 5. 7. Distance from downtown Yangon

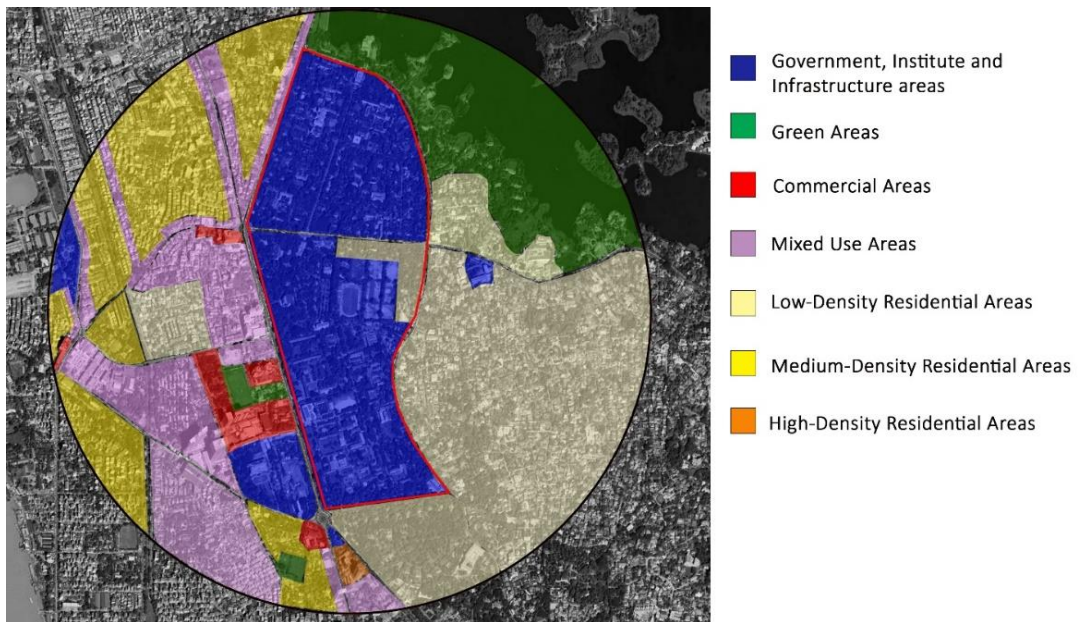


Figure 5. 8. Surrounding land use

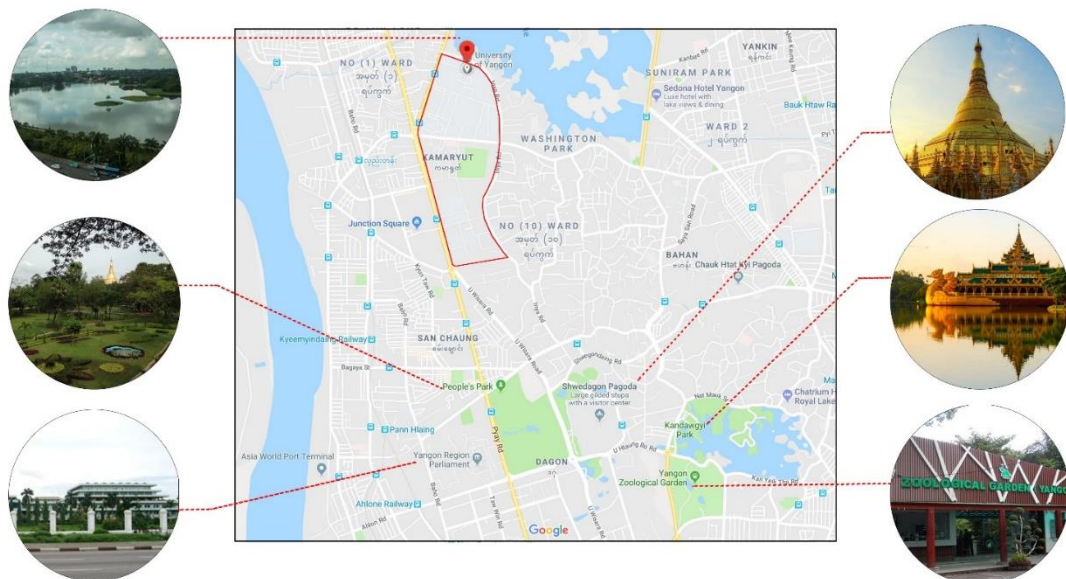


Figure 5. 9. Surrounding Land Marks



5.4.2. Surrounding (micro Analysis)



Figure 5. 10. Land use and significant buildings

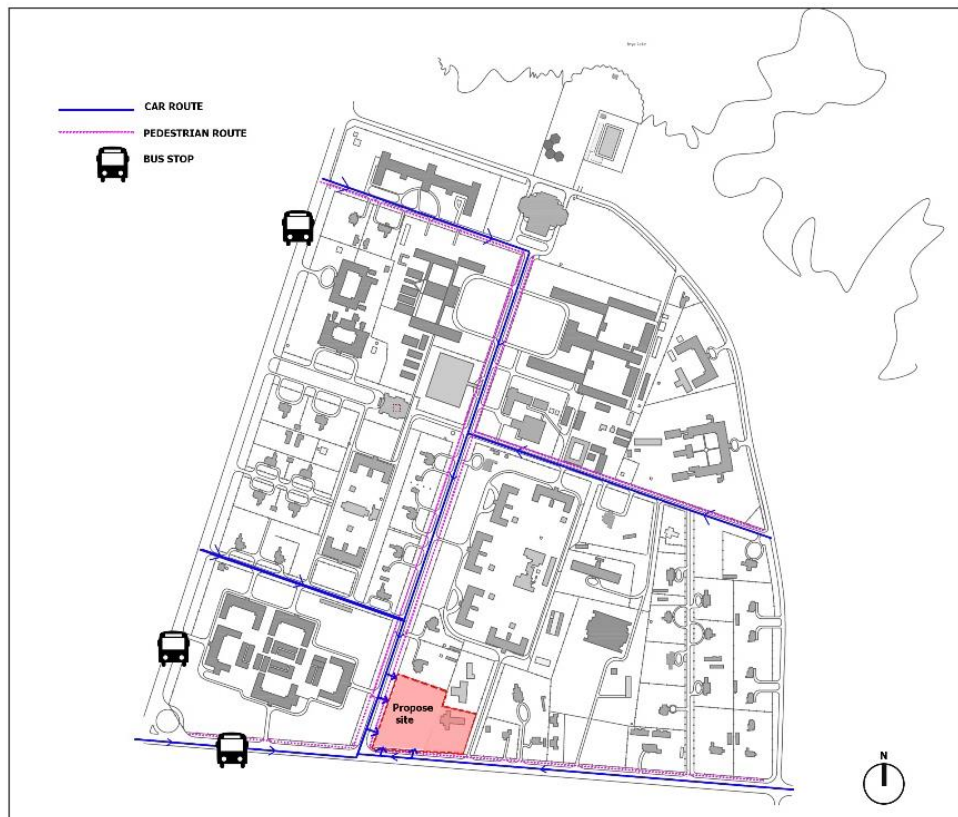


Figure 5. 11. Accessibility

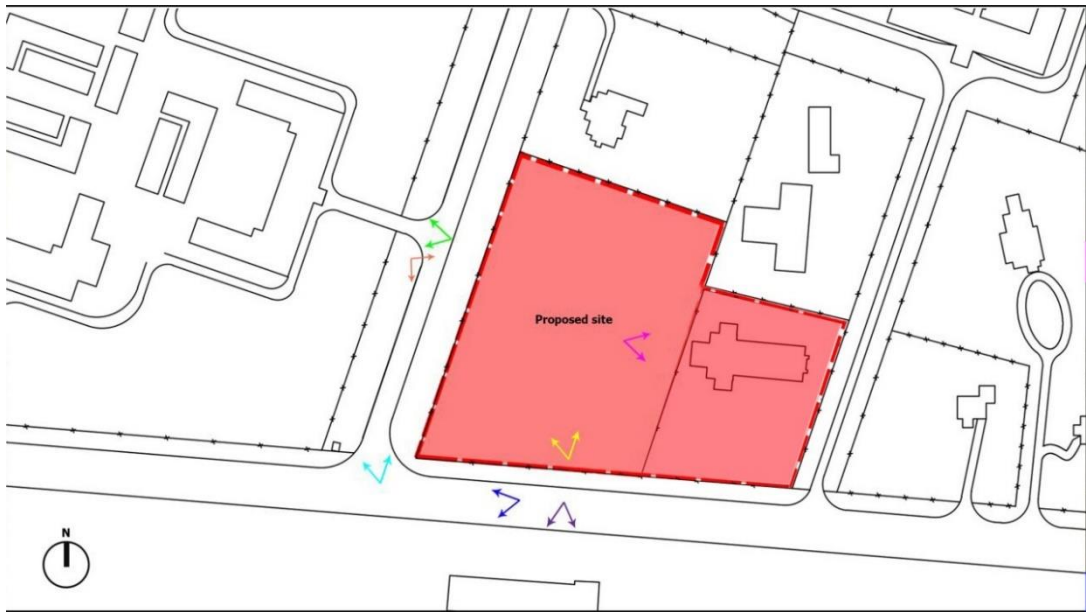


Figure 5. 12. Index plan for views



Figure 5. 13. Views around the site



### 5.5. Existing conditions

Currently, the site is not properly maintained. The site has been fenced off and students cannot easily enter. As such, people can only use Chancellor Road to enter the site. The whole site is covered by randomly growing trees and the old building cannot be easily seen. For the remaining elements of the old student union building, only the entrance gate posts of the old building still remain. The Bo Aung Kyaw monument dating back from the colonial era also still exists. In the past, there was an open area between the student union building and the gymnasium building. Nowadays, the gymnasium building and the student union were divided by fences and this caused the gymnasium to become less used.



Figure 5. 14. Site analysis for existing conditions



5.6. Laws & regulation

5.6.1. Land use zoning

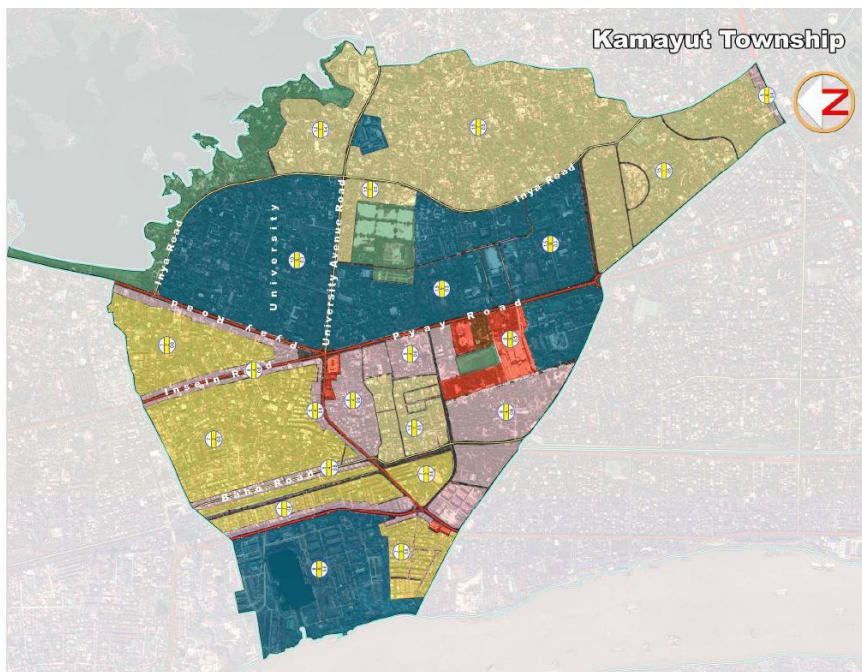


Figure 5. 15. Kamayut Township (Yangon) zoning Plan

Source: Yangon City Comprehensive Land use, Zoning and Urban Design Review Working Committee, Yangon Land Use & Building Height Zoning Plan

5.6.2. Set back law

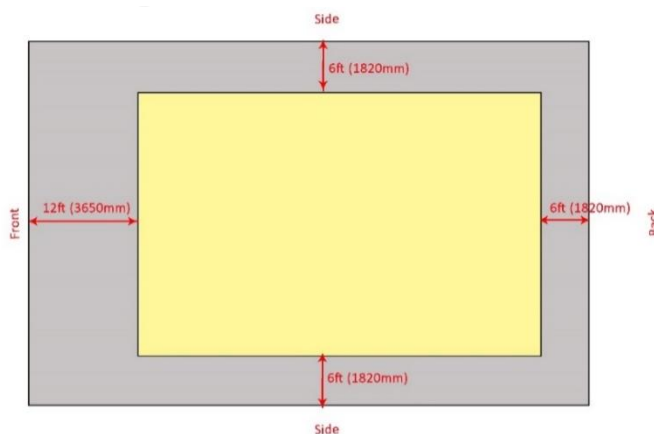


Figure 5. 16. Set Back Law

(source diagram by author based on the law of the Yangon City Development council)

The University of Yangon is located on the government, institute, infrastructure areas. This area is limited to a maximum height of 20 storeys. The limitation for FAR (Floor Area Ratio) is 1.5 and BCR (Building Coverage ratio) is 0.3. The University Avenue Road is considered to be a main road outside of the city areas and the setback requirement is front 12ft (3650mm), side 6ft (1820mm) and back 6ft (1820mm).

### 5.7. Design concept

The main concept of the new student building is to revive previous important histories and memories within a contemporary interpretation. The main approaches include reviving the old building's form in combination with the new building form, recreating memorial spaces and creating free and porous environment for the democratic period.

#### (a) Revival of the old form as symbolic integration

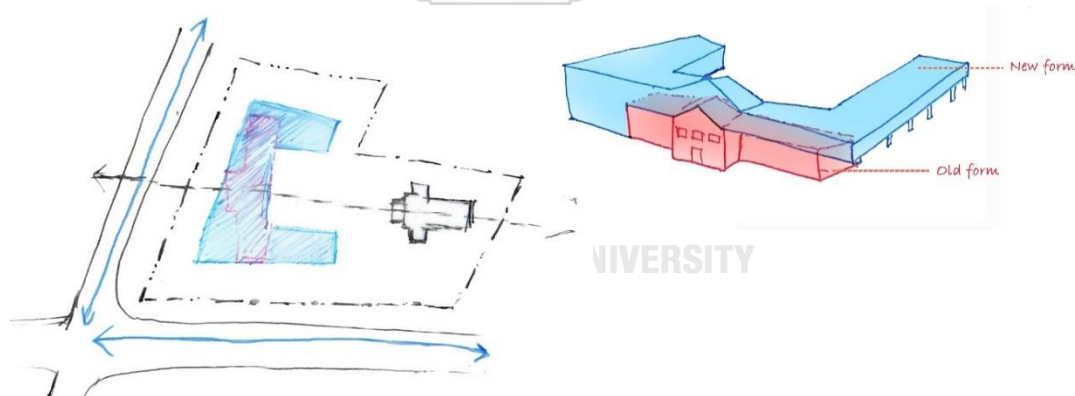


Figure 5. 17. Concept Diagram 1

The reason for reviving the old form of the old student union building is the old building's structure is attached to people's memory as an important figure for the student movements and is part of the political history of Myanmar. The old building is perceived as the symbol of democracy and it has a meaningful influence on people's mind. Although the old form of the student union building is revived in the new design, it is not a complete replica of the form of the old building. It is a revival for the

contemporary use. Therefore, the new building form is attached to the old building form as a representation of the current period.

(b) Creation of memorial place

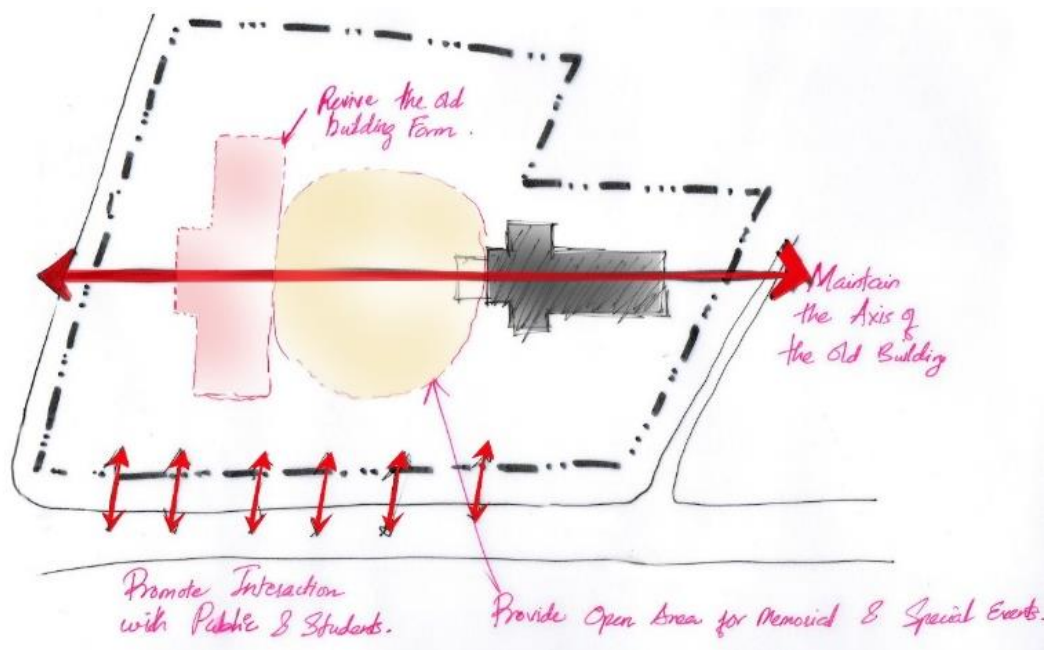


Figure 5. 18. Concept Diagram 2

As a response to the historical contexts, the relationship with the old gymnasium building is important for the new student union building. In the past, the central open area between the two buildings had a meaningful connection, as the space was used for political speeches and events. Maintaining the axis of the gymnasium building, the open space between the old student union building and gymnasium building will be regenerated as the memorial place. This space will serve as memorial area for the past student leaders and multipurpose space for various events. This space will evoke meaningful collective memory for the students. This space will also add new values to the old gymnasium building.

(c) Creation of porous and free environment

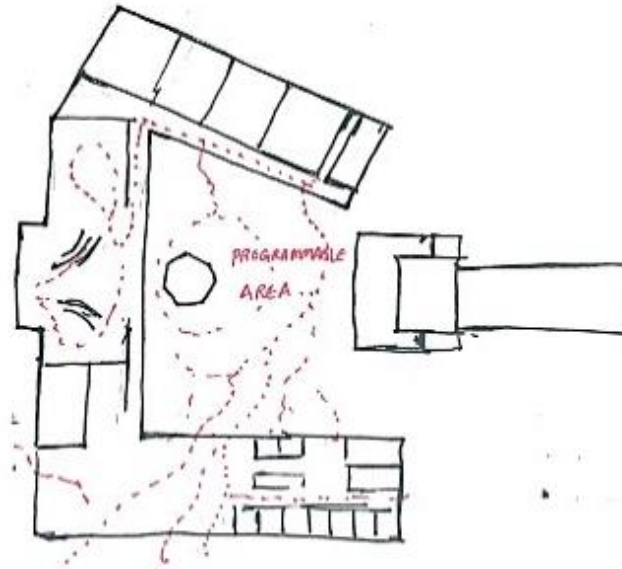


Figure 5. 19. Concept Diagram 3

In the new student union, porous environment is created so that the students can move freely, and they will have freedom to use the spaces. The central area can be programmed for many social activities.

(d) Promoting social values and visual connection

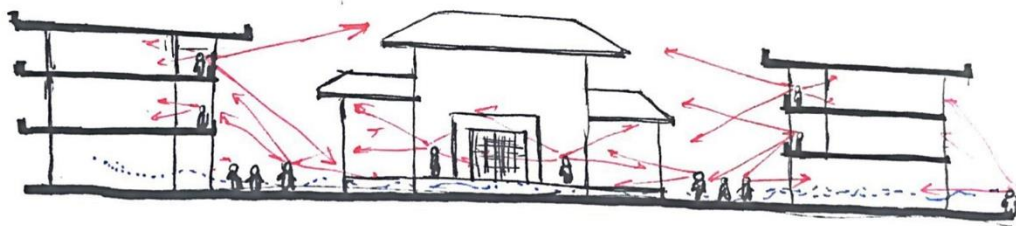


Figure 5. 20. Concept Diagram 4

In this democratic environment, social values become even more important. The interaction between students themselves and the interaction between students and other people is important in order to share new ideas and free thinking. Therefore,

by producing an environment with various visual connections can promote more social connection and gain more social interaction.

### 5.8. Design development

To clarify the building of the contemporary period, the style of the building does not follow the historical styles of the surrounding buildings. The style for the new student union will be contemporary style to represent a building of the contemporary era as imitating the style of the old building can lead to ambiguity in old architecture and new architecture. However, the new building responds to surrounding historical contexts that the main axis of the old gymnasium building is preserved as the main axis for the new building as well. The new building's shape is formed by the alignments of the two main roads.

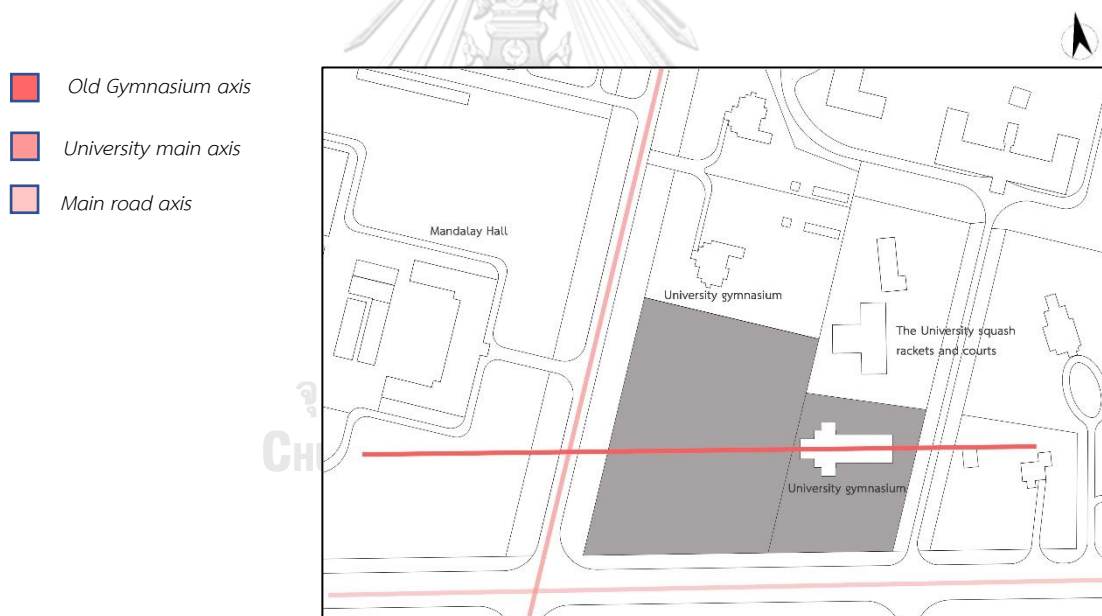
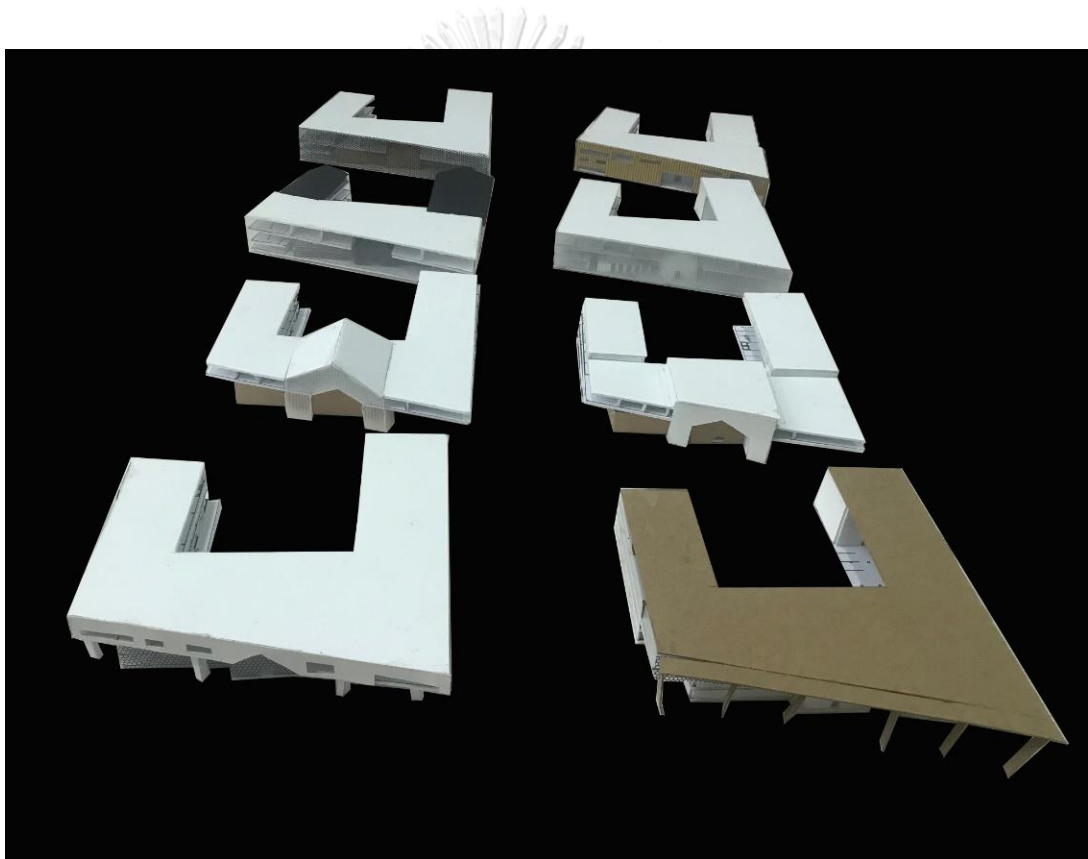


Figure 5. 21. Axis Diagram



As the concept is reviving the old building form concerning with old memories, it is important that people can sense of the form of the old building. The first and second floor of the central part is used to revive the shape, as this is the actual location where the original old building existed.

The combination of the volume of the old building shape and the new building is examined by using different models. The differentiation of solids and voids can highlight the old building's volume. The differentiation of colors also makes the old building's form dominant.



*Figure 5. 22. Conceptual Models*

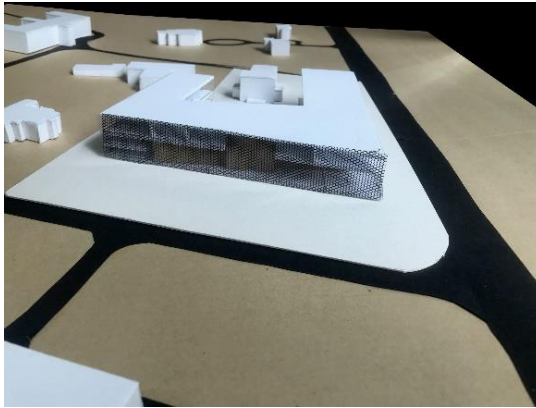


Figure 5.23. Conceptual Model 1 (left)



Figure 5.24. Conceptual Model 2 (right)

In conceptual model 1 and 2, the old building's form is placed inside the new building form. By using the semi-transparent façade for the new form and solid material for the old form inside, the shade of the old form can be recognized from the outside but not so dominant. The new form become more dominant than the old form.

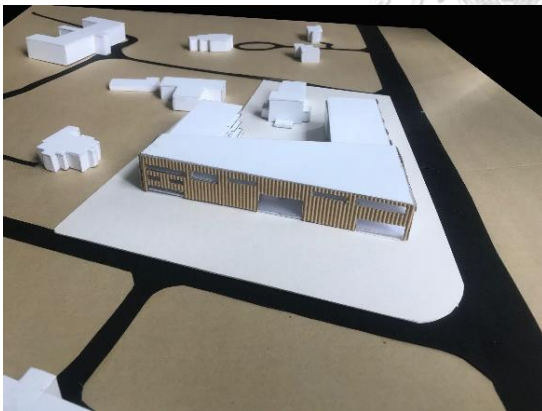


Figure 5.25. Conceptual Model 3 (left)



Figure 5.26. Conceptual Model 4 (right)

In conceptual model 3, solid material is used in both old and new form. In this model, only the people inside the building can feel the old form and it is completely hidden from the outside.

In conceptual model 4, semi-transparent material is used for the old form and the complete transparent material is used for the new form. In this concept, the old form become less obvious and less dominant as it can blend with the new form.



*Figure 5. 27. Conceptual Model 5 (left)*



*Figure 5. 28. Conceptual Model 6 (right)*

Placing the old form inside of the new form can cause the new form to become more dominant. Therefore, in conceptual model 5 and 6, the old form is attached to the new form but not positioned inside of the new form. Using contrast materials and colors can separate the old form and the new form.



*Figure 5. 29. Conceptual Model 7*



*Figure 5. 30. Conceptual Model 8*

In conceptual model 7 & 8, the roof of the central part of the building is raised up to emphasize the entrance and the main axis of the whole building. The different types of roof are examined for the new form. The sloping roof in conceptual model 8 blends well with the old building form and it is appropriate for the sloping interior space as well.

(a) Zoning

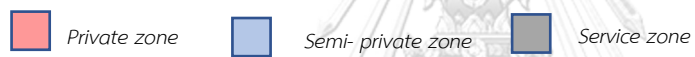
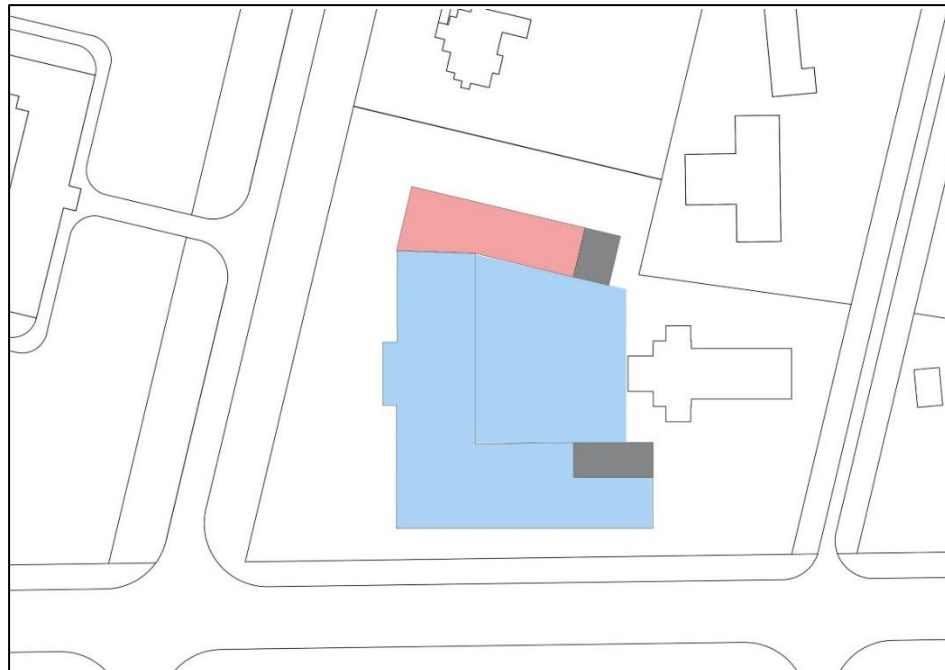


Figure 5. 31. Private-public diagram

In terms of zoning, the areas facing to the two main roads are for semi-private zone that both students and visitors can use. The private zone is mainly for students. The service zone is placed both on the end of north and south wing.

(b) Multipurpose spaces and memorial area

Multipurpose spaces that students can have freedom for multiple uses are provided. The central memorial area is not only meant for memorial commemoration events but also for various school events (Fig 5.43).

Student activities areas on third floor can also be used for various activities such as debates, chilling area and study area. This area also provides a living room environment, where students can relax and chill. As the area is open and not enclosed within the walls, the sound of the debates and the activities of students can be heard and seen from the outside.

These multipurpose spaces will increase social bond between students and create collective memories for them.

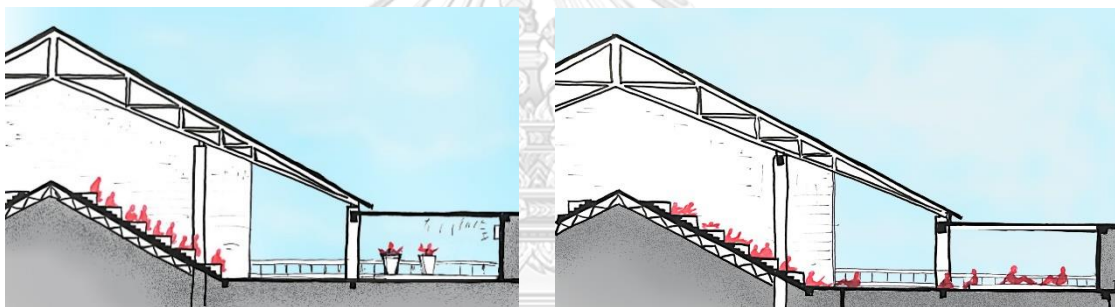


Figure 5. 32. Multipurpose student activities area



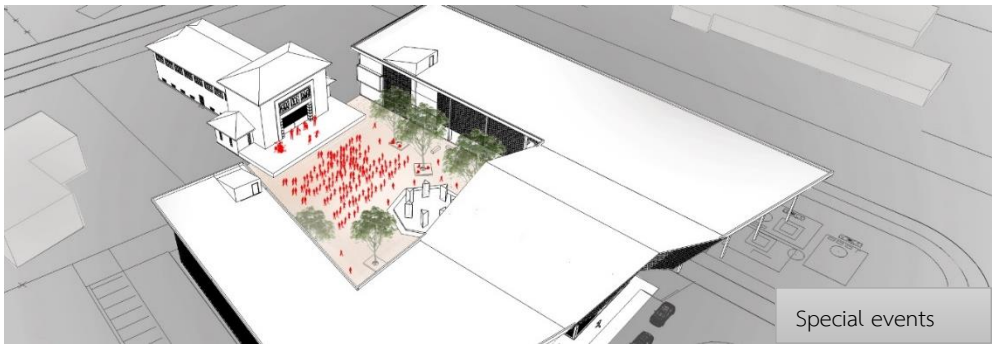


Figure 5. 33. Multipurpose memorial area

## (c) Symbolic integration

Symbolic integration is one way of keeping memories by using the symbols. In the new student union design, the old building is appreciated as the important symbol of democracy and student movements.

As the most dominant part of the old student union building is the entrance, the dominant architectural elements of the old student union building such as the windows and doors will be reinterpreted with modern materials in the new design. The similar shape and number of the windows will be reintegrated into the new design. The windows and doors at the front entrance will serve as symbols and recalling memories to the old building.

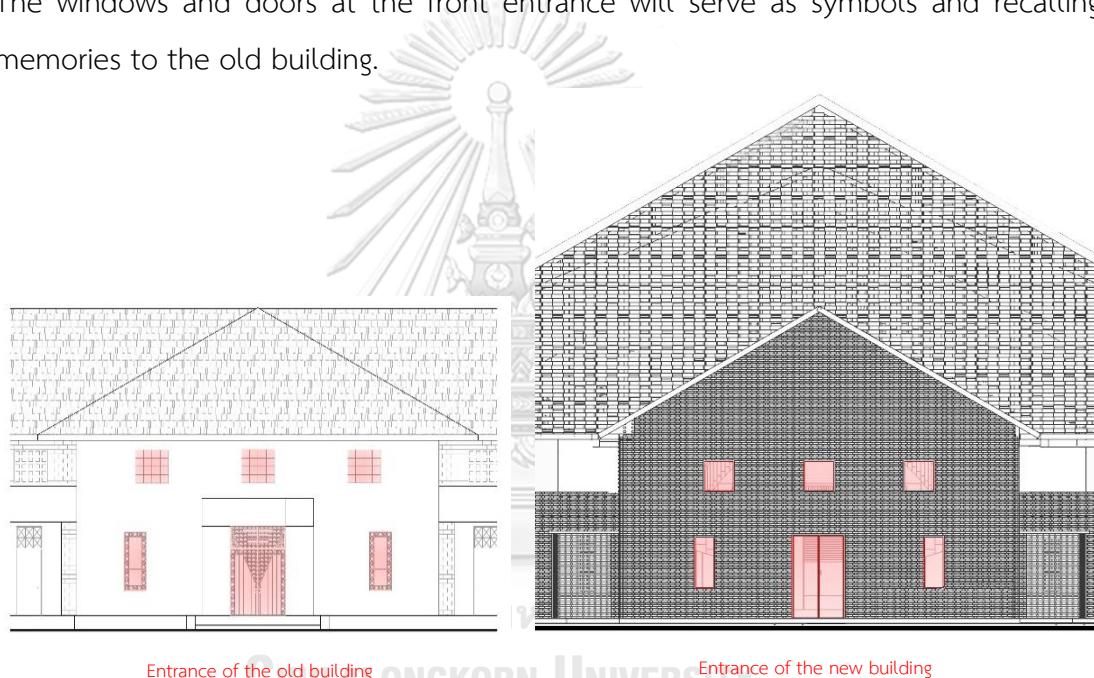


Figure 5. 34. Integration of architectural elements of the old building entrance

. Another symbolic integration is applied in the design of the memorial area. The memorial area is designed with an elevated floor, which is in the shape of a heptagon. There are seven glass tubes, where the name of the student leaders will be inscribed. The heptagon and the glass tube stand for the unforgettable date of 7 July 1962. Moreover, inside the central memorial area, symbolic Thit Pote trees are planted. These symbolic trees will give silhouettes through perforated walls of the façade.

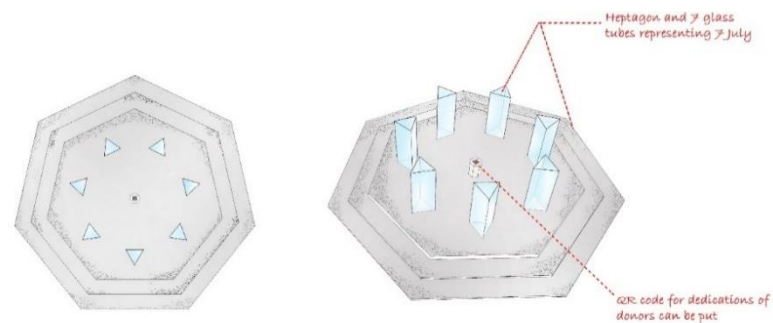


Figure 5. 35. The memorial

(d) Climatic consideration

Climatic consideration is one of the issues that need to be aware for the tropical climate of Yangon. On the ground floor, the principle of pilotis is applied in most of the areas in order to let the ventilation in. In the new design, brick and metal screen walls are used in the front façade because the building is facing towards the west. Screen walls will not only give shade to interior spaces but also, allow ventilation at the same time.

(e) Inspiration from modern architecture

The architectural elements at the façade are inspired from the design of Rangoon Engineering College. Inspiring from the rainscreens and concrete blocks of Rangoon Engineering College, contemporary materials and modern techniques are used in the new design. Alternate patterns of sloped aluminum panels and bricks are used as screen walls. They can protect from the sun and rain for the interior spaces.

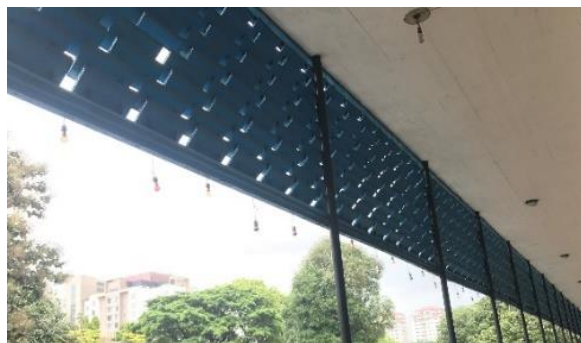


Figure 5. 36. Rainscreens of Rangoon Engineering College (left)

Figure 5. 37. Screen wall of new student union (right)

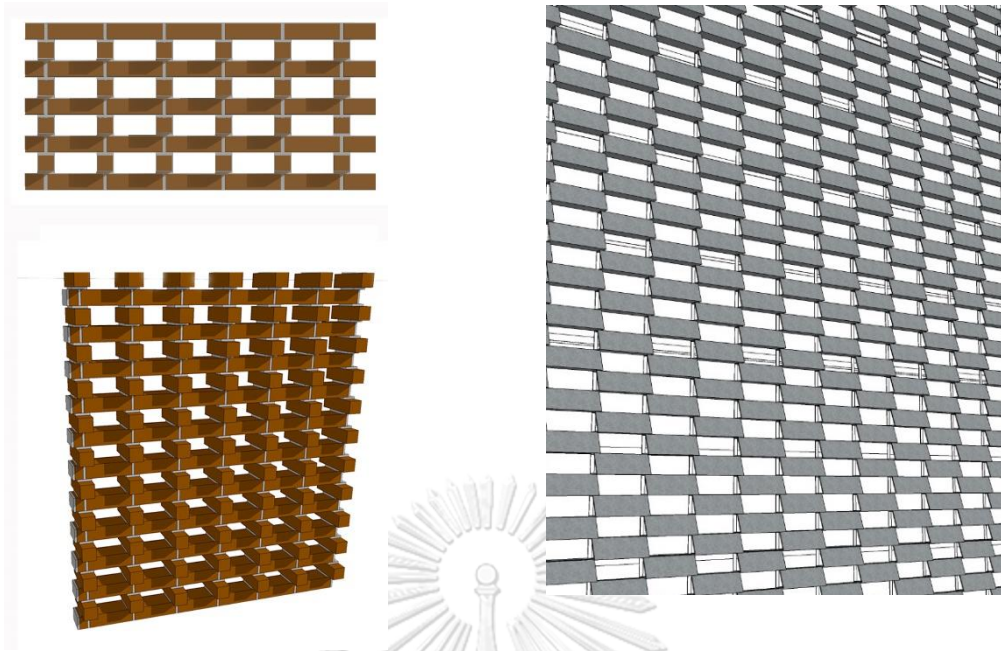


Figure 5. 38. Pattern of bricks (left)

Figure 5. 39. Pattern of aluminum panels (right)



5.9. Design drawings



Figure 5. 40. Site Plan



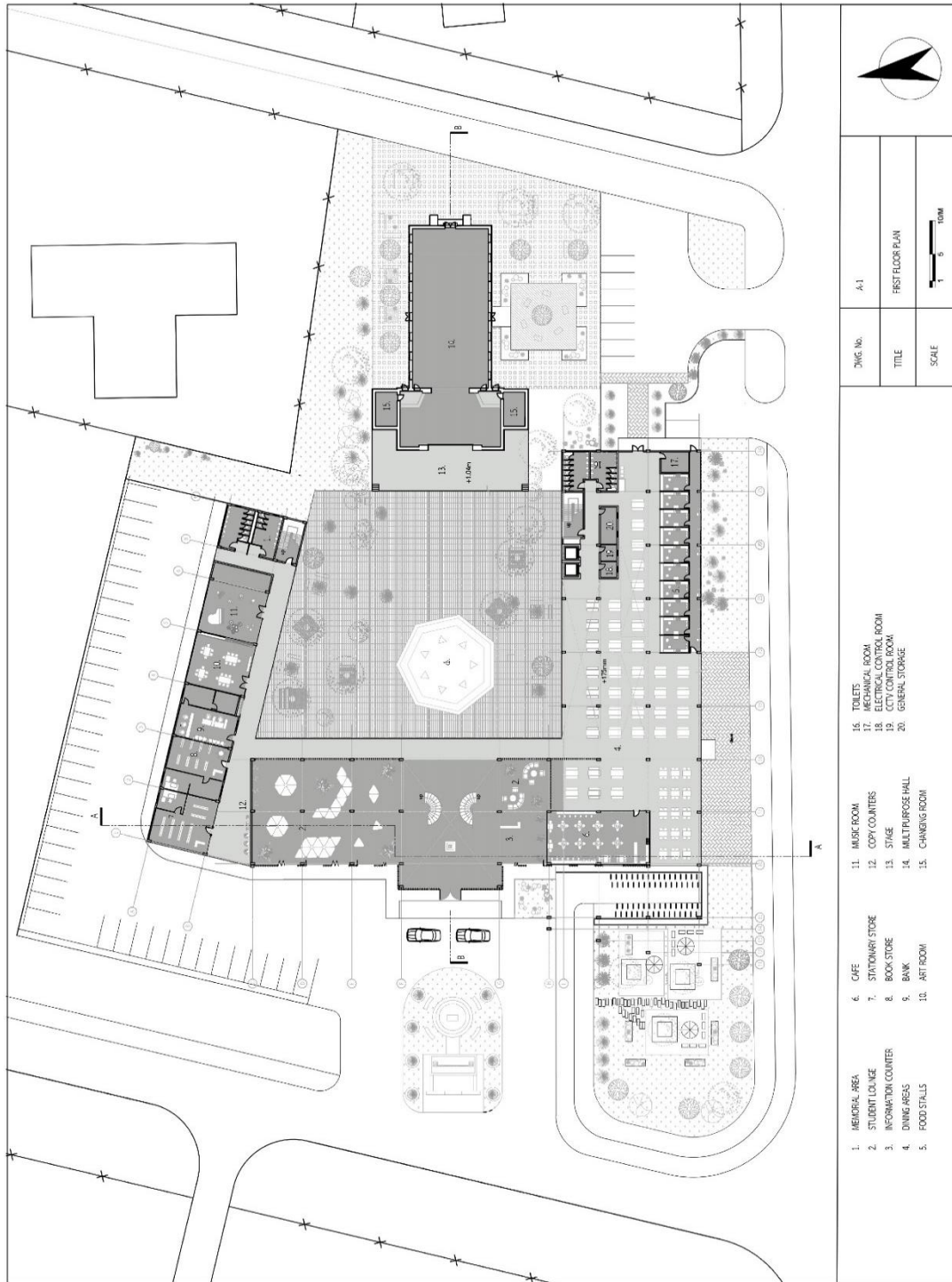


Figure 5. 41. First Floor Plan

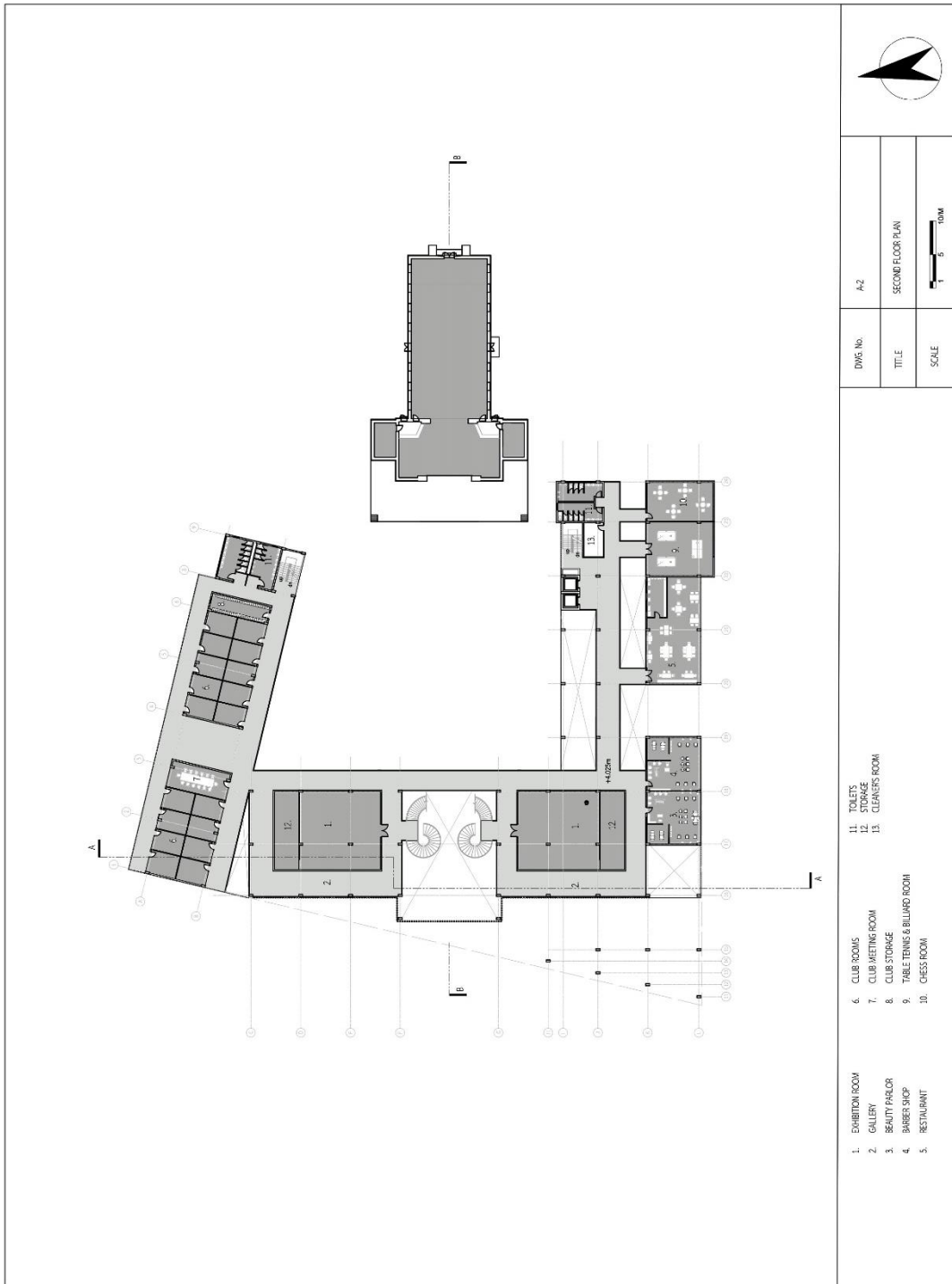


Figure 5. 42. Second Floor Plan

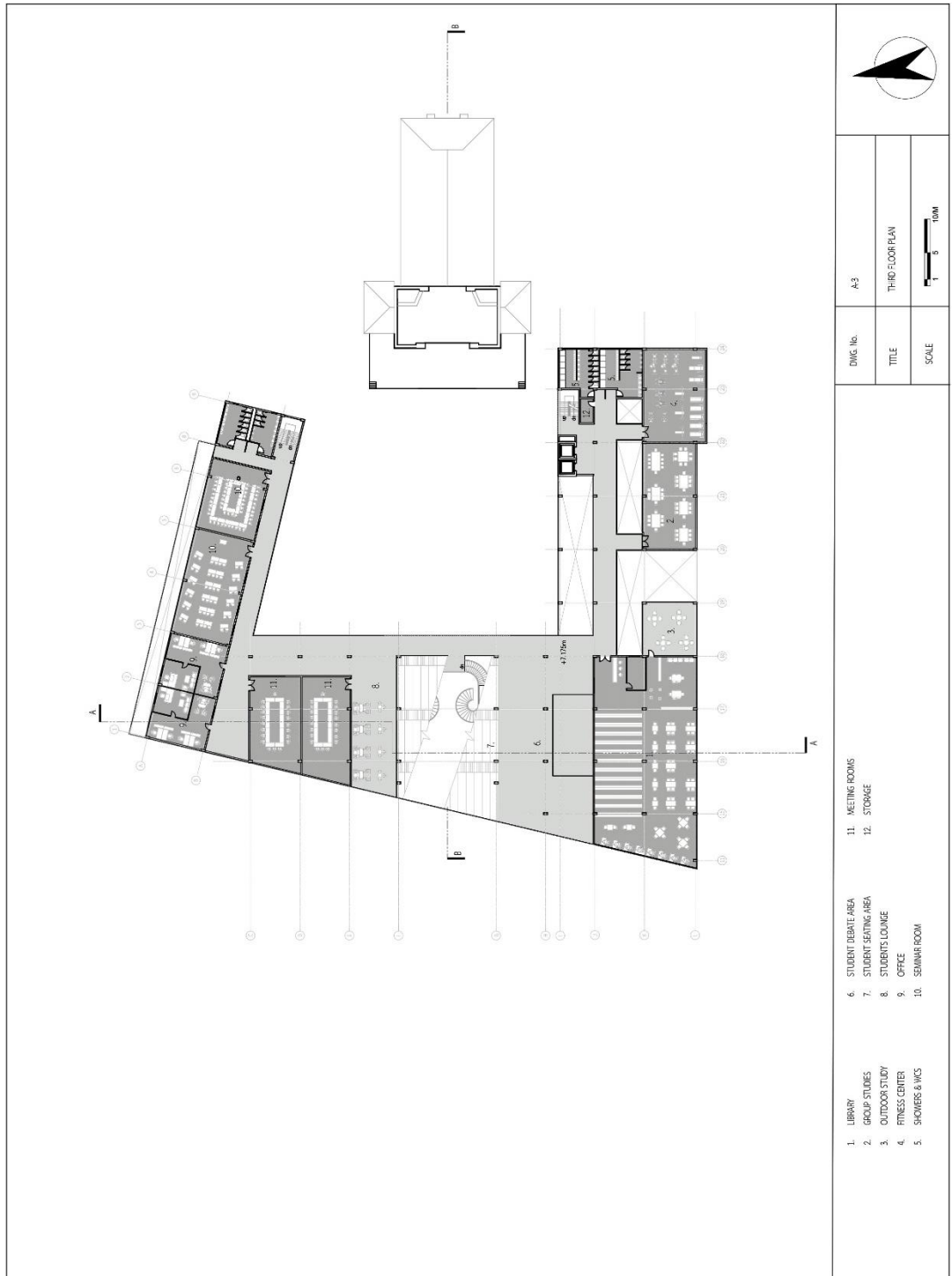


Figure 5. 43. Third Floor Plan

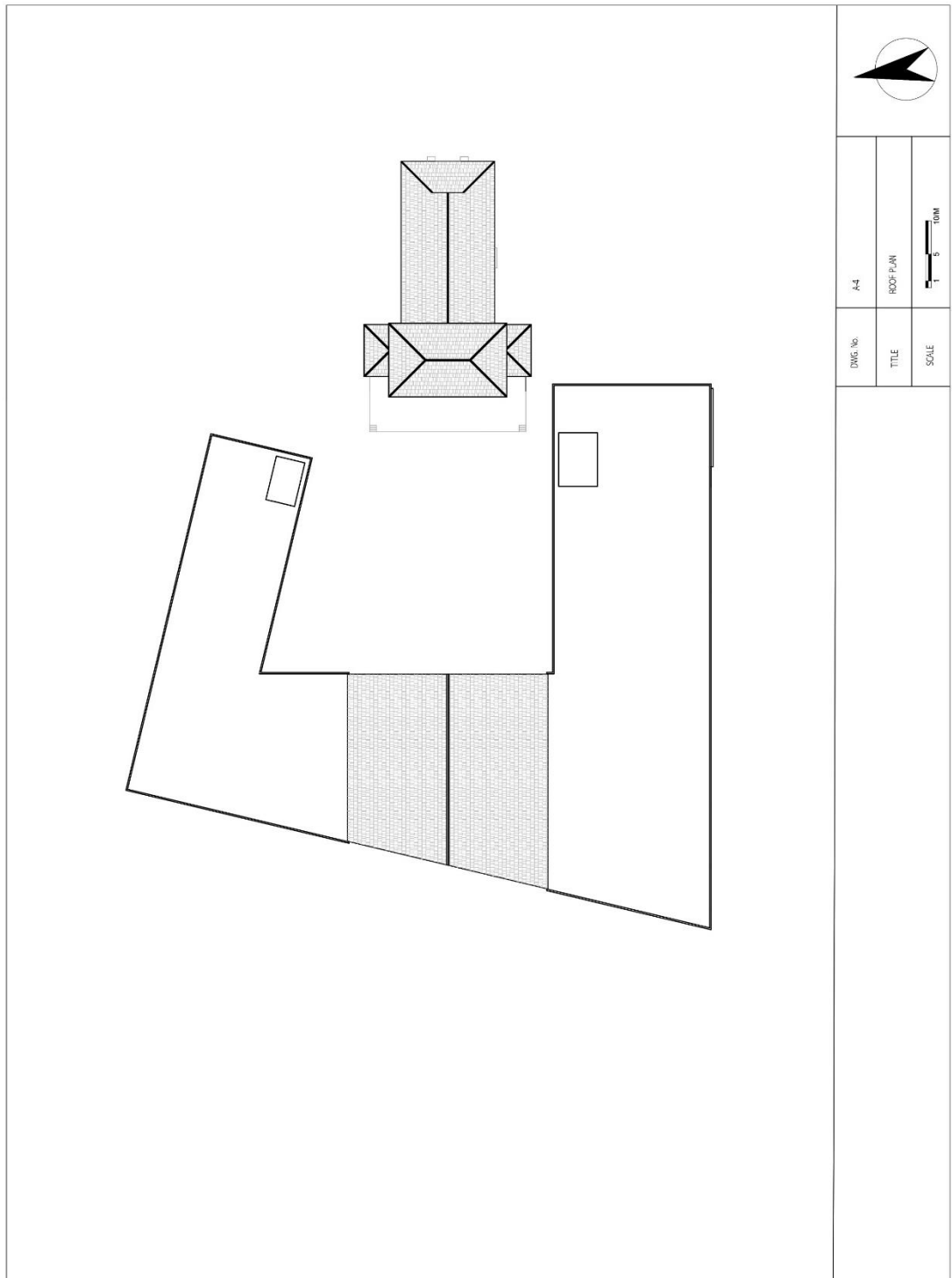


Figure 5. 44. Roof Plan

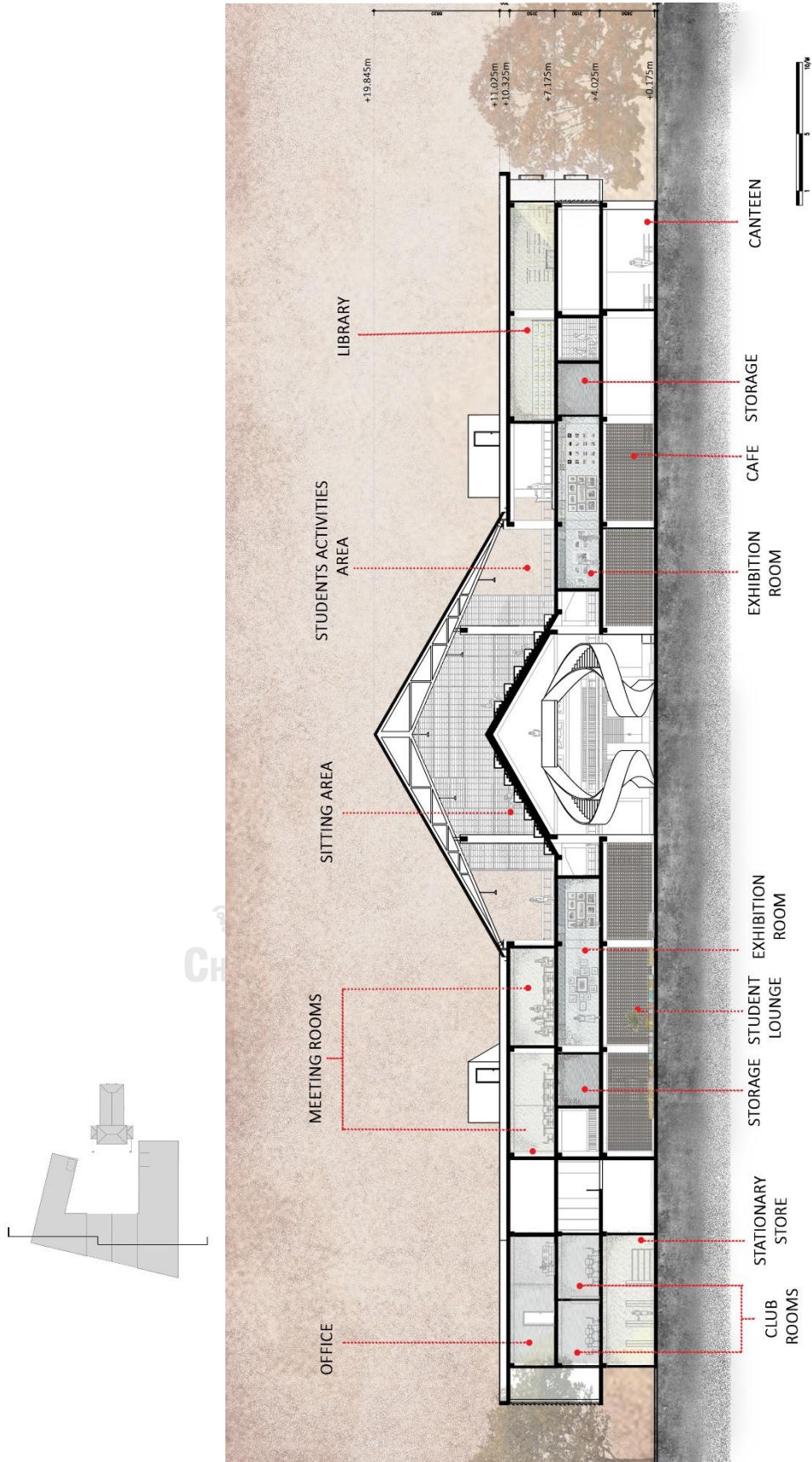


Figure 5. 45. Section A-A



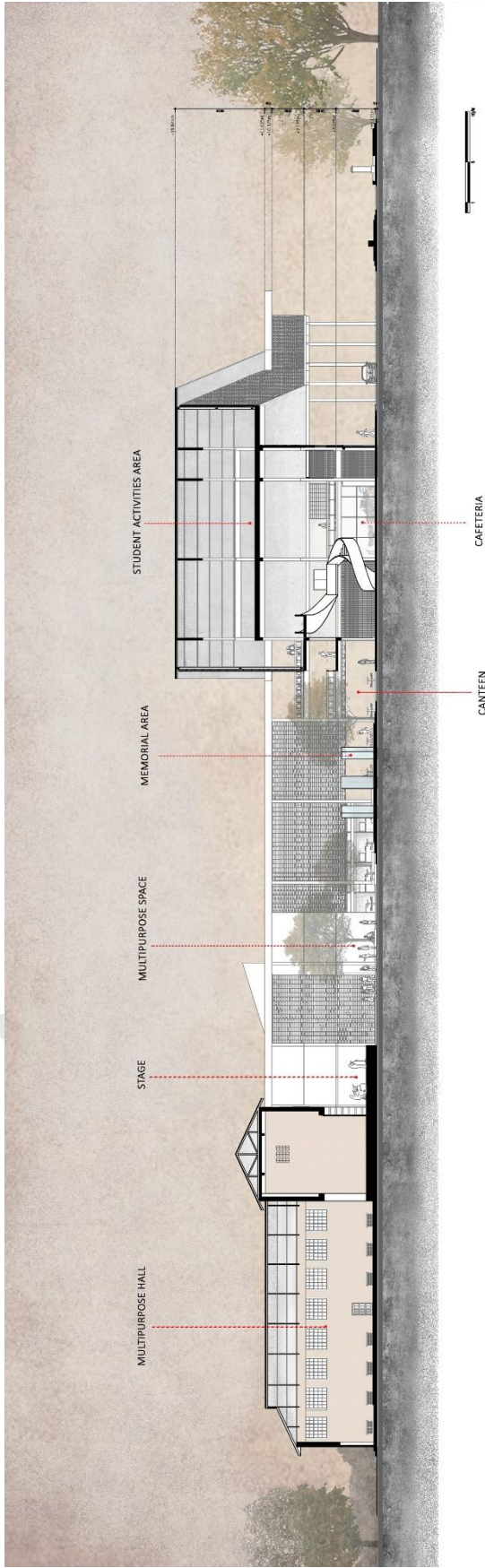
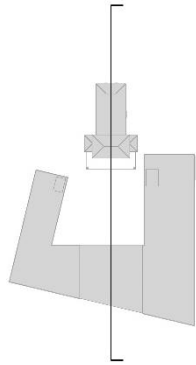


Figure 5. 46. Section B-B

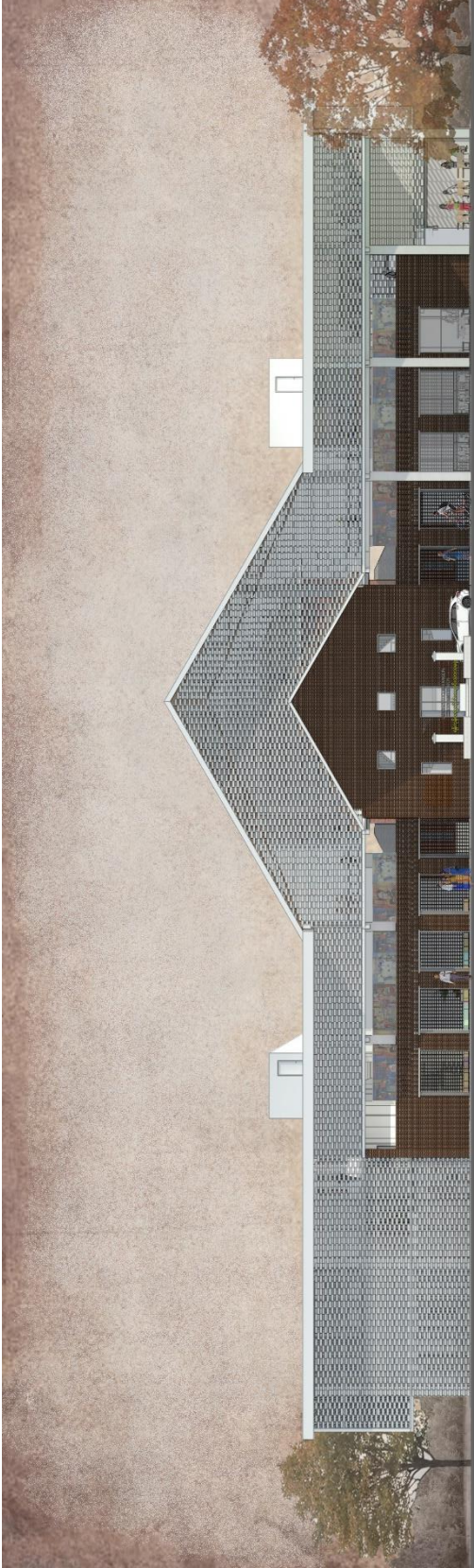


Figure 5. 48. West Elevation

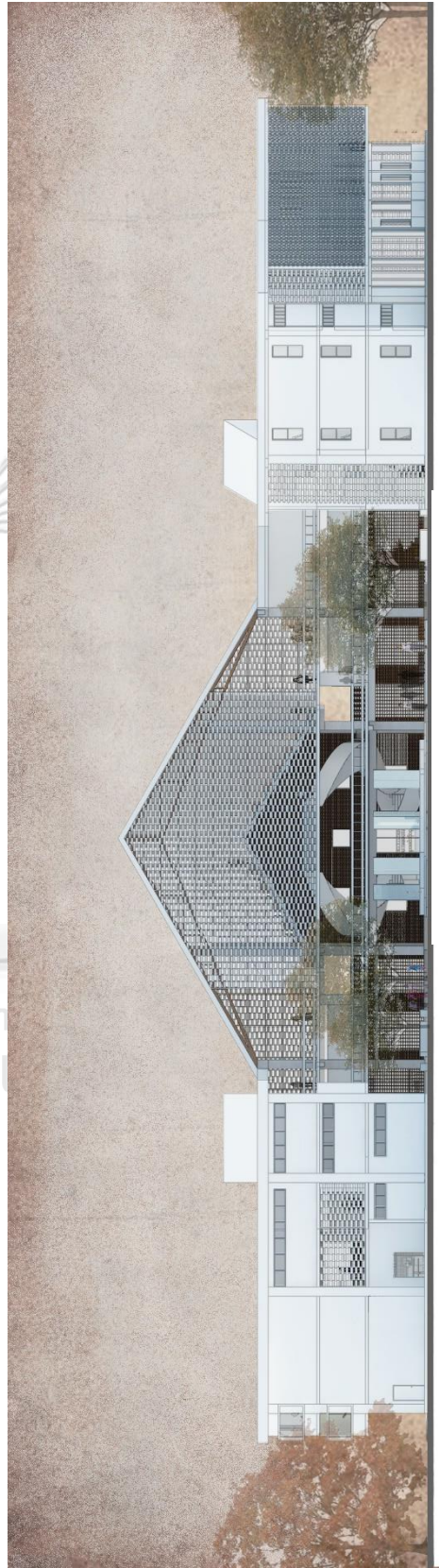


Figure 5. 47. East Elevation



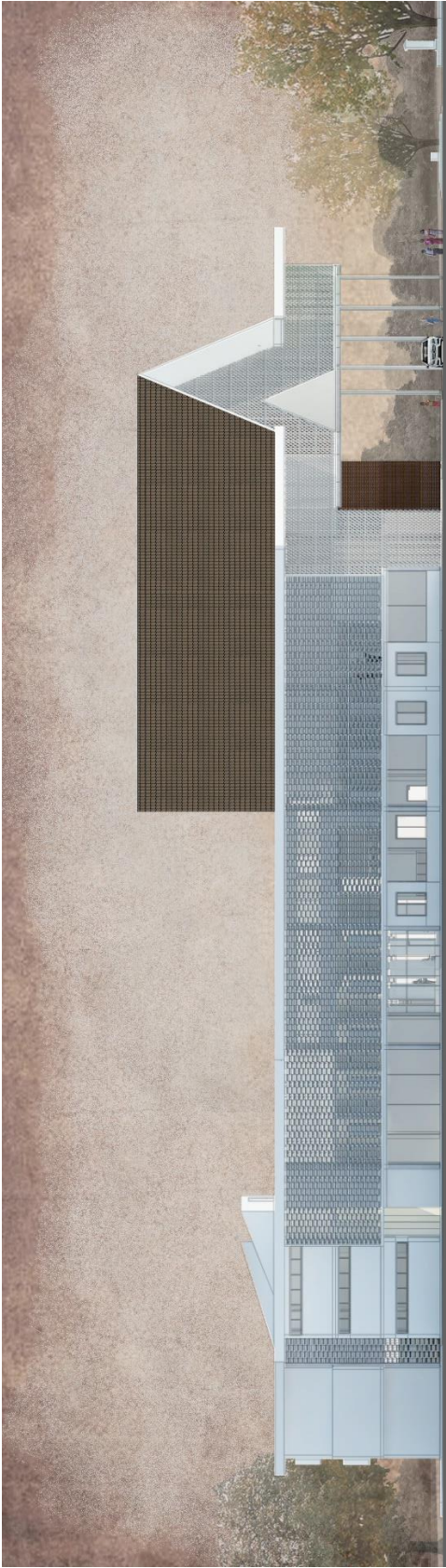


Figure 5. 50. North Elevation

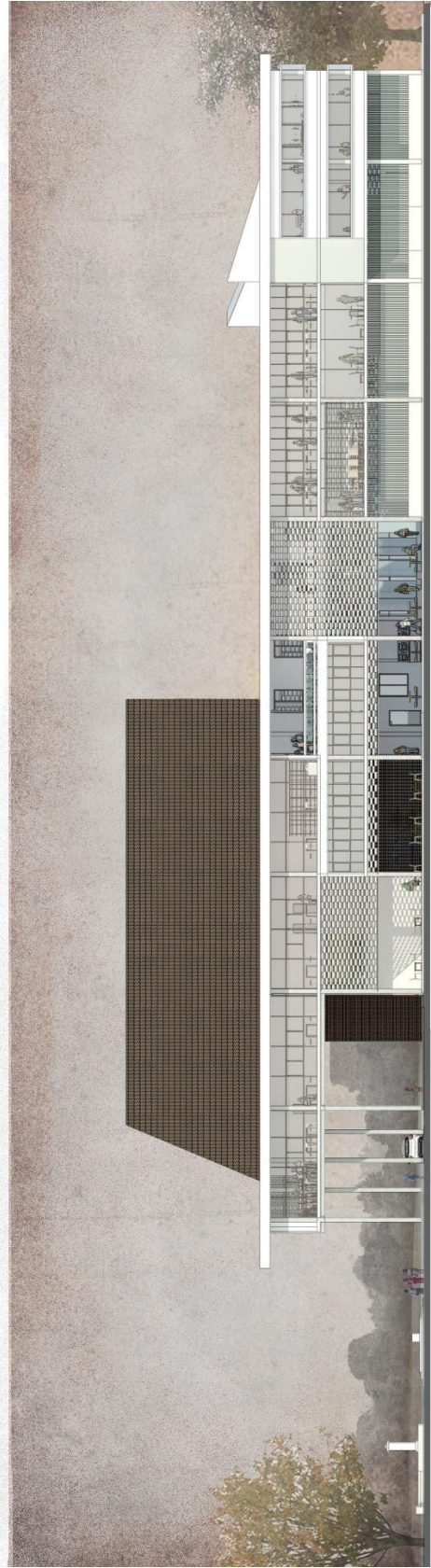


Figure 5. 49. South Elevation





Figure 5. 51. Exterior Perspective 1

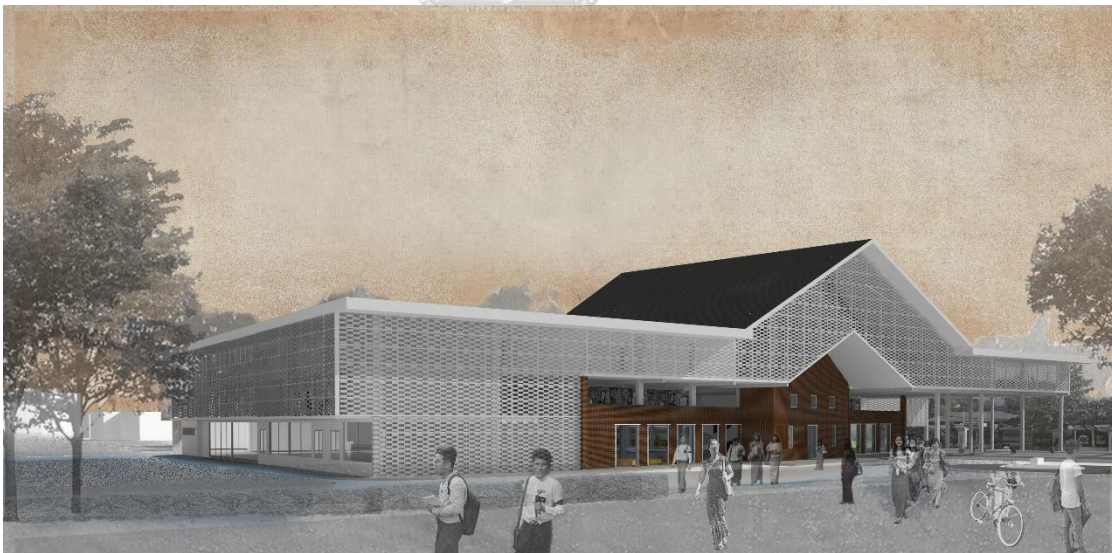


Figure 5. 52. Exterior Perspective 2



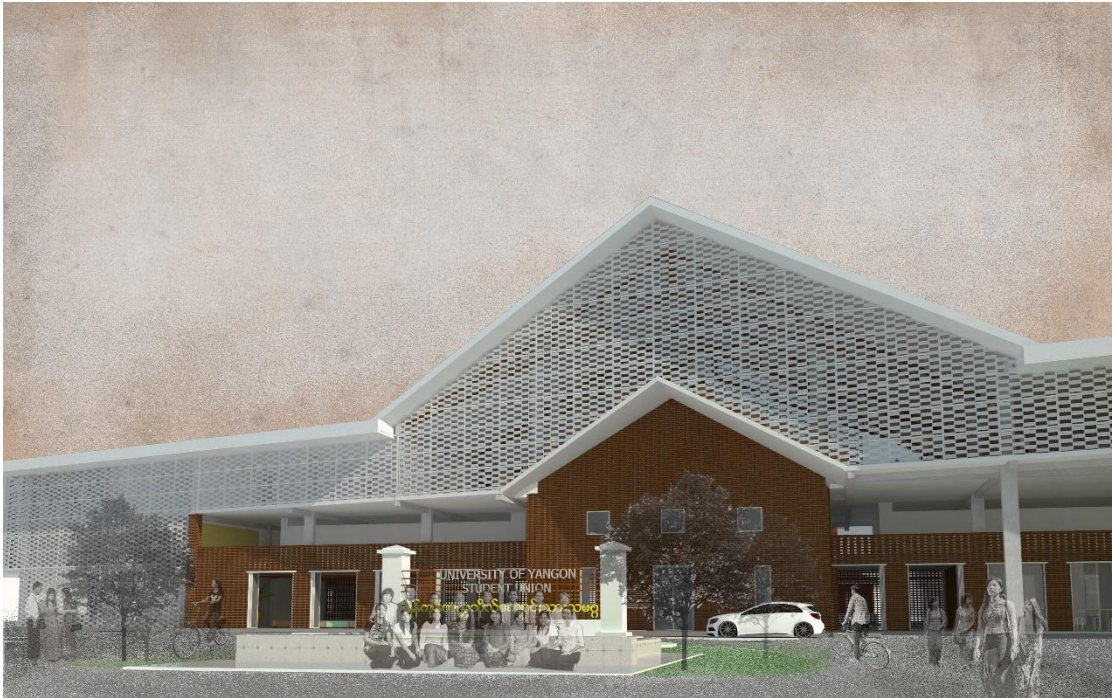


Figure 5. 53. Exterior perspective 3 (Front Façade)

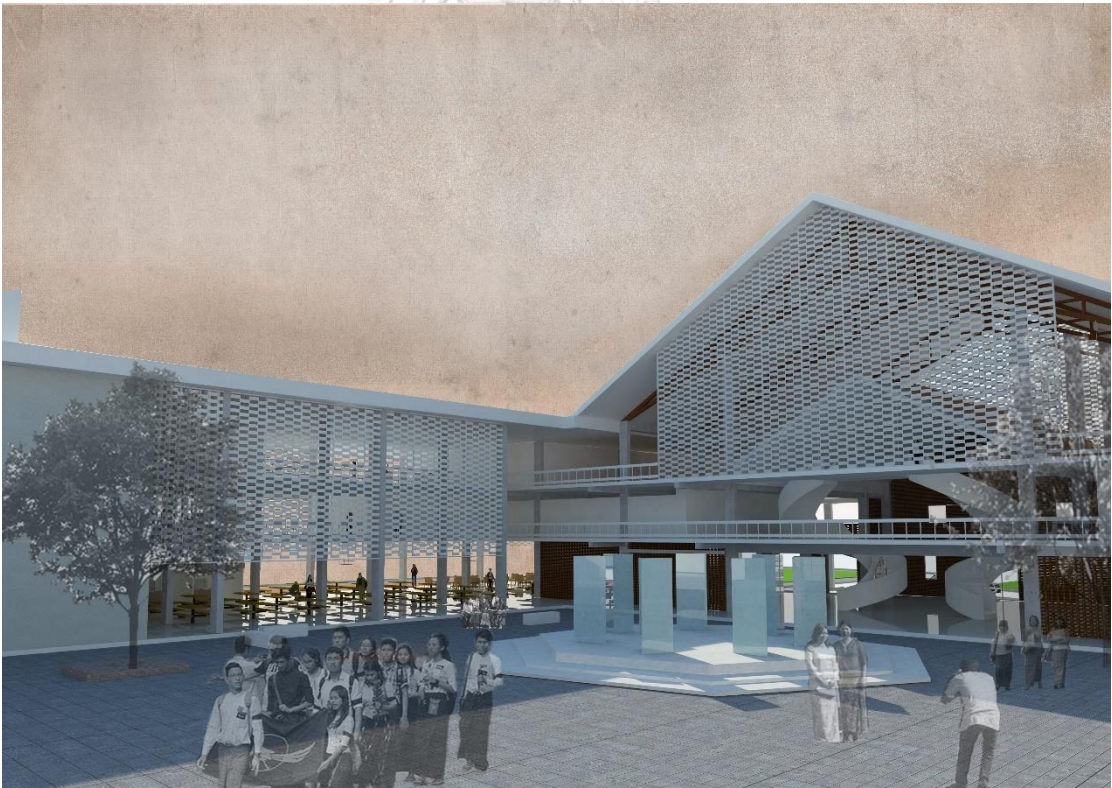


Figure 5. 54. Exterior perspective 4 (Memorial area)





Figure 5. 55. Interior perspective (Canteen Area)



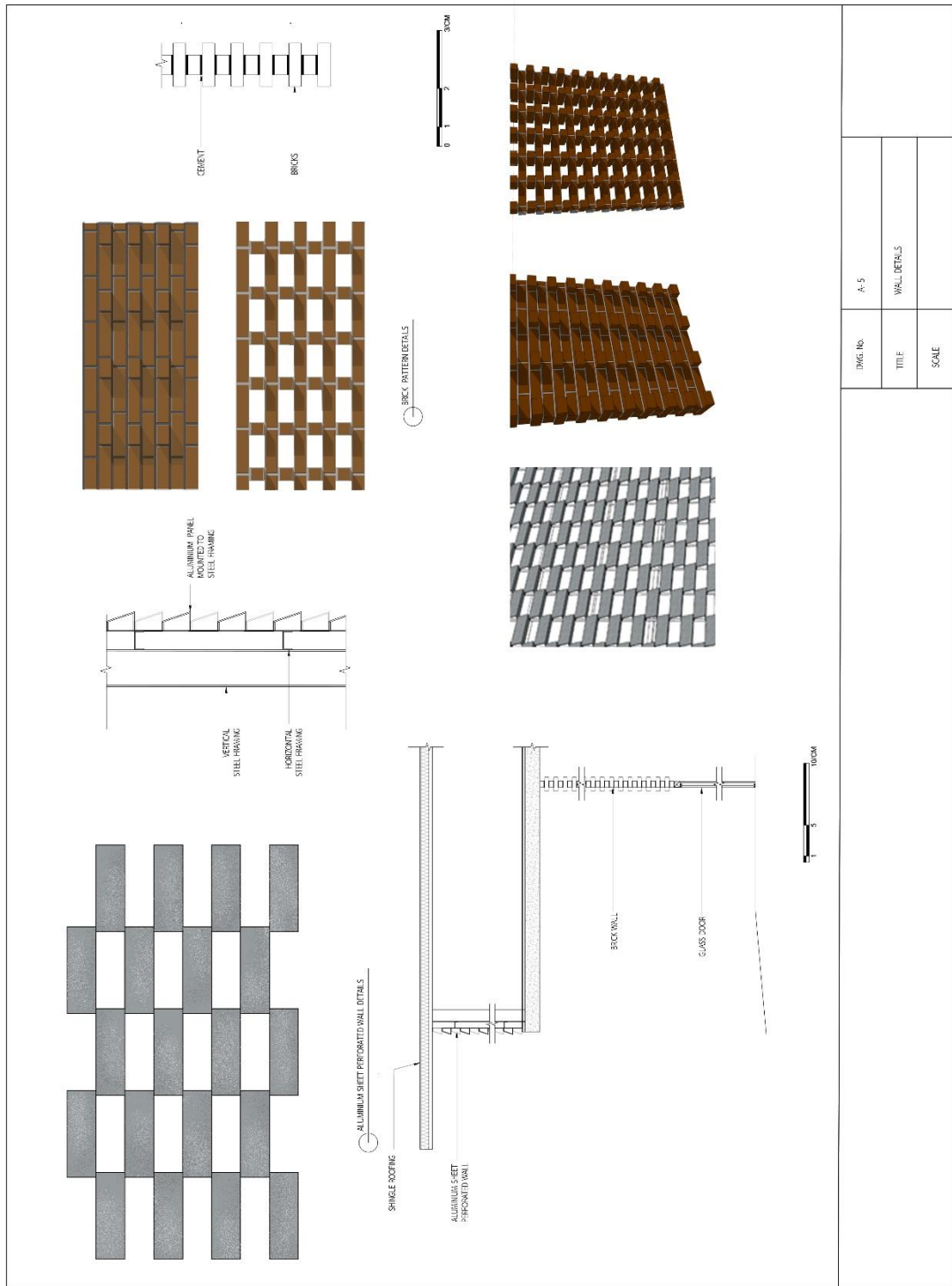
Figure 5. 56. Interior perspective 2 (entrance Lobby)



Figure 5. 57. Interior perspective 3 (Debate Area during debate)



Figure 5. 58. Interior perspective 4 (Debate area used as relaxation area)



<p>DRG. No.</p> <p>A-5</p>	<p>TITLE</p> <p>WALL DETAILS</p>	<p>SCALE</p>
	<p>SCALE</p>	
	<p>TITLE</p> <p>WALL DETAILS</p>	

Figure 5. 59. Wall Details





Figure 5. 60. Final model photo 1



Figure 5. 61. Final model photo 2 (left)



Figure 5. 62. Final model photo 3 (right)



Figure 5. 63. Final model photo (left)



Figure 5. 64. Final model photo (right)

## CHAPTER 6

### CONCLUSION

This research is for designing contemporary architecture having connections and relationships with the vital memories and historical moments of University of Yangon. These memories and histories are reinterpreted in new design to benefit and functional for the current and future generations. From this research, further researchers can understand the architectural history of the University of Yangon in relation to social political contexts and they can adapt the research methodology for redesigning other contemporary projects which has meaningful histories and memories.

The research started from the question of what kind of contemporary architecture should be used in the new design for the student union building, which had a remarkable history. The location of the new design will also be at the original site, with authentic value located on the historic campus. Moreover, the surrounding buildings' history and significance are also part of the memories of the student lives and the student union. For the campus, it is a campus that holds both tangible and intangible values. Tangible values include the architectural heritage of different periods that are situated together within the campus. The campus also possesses social, political and cultural significances that can form intangible values. These values make the University of Yangon campus a memorable place for students. Nowadays, the importance of histories and memories are starting to fade away. To deal with these historical values and memories, the new student union became a challenging project. In addition, it is a project with the most controversial debates between old students and current students.

This thesis based on the idea of reviving the important histories and memories of the old student union and the vibrant student lives of the past. The University of Yangon used to have very vibrant students' lives. The whole campus and its buildings gave students an active social environment and emancipated students with modern thinking. However, since the military government closed the university's undergraduate



courses and banned the student unions, social integration and vibrant student life became degraded. Students lost not only freedom but also, free thinking and social skills. Nowadays, as Myanmar's new government is moving towards a more democratic country, active social environments and knowledge sharing among the university's students is vital.

Therefore, the author tried to understand the history of the University of Yangon better by reviewing the literatures mainly on the background of the University of Yangon campus and its buildings, as well as the important and significant political events that made the University of Yangon so special. The activities of previous student's lives were also studied in written documents in yearly magazines by the old students of the University of Yangon. When studying the buildings, it has been found that the architecture of these buildings also responded to the socio-political and cultural conditions of the students at that time. In order to deeply understand the buildings, field observations and documentations were also carried out.

The main idea for the new student union building is to revive the memories of the past in order to preserve the intangible historical values of the old student union and the campus. At the same time, it is a design that also suits contemporary contexts. Respecting the surrounding historical contexts, the main axis with the old gymnasium building is maintained. To revive the memory of the old building, the form of the old student union building is referenced and expressed in an abstracted volume in the new building. Further, the use of different materials and color distinguishes the old building volume and the new form.

The open space that was used as a multipurpose area between the student union building and the gymnasium will be revived as a memorial area in the new design. The memorial area was provided because contemporary students used to celebrate commemoration ceremonies on significant days. This area can also be a multipurpose and flexible area, where student can do many activities, as well as celebrate school festivals and events. This central area will serve as an area that links to the old building and mobilizes the old stage of the gymnasium building as well.

As social interaction and sharing knowledge and experiences are also key factors for a democratic environment, the principle of visibility and transparency is

applied. Moreover, multipurpose spaces, such as the amphitheater, promotes the cultural and social activities that can increase the social bonds between students and can create vibrant student lives. This space can be used freely and can organize many social events. The integration of a debate area can encourage students to demonstrate their free thinking and opinions. In this debate area, the steps are provided for the students who want to listen to their debates. This can create a space where students can learn and share multiple opinions. The debate area is also treated with perforated walls so that those passing by can also hear and understand the active student lives of the student union. By creating a more visible and transparent environment, the space can promote interactions not only between students but also, interactions between the university's students and the public. This can increase students' curiosity to the world outside of the university.

#### 6.1 Limitation of study

The limitation of this study is my time and permission by the University of Yangon for accessibility. In this study, I focused mainly on the shared facility buildings between the 1920s and 1960s; however, it would be better if the student halls and other buildings from different periods could also be studied, as they were also part of the important memories of student lives. This study would be better if there were systematic interviews to both current and older generations of students and the university's authorities for opinions and expectations for a new student union. Due to the limitation of historical data, some of the architectural drawings and information for the architects of the buildings were not available in time. Thus, more documentations and historical research will improve this study.

#### 6.2. Suggestion of the future study

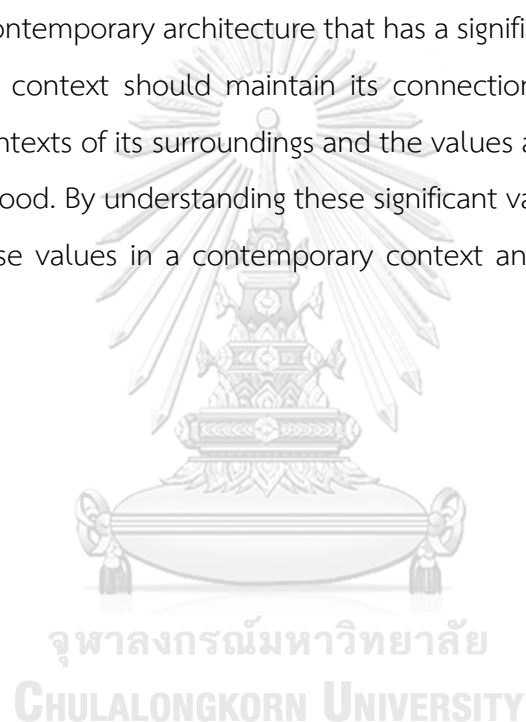
This study focuses on the new design project for the historic old student union building at the University of Yangon, which was demolished. This study can be improved by many ways, including:

1. Further studies on the architecture of the other buildings, such as the student halls and buildings of different periods, including the recreation

center (1962), the university's central libraries (1980), the Diamond Jubilee Hall (1995) etc.

2. Further systematic interviews with current students, old students and university authorities in order to understand their needs and expectations for a new student union.
3. Further theoretical studies on the creation of social culture on higher educational learning environments.

Designing a new contemporary architecture that has a significant historical past located within a historical context should maintain its connection with the past. It should respond to the contexts of its surroundings and the values and memories of its history should be understood. By understanding these significant values, the new architecture should revive these values in a contemporary context and be beneficial to current users.





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