



ARCHCMU
FACULTY OF ARCHITECTURE
CHIANG MAI UNIVERSITY

LOCAL CREATIVITY TO NEW PUBLIC PLACE

Improving English skill in Lanna creative design and presentation

English Skill Improvement Project for Undergraduate Student
following the Policy of the Upgrade of English Language Skill Standard
of Undergraduate Student Faculty of Architecture
Chiang Mai University . Academic Year 2019



โครงการพัฒนาทักษะภาษาอังกฤษของนักศึกษาระดับปริญญาตรี
ตามนโยบายการยกระดับมาตรฐานภาษาอังกฤษของนักศึกษาระดับปริญญาตรี มหาวิทยาลัย
เชียงใหม่
ปีการศึกษา 2562

1. ชื่อโครงการ พัฒนากิจกรรมภาษาอังกฤษในการออกแบบและนำเสนอผลงานด้านนาสร้างสรรค์
(Improving English skill in Lanna creative design and presentation)

1.1 ส่วนงานที่รับผิดชอบโครงการ

คณะสถาปัตยกรรมศาสตร์ มหาวิทยาลัยเชียงใหม่

1.2 ผู้ประสานงาน

ชื่อ-นามสกุล ผศ.ดร.แผ่นดิน อุจะนำ

ตำแหน่ง รองคณบดีฝ่ายวิชาการ สังกัด คณะสถาปัตยกรรมศาสตร์

2. ความสำคัญของโครงการ/หลักการและเหตุผล

มหาวิทยาลัยเชียงใหม่มีนโยบายการยกระดับมาตรฐานภาษาอังกฤษของนักศึกษาระดับปริญญาตรี เพื่อให้ นักศึกษาสามารถใช้ภาษาอังกฤษในการศึกษาค้นคว้าองค์ความรู้ที่ทันสมัย และเป็นสากล และเพื่อให้บัณฑิต ของมหาวิทยาลัยเชียงใหม่มีความพร้อมทั้งในด้านวิชาการ วิชาชีพ และสามารถใช้อังกฤษในการสื่อสารอย่าง มีประสิทธิภาพ รองรับการแข่งขันสู่ประชาคมอาเซียน

คณะสถาปัตยกรรมศาสตร์มีเป้าหมายหลักในการผลิตบัณฑิตสู่วิชาชีพสถาปนิก ที่มีความรู้ความ สามารถในการออกแบบ และการนำเสนอผลงานที่มีความเป็นมืออาชีพ และยังมีเป้าหมายในการเป็นโรงเรียน สถาปัตยกรรมชั้นนำในอาเซียน ซึ่งสิ่งสำคัญในการเข้าสู่ระดับชั้นนำในอาเซียน และยกระดับสู่ระดับนานาชาติ คือ ความสามารถในการใช้ภาษาอังกฤษที่สามารถนำเสนอผลงานทั้งการเขียนอธิบายแนวคิดในการออกแบบลงสู่ แผ่นการนำเสนอผลงาน และการนำเสนอผลงานต่อกลุ่มเป้าหมายด้วยภาษาอังกฤษ เพื่อให้ทุกคนในระดับนานาชาติ สามารถเข้าใจและสื่อสารผลงานออกมาได้อย่างชัดเจน

จากความสำคัญของทักษะภาษาอังกฤษในการเป็นเครื่องสื่อสารที่สำคัญ ในการนำเสนอผลงาน ออกแบบของนักศึกษาสถาปัตยกรรมศาสตร์ ที่จะป็นสถาปนิกในอนาคตที่สามารถทำงานในระดับประชาคมอาเซียน และ นานาชาติได้ จึงก่อให้เกิดโครงการพัฒนาทักษะภาษาอังกฤษในการออกแบบผลงาน สู่การนำเสนอผลงานด้วย ภาษาอังกฤษ ในรูปแบบผลงานของด้านนาสร้างสรรค์ ที่ผลิตผลงานออกมาตอบรับกับยุทธศาสตร์การพัฒนา มหาวิทยาลัยเชียงใหม่ โดยเป็นกิจกรรมปฏิบัติการออกแบบผลงานที่พัฒนาด้านด้านนาสร้างสรรค์ โดยการใช้ทักษะ ภาษาอังกฤษผลิตผลงานและนำเสนอผลงานด้วยภาษาอังกฤษ ให้กับสถาปนิกรับเชิญที่มีชื่อดังในระดับเอเชีย ในการตรวจ ผลงานการออกแบบของนักศึกษาทุกชั้น และนำผลงานการออกแบบทั้งหมดจัดแสดงผลงานสู่สาธารณะ โครงการนี้จึง ถือเป็นการพัฒนาทั้งทักษะภาษาอังกฤษ การออกแบบและนำเสนอของนักศึกษา อีกทั้งยังเป็นโครงการ ที่ตอบรับต่อยุทธศาสตร์มหาวิทยาลัยเชียงใหม่





3. วัตถุประสงค์ของโครงการ

- 3.1 เพื่อพัฒนาทักษะภาษาอังกฤษในการออกแบบและนำเสนอผลงานโดยผ่านการออกแบบ ผลงานล้านนาสร้างสรรค์
- 3.2 เพื่อจัดปฏิบัติการณ์การออกแบบผลงานล้านนาสร้างสรรค์ ให้เป็นประโยชน์ต่อมหาวิทยาลัยเชียงใหม่ หรือจังหวัดเชียงใหม่ต่อไป
- 3.3 เพื่อการจัดแสดงผลงานการออกแบบล้านนาสร้างสรรค์ สู่สาธารณะโดยการเชิญสถาปนิกชื่อดังระดับเอเชีย ร่วมตรวจผลงานและให้ข้อเสนอแนะในการพัฒนาผลงานของนักศึกษาต่อไป

4. กลุ่มเป้าหมาย และจำนวนผู้เข้าร่วมโครงการ

กลุ่มเป้าหมายหลัก

+ นักศึกษาระดับปริญญาตรี หลักสูตรปกติ	จำนวน	190 คน
+ นักศึกษาระดับปริญญาตรี หลักสูตรนานาชาติ	จำนวน	10 คน
	รวมทั้งหมด	200 คน

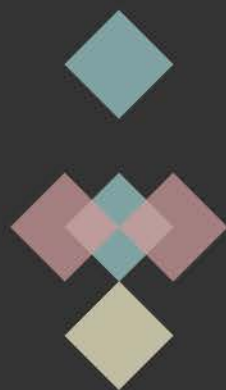
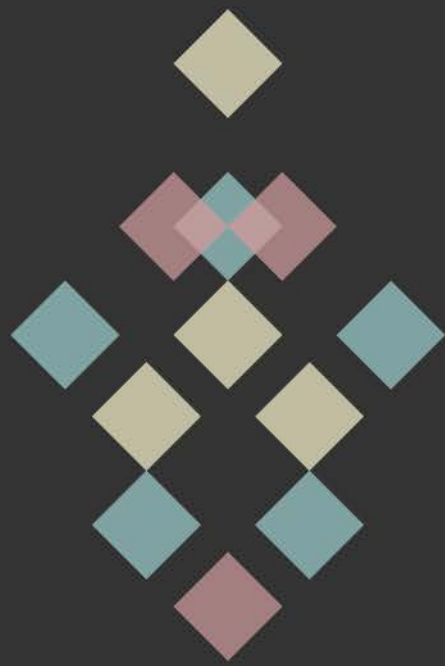
ผู้เข้าร่วมโครงการในการรับฟังการบรรยายพิเศษจากสถาปนิกชื่อดังระดับเอเชีย

+ นักศึกษาคณะสถาปัตยกรรมศาสตร์และอื่น ๆ	จำนวน	300 คน
+ คณาจารย์ ศิษย์เก่าฯ สถาปนิก และบุคคลทั่วไป	จำนวน	100 คน
	รวมทั้งหมด	400 คน

5. ตัวชี้วัดความสำเร็จ และค่าเป้าหมาย

- 5.1 คุณภาพของผลงานการออกแบบล้านนาสร้างสรรค์ในระดับ ดี-ดีมาก จากการประเมินของคณาจารย์ผู้ร่วมตรวจผลงานและสถาปนิกรับเชิญ
- 5.2 จำนวนผู้เข้าร่วมฟังบรรยายพิเศษที่รับเชิญสถาปนิกชื่อดังระดับเอเชีย ในความรู้และตัวอย่างผลงานในการออกแบบของสถาปนิก จำนวน 300 – 400 คน
- 5.3 จำนวนผู้เข้าร่วมชมนิทรรศการ จำนวน 100 คนขึ้นไป และความพึงพอใจในระดับ ดี







Special Lecture

DESIGN THINKING PROCESS IN ARCHITECTURAL DESIGN



Oliver Loesser

Lecturer of the Faculty of Architecture, CMU

WED 25 DEC 2019

1.30 – 2.30 p.m.
Room 2001 floor 2



NEW CONTEMPORARY ARCHITECTURAL DESIGN AND PRACTICES IN ASIA

24 AUG
2020 | 4.00 -
6.00 pm

Ar Denny Setiawan

*Studio Denny Setiawan
Indonesian Institute of Architects, Indonesia*



26 AUG
2020 | 4.00 -
6.00 pm

Ar Adrianta Aziz

*AR RAD Architects
ARN Consulting, Malaysia*



02 SEP
2020 | 4.00 -
6.00 pm

Ar Mikako Oshima

*LEED AP BD+C, WELL AP
Nihon Sekkei Inc., Japan*



Schedule

- 3.30 - 4.00 p.m. Online registration
- 4.00 p.m. Opening Speech by *Dean of Faculty of Architecture*
- 4.10 - 5.30 p.m. Lecture by Special Speaker
*Moderator : Asst. Prof. Dr. Rattapong Angkasith
Assistant Dean for Student Affairs, Alumni and Professional Relations*
- 5.30 - 6.00 p.m. Q&A Session

** This schedule applies to every lecture date.*

The lecture will be held online via Facebook Live www.facebook.com/arccmu



ARCH CMU LECTURE SERIES DAY 01

NEW CONTEMPORARY ARCHITECTURAL DESIGN AND PRACTICES IN ASIA

24 AUG 2020 4.00 - 6.00 pm

Denny Setiawan

Studio Denny Setiawan

Indonesian Institute of Architects, Indonesia



The lecture was held online via Facebook Live www.facebook.com/arccmu

ARCH CMU LECTURE SERIES DAY 02

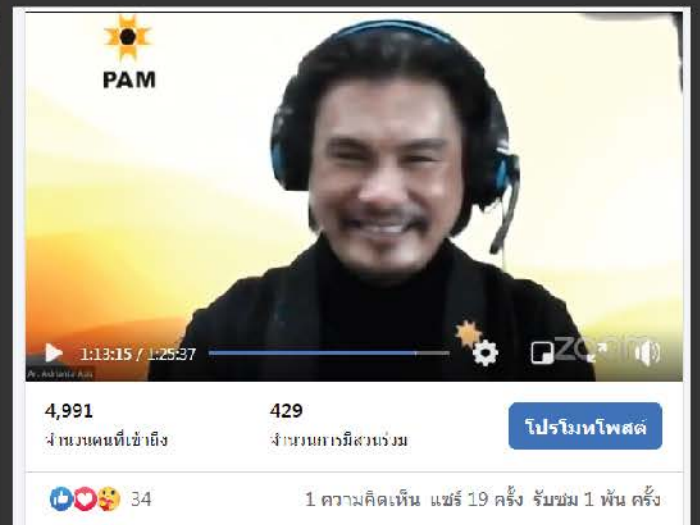
NEW CONTEMPORARY ARCHITECTURAL DESIGN AND PRACTICES IN ASIA

26 AUG 2020 4.00 - 6.00 pm

Ar Adrianta Aziz

AR RAD Architects

ARN Consulting, Malaysia



The lecture was held online via Facebook Live www.facebook.com/arccmu

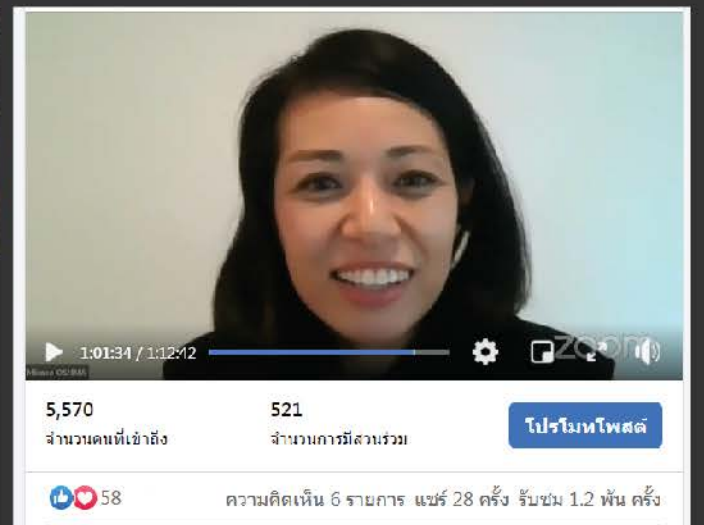
ARCH CMU LECTURE SERIES DAY 02

NEW CONTEMPORARY ARCHITECTURAL DESIGN AND PRACTICES IN ASIA

02 SEP 2020 4.00 - 6.00 pm

Ar Mikako Oshima

LEED AP BD+C, WELL AP
Nihon Sekkei Inc., Japan



The lecture was held online via Facebook Live www.facebook.com/arccmu

LOCAL CREATIVITY TO NEW PUBLIC PLACE

Project

Present the concept of "locality" in terms of, for example, lifestyle, geography, climate, nature, ethnic, material, equipment, story, belief, etc. through the design of "Local Creativity to New Public Place" for Chiang Mai University that is suitable for the user and the program depending on the design team. Please select the design site from given sites of the maximum of 500 square meters.

Site

1. CMU shuttle bus stop in front of CMU
2. Activity space in front of CMU Main Canteen

Work

- + 1-page digital file of an A1 vertical layout (RGB,300 dpi) with complete English content
- + Conceptual Design of not more than 150 words in word file

Detail

Conceptual Design / Lay out with scale bar / Plan with scale bar / Perspective / Other elements ex. diagram, elevation, section

Member

- + Faculty of Architecture, CMU students in the same year and program, maximum of 5 people/group

JUDGES



Ar. Denny Setiawan
Studio Denny Setiawan
Indonesian Institute of Architects
Indonesia



Ar. Adrianta Aziz
AR RAD Architects
RN Consulting
Malaysia



ARCHCMU
FACULTY OF ARCHITECTURE
CHIANG MAI UNIVERSITY

48 PROJECTS JOIN THE COMPETITION



Ar. Mikako Oshima
LEED AP BD+C
WELL AP Nihon Sekkei Inc.
Japan



Asst. Prof. Dr. Rattapong Angkasith
Assistant Dean for Student Affairs
Alumni and Professional Relations
Faculty of Architecture, Chiang Mai University



First Prize



LAN-MAI

CHONLANUT BOONMADUM

CHUTIKAN KHAITA

PAKORN SADKAEW

WATTANAKORN WATTANAPORN



LAN-MAI

THE CONCEPT IS A RESULT OF THE WISDOM BY LANNA PEOPLE TO WEAVE INTO A TREE THAT PROVIDES SHADE TO USERS. BY DESIGNING WITH SITTING AREA TO SUPPORT STUDENTS AND INSTALLED AT THE Main Canteen of Chiang Mai University



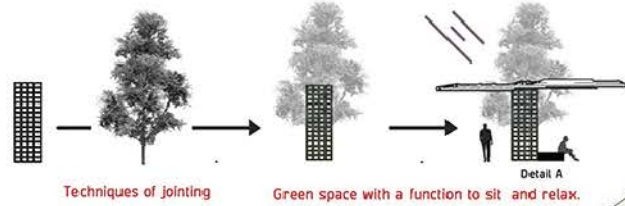
techniques of jointing



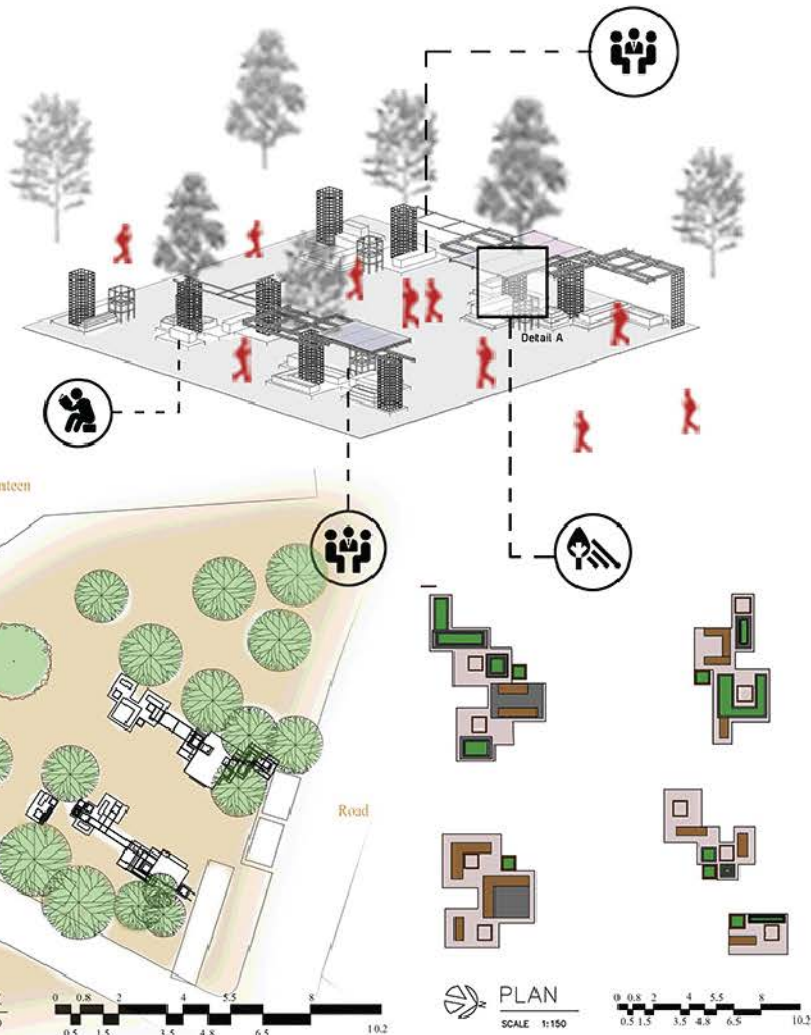
Using the techniques of jointing by local carpenter in designing the entire area to present localization for architecture

USER
The user groups are students and personnel of CMU.

Design thinking



Seating design, wood is used to make the top frame and then use the polycarbonate roof to prevent sunlight leaf out and also become a natural roof. The interior will become a green space with a function to sit and relax.





Second Prize



BLEND

PREEYANUCH JUNLAPAT

SATTAYA PILA

INTUORN HINMALAI

TEEJUTA CHANSEESOM

BAMBOO COTTA

NATHDANAI KUNAMAI

WUTTHIPAT YOSPANYA

SMITH SAROBOL





BLEND

CONCEPT

THIS PROJECT "BLEND" WANT TO ATTACH HIGHLY OF IDENTITY OF THE TREES. IN THIS SITE ; OPEN SPACE IN FRONT OF CHIANGMAI UNIVERSITY CANTEEN THAT SURROUNDING BY A DORMITORY AROUND CHIANGMAI UNIVERSITY. FOR THE ACTIVITIES THAT WOULD LIKE TO HAPPEN AROUND THIS PLACE IS FLEA MARKET AND PLAZA FOR AN ACTIVITY FOR STUDENTS PROF. AND OUTSIDER. BY USE OUR PROJECT TO ORGANISE THIS AREA TO BECOME A NEW PUBLIC SPACE.

FUNCTION

-SALES AREA -SITTING AND WORK AREA

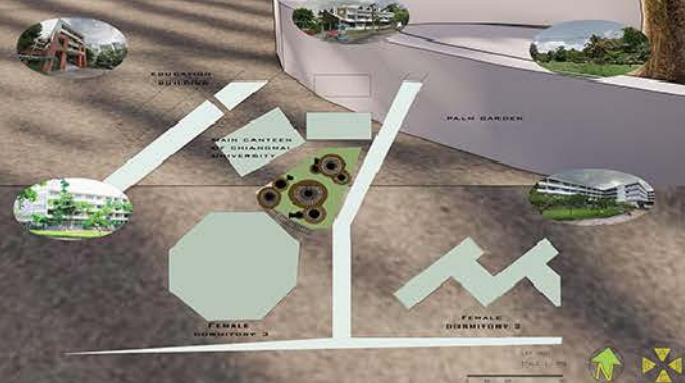
USER

-STUDENTS -TRADERS

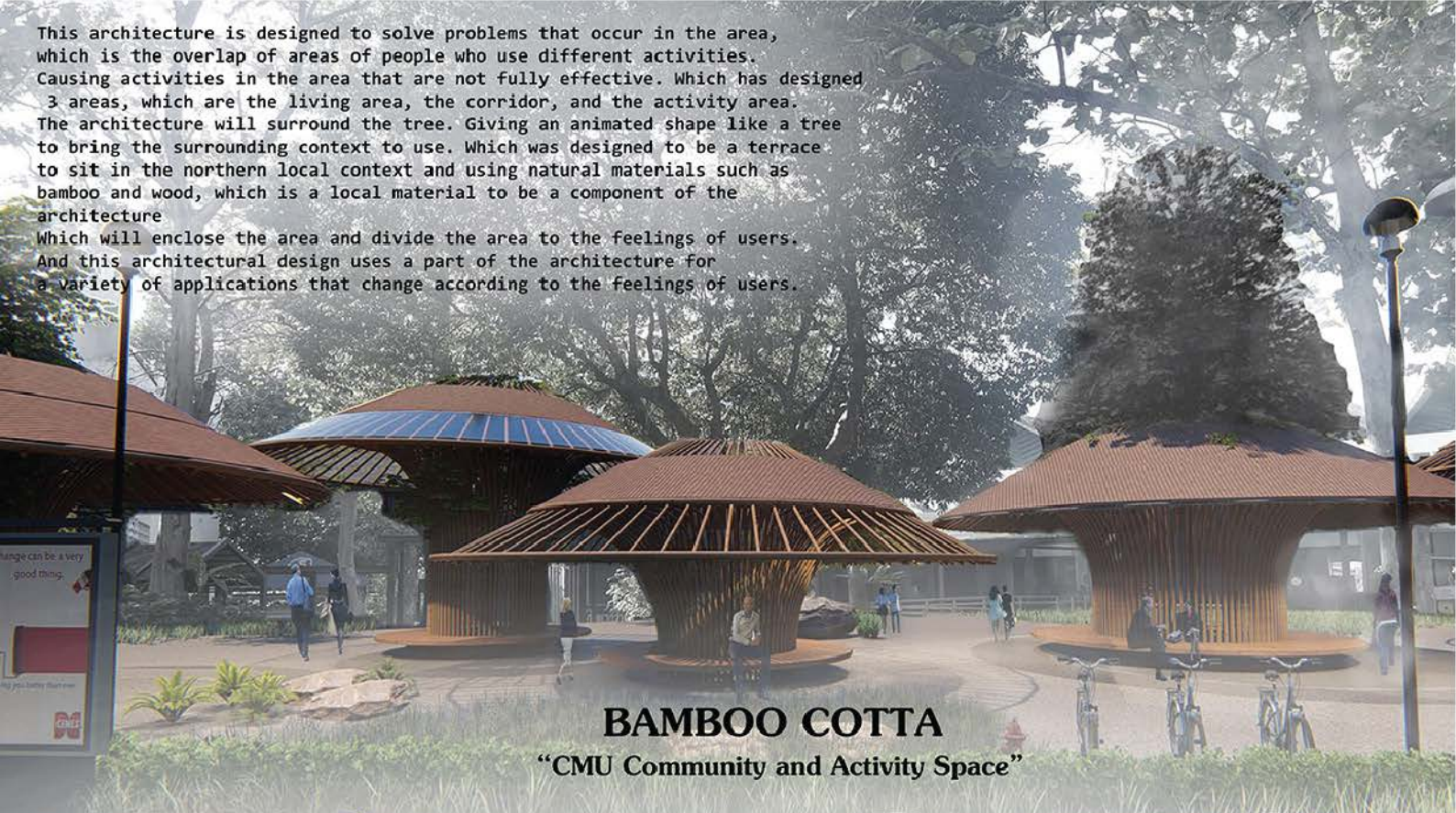
MATERIAL

- BAMBOO -WOOD

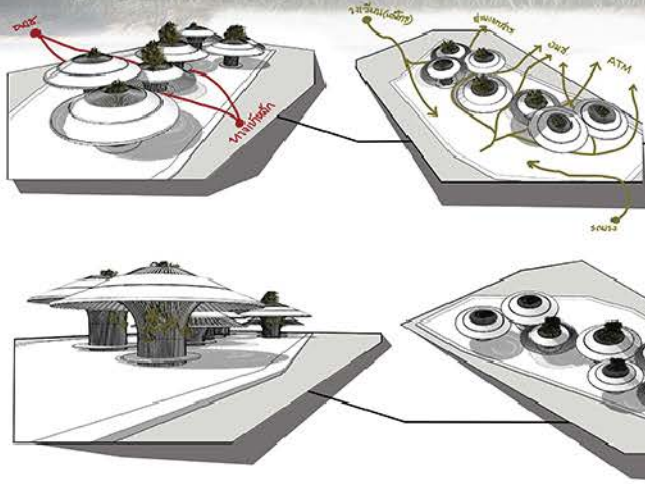
◦THE INTEGRATION OF LOCAL MATERIALS WITH THE ENVIRONMENT



This architecture is designed to solve problems that occur in the area, which is the overlap of areas of people who use different activities. Causing activities in the area that are not fully effective. Which has designed 3 areas, which are the living area, the corridor, and the activity area. The architecture will surround the tree. Giving an animated shape like a tree to bring the surrounding context to use. Which was designed to be a terrace to sit in the northern local context and using natural materials such as bamboo and wood, which is a local material to be a component of the architecture. Which will enclose the area and divide the area to the feelings of users. And this architectural design uses a part of the architecture for a variety of applications that change according to the feelings of users.



BAMBOO COTTA "CMU Community and Activity Space"



The space layout has laid the main entrance to the cafeteria CMU. There are 2 main corridors flanking the central building and there are distribution corridors from the central building.

Also has a duty to divide the use of areas according to various activities such as sitting areas to relax, passage way area and activity area.

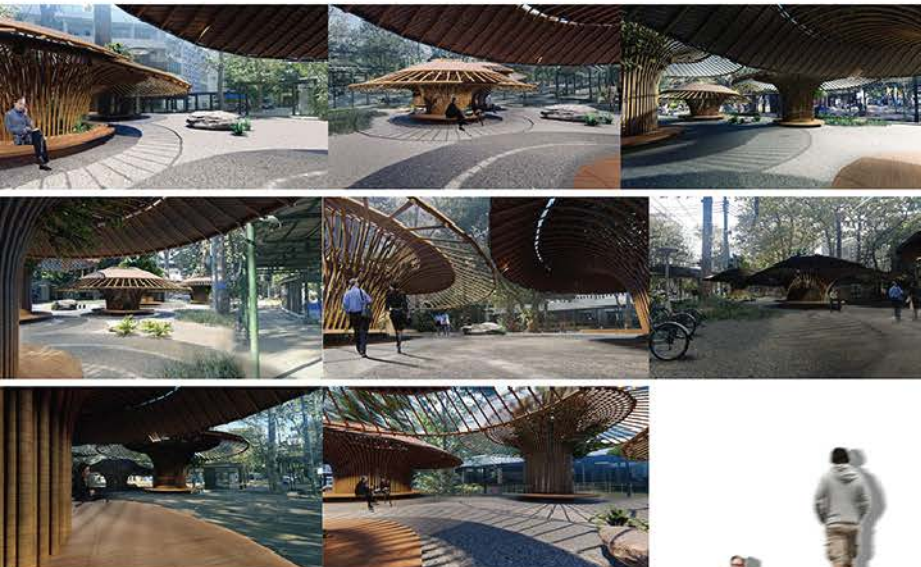


Bamboo



Terra cotta roof

Site's perspective



Front



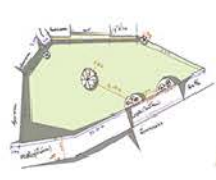
Back



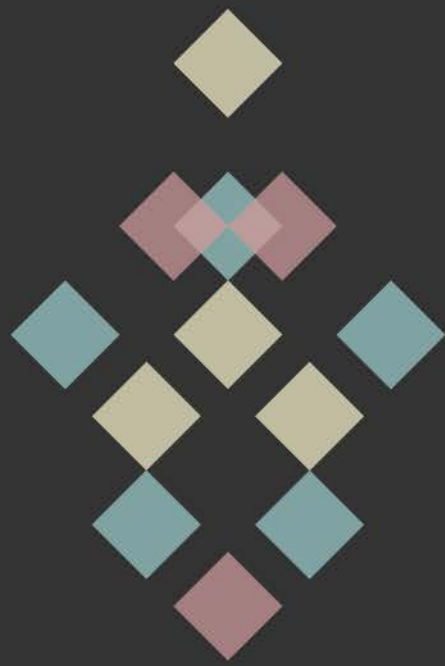
Left



Right

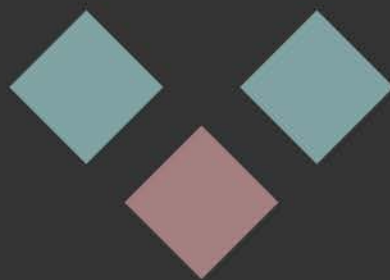


Bamboo structure, in addition to being a component of the seat around the tree





Third Prize



CMU Multi-Activity Ground
PHUNYAPAT ORPRAYOON
PATTANAN SRIVIPAT
RUJ-APHA VIBHATASILPIN
SAIKLANG KITMONGKONPAISAN

SHEN

CHUTIPA PAKDEE
TECHINEE KHAISIN
TIKUMPON JUNPONG

DE LEAF

NATTHAPON KLINFUNG
LUKSIKA WANGKRASEAR
SATAPORN NIMJINDA





CMU Multi-Activity Ground

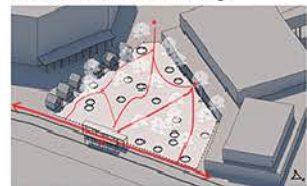
CONCEPT

A public space that is designed to be multi-purpose and flexible in order to accommodate various activities, since this location is a gathering spot, activity area and also acts as an intersection to various building.

SITE



Student Council building



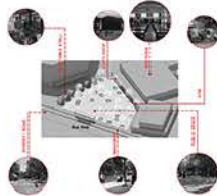
Circulation



Sun and Wind Path



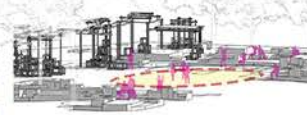
Gathering/Meeting Area Area acting as intersection to various area



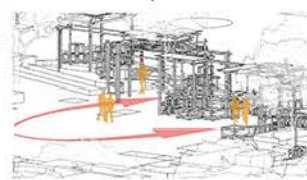
ACTIVITIES



The sitting spaces is created from elevated ground level. When combined with the wooden structure, creates a sitting space that accommodates various sitting gestures.



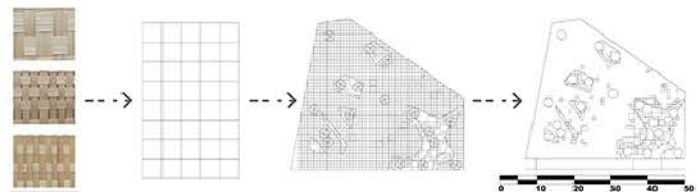
The space at the center is enclosed by the surrounding wooden structure to create court area that can be adapt to various activities.



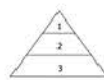
The wooden structures also act as gates or entrances to other court area.



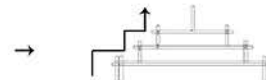
The floor plan grid is derived from bamboo wicker pattern that has been laid on the site plan, which is used to determine the elevation of the ground level that will be served as sitting spaces and also area for activities.



The wooden structure comes from the idea of using "Ma Tung Mai" (timber structure that is used commonly in Lanna architecture) to complement the sitting spaces. The combination of elevated ground level and the wooden structure create semi-enclosed area for performance and entertainment area.



"Ma Tung Mai" is pyramid-like roof structure.



The characteristic of this structure is that the structure is gradually decrease in each level from bottom to top.



This project uses this characteristic to create structure for the gates.





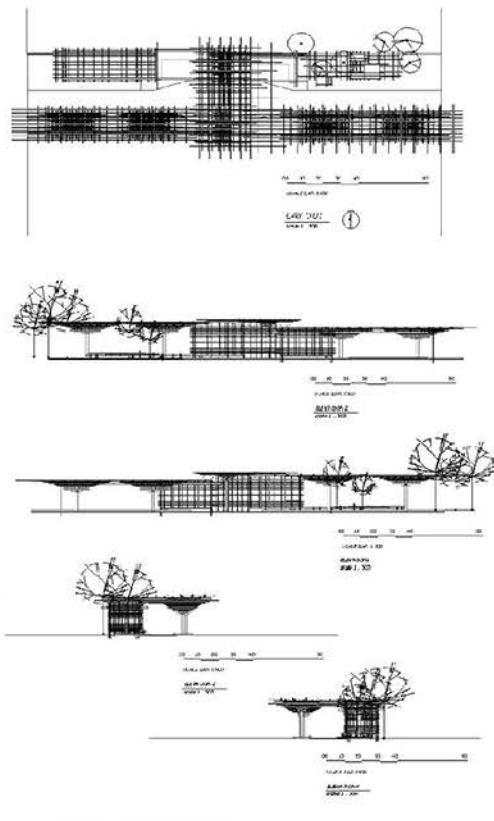
Location

SITE Located at the location of the purple bus waiting line In front of Chiang Mai University

SHEN

Conceptual Design

"SHEN" get design ideas from the vernacular in the Social Environment and Human Society Human nature SHEN is designed as a public space. Based on the relationship of man and nature in the design SHEN is designed to analyze the location and the purple bus in front of the university campus. The analysis Found that the use of the area. I was waiting for the shuttle bus is late and people were shopping in the market in front of the design concept of raises in a new line of SHEN History of the area is designed using the 3 strategies is Rebrand to add value to the area. This makes the activity tame User Revival developing some of the public areas, Relink the tame to the Design of SHEN has brought structure Tong used to load and force distribution. The placing of the joist, causing a build strength as a convinced Social Human Environment and the same.



User

- CMU student
- Tourist
- Athlete
- Children

Function

- Public transport

Material

- WOOD
- CONCRETE
- STONE
- STEEL
- MIRROR





DE LEAF

CMU NEW PUBLIC SPACE

Location : Activity space
in front of CMU Main Canteen



CONCEPT

The leaf are falling It is like a signal of the coming seasons change. Is like changing into a new era of Chiang Mai University. That has changed in various fields And the old leaf that have fallen to the ground, showing signs of growth Therefore, the overlapping of leaf is used as a process to design the area while surveying the original activities and problems of the area in order to design as a public area.

PROGRAMS

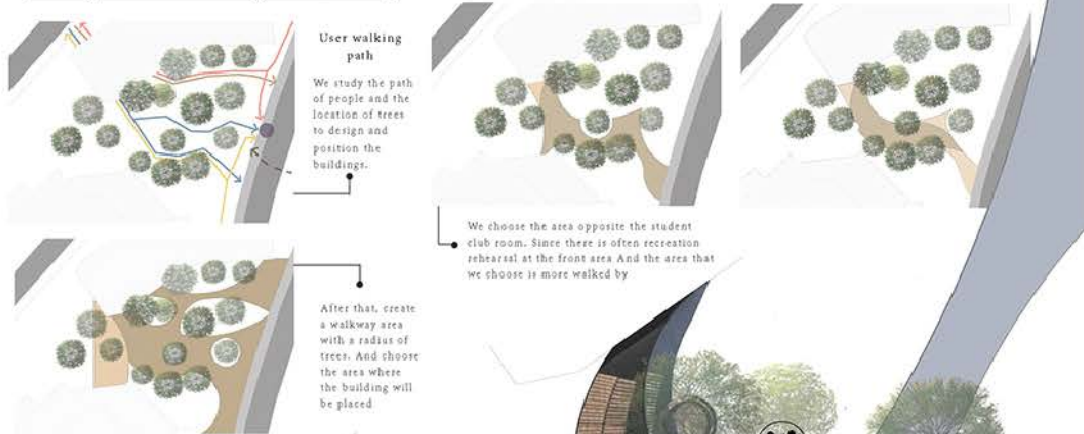


In this program, we asked students and other users and surveyed the area to ask about the problems and benefits of the area. Including the need for new facilities

Most problems are

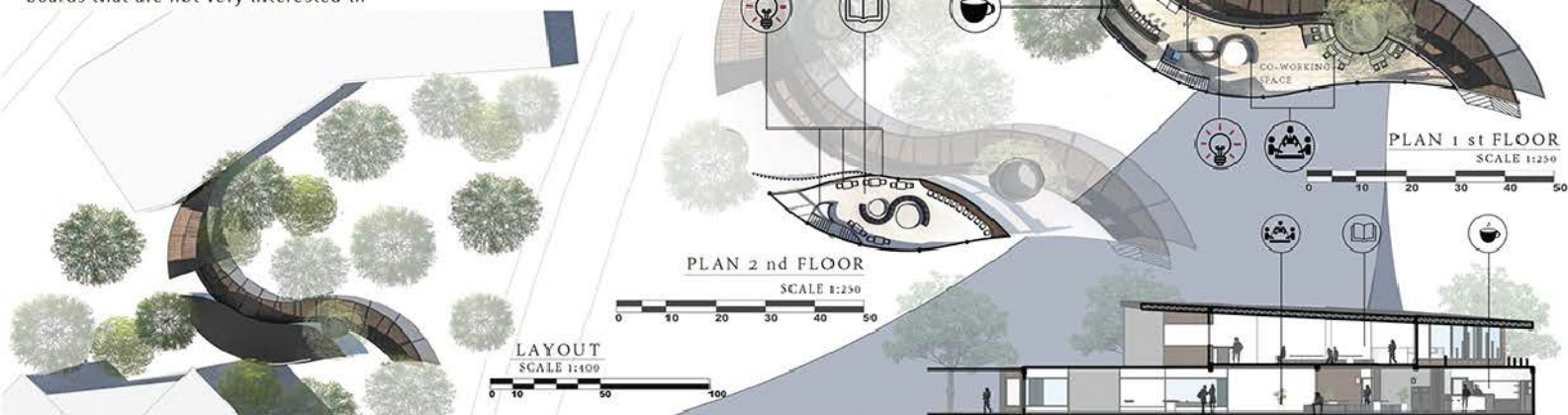
1. There is no covered walkway which makes it difficult to get into the building during the rainy season.
2. There are not many facilities to wait during class, such as sitting areas to relax.
3. Peaceful area for reading books
4. Problems with advertisement or public relations boards that are not very interested in

Analysis & Design Develop



USER

- Student
- General



INTERIOR



EXTERIOR



SECTION



ELEVATION




Popular Vote

320 likes + (379 shares x 3 points) = 1,457 points



Khein

1. PANUWAT DONTHONG
 2. WARAT PHANSANESRI
 3. TAI VILAINATE
 4. PUPING HARINTARAT
- 



Khein

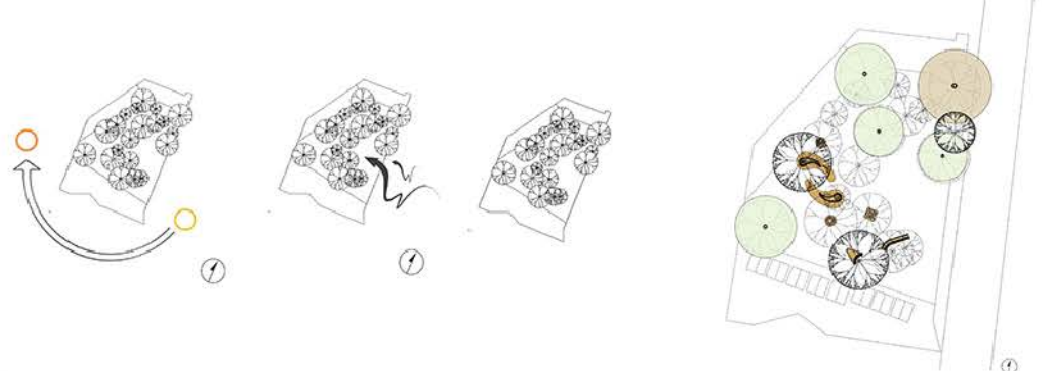
CONCEPT AND INTRODUCTION

Today, the area in front of the cafeteria ๑๗๕. is still a disconnected area between those who work in the area. Therefore, it leads to the development of a good, convenient, safe, inviting space for connecting with the atmosphere and having activities to support socialization of the users of the area. Therefore, leading to the origin of the event Lacquer ware is a work of art of the Lanna people and is an appliance. Involved in the daily lives of the Lanna people in the past When referring to lacquerware, it generally refers to utensils that are woven with bamboo and coated with love to write decorative patterns

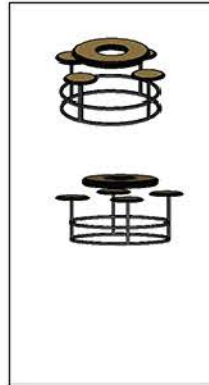
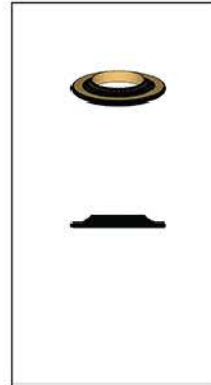
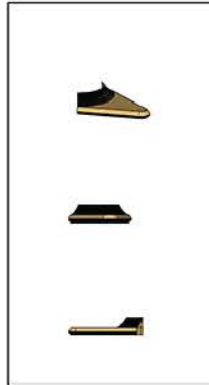
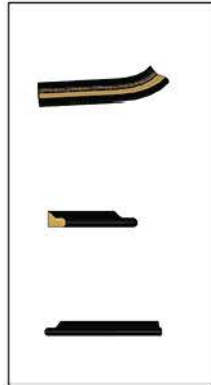
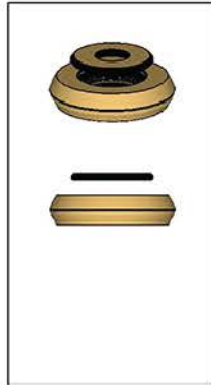
CONCEPT PERCEPTION



DIAGRAM



DETAIL





Honorable Mention Prize



LAN MAI

Public Space

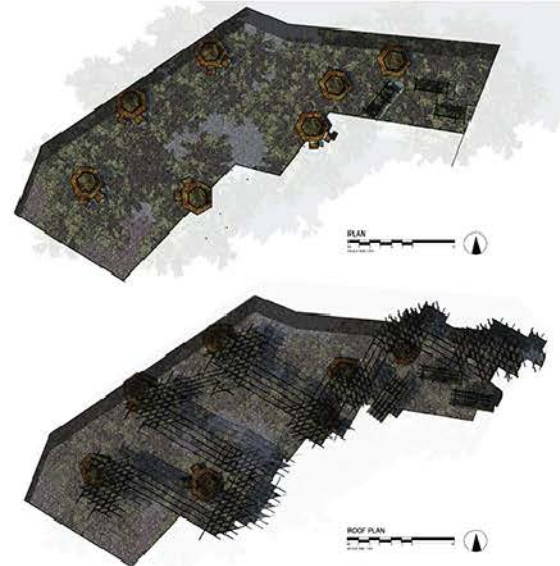
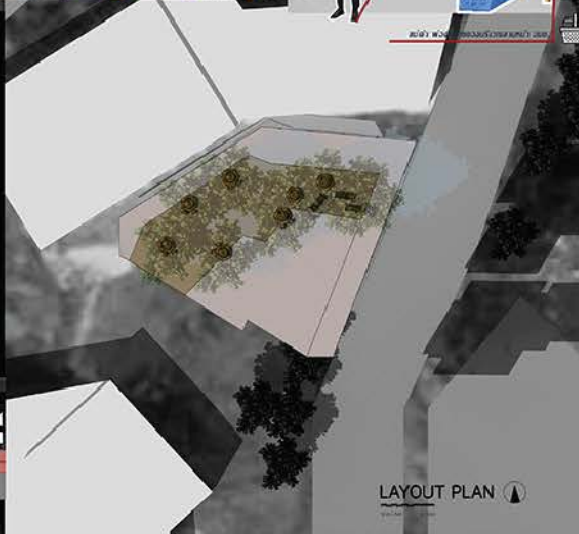
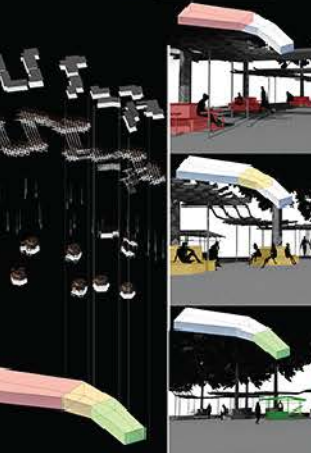
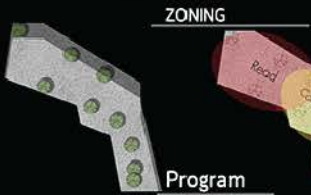
SITE ANALYSIS

USER

Concept



The art of 'basketworks' have its own identity in different regions but yet reflects the local geography, living conditions and lifestyle. Furthermore, its the valuable attainments passing through generations. The differences of the way they do basketworks totally tells a story behind their own history. This project was inspired by the beautiful pattern of 'บุง' or the traditional fruit container in a local community around Chiangdao district which was made with bamboo and that's a great representative of their ways of life and their agricultural field.



PERSPECTIVE



NEON GEN-NEISIS

CMU co-working space



Lifestyle Demographic Data

Co-Working Space

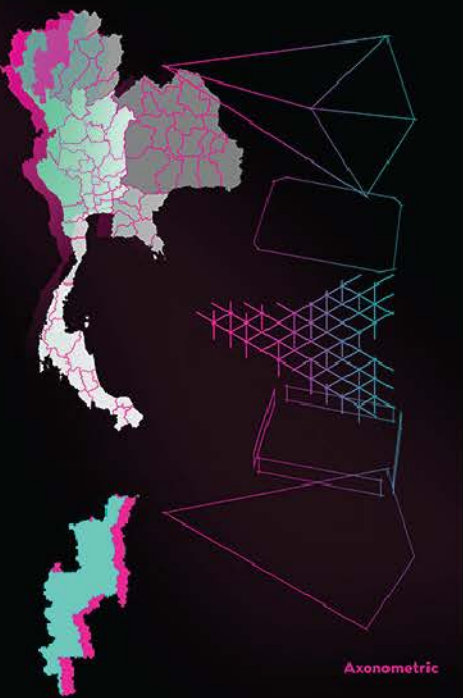
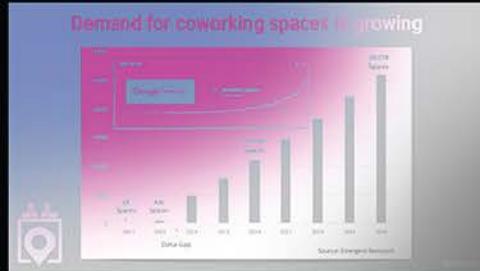
New a global phenomenon, co-working spaces are popping up in most major cities. Co-working is the new path of melding life and work in a sustainable fashion. It is the global linchpin at the intersection of real estate, technology and community.

Work-Life Balance

In 2018, we found that knowledge workers, on average, have 2 hours and 48 minutes a day for productive tasks. The rest of the day is spent on neutral and distracting activities. In fact, 21% of the workday was spent on entertainment, news, and social media.

Meeting Space

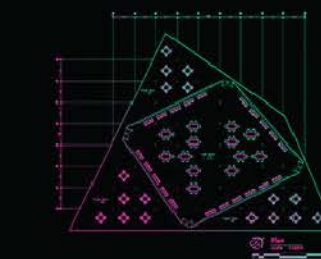
Now a day, people communicate with others much more than before. For social interaction, it's critical to have space where people can engage with one another. Like talking or discuss something, even place where people can have a meeting.

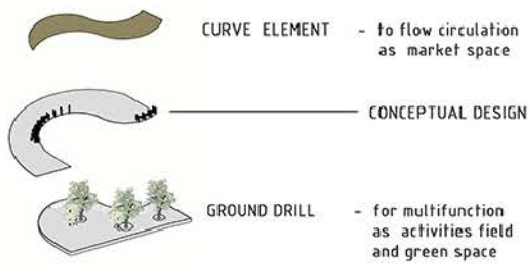


Process From Layout

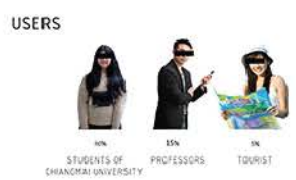
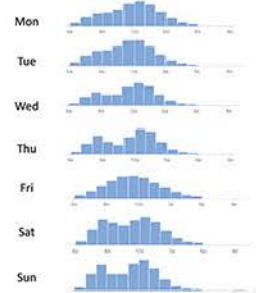
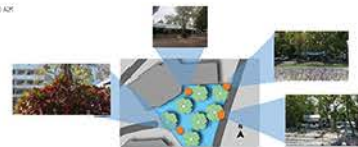
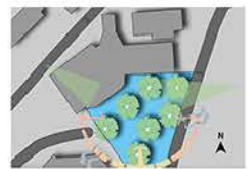
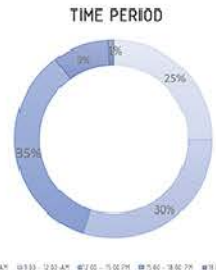
Concept

The Neon Gen-nesis project is a sparking place for CMU in the day and night on the front of CMU's canteen court that is the main node to connect between student's social life and study building. The process of project was thinking deep in the access from surround building and using axis for circulate the circulation among the place that would not disturb any old activity. This project would be the 1st waking up station 24hours for CMU that support people to doing various activity as the New-Gen life.





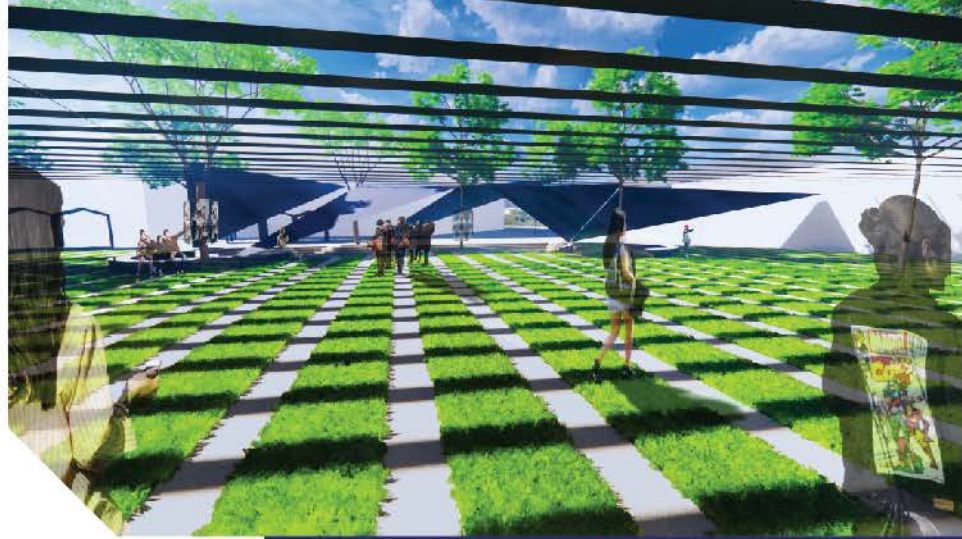
SITE SELECTION



INDILOCAL

Concept

"MOR - HOM" is a local indigo fabric of Phae which has a distinct identity and unique. It was influenced by "Tai - Paun" who emigrated from Laos. We choose a unique process about how to make a "MOR - HOM" also we analyze the process to make a design and function.



Process of Mor - Hom



1. Planting

The local people in Phae, have planted "Hom" seed around their house and waited for growing. On the other hand, we use the tree around the site to make a shade protect users from the sun.



2. Fermentation & Dyeing

In the fermentation and dyeing process must use a large water jar to put Hom's leaf into the jar like the users using space for sitting, waiting and make some activity also we design pot-hole like a jar to make activity inside and take your time.



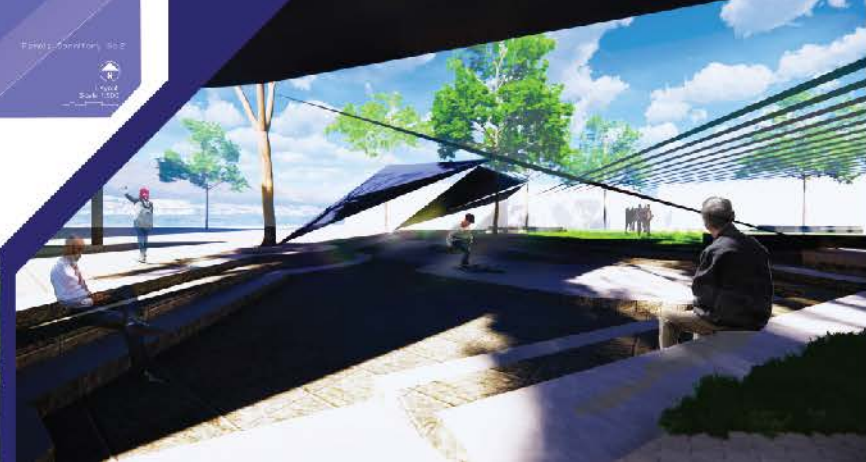
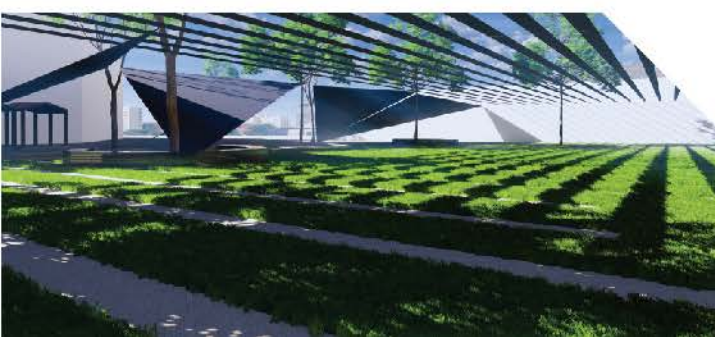
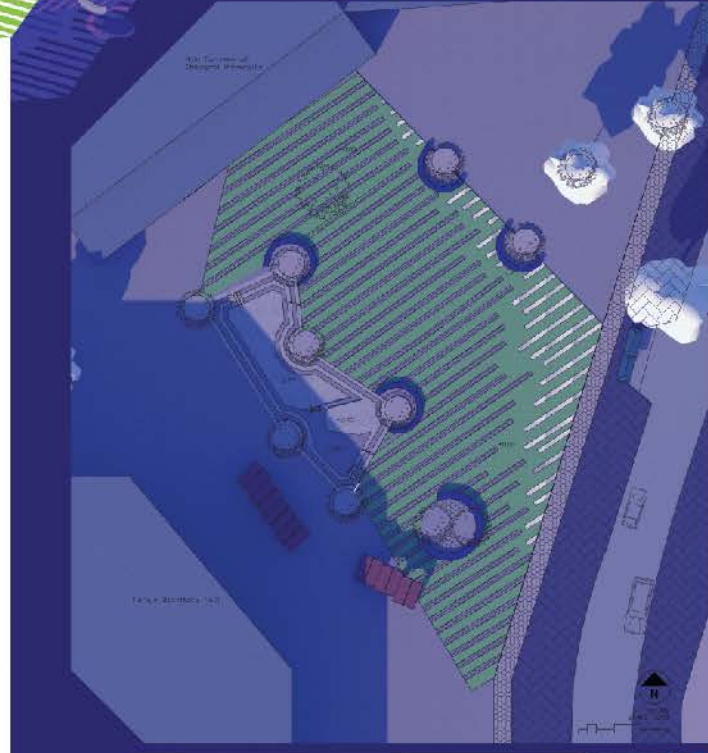
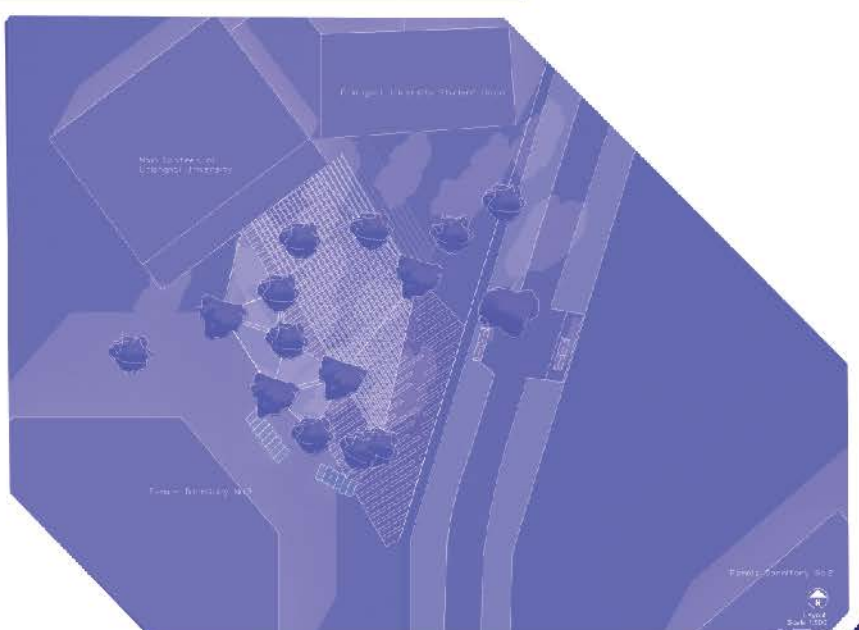
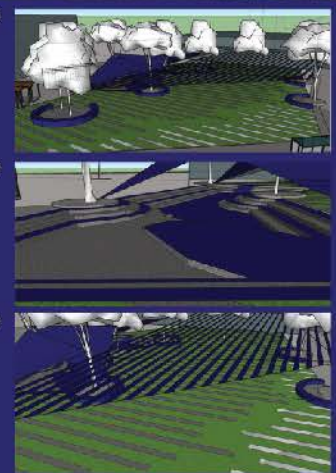
3. Weaving & Knitting

In the knitting process, it proves character about a thread across a thread like they across on the other axis, so we design to use fabric on the head to make shade on the floor that has across from other the axis.



4. Clothesline

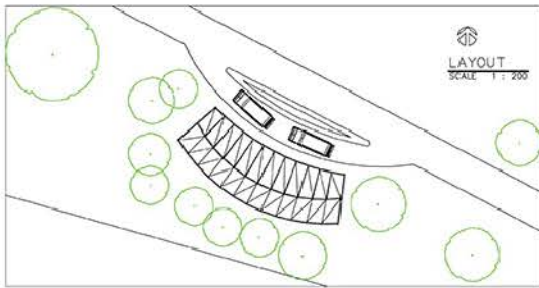
The Tensile Membrane design from a clothesline. It can make a shade and space.





JK69

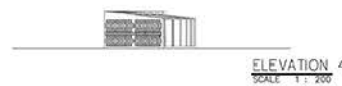
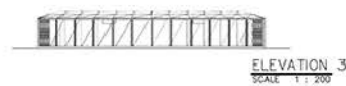
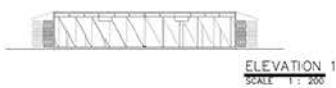
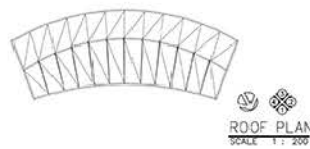
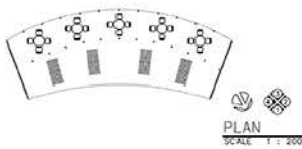
PHASIN



Concept

Project start from site study. We studied activities that occurred around it and found that people tend to sit and wait for the bus or take a break after jogging. And then we designed public spaces that meet the needs of users. We have use traditional Sin or traditional sarong patterns to design details in the project.

Sin or traditional sarong is traditional clothes that northern Thai woman wear in the past for various ceremonies. Also has many various pattern depends on various provinces.



SONTHAYA

CONCEPT

The inspiration comes from the context of the surrounding area trees. Have applied the form of the tree to be the pillar of architecture. By using natural materials to create architecture which is bamboo and with the use of battens are the Lanna patterns that show communication to vernacular of the area.



CONTENT

The problem of the site is car parking space and restroom for People who walk in the Kad-Hna-Mo market. Therefore has built a parking place and restroom.

MATERIAL



BAMBOO



BAMBOO WEAVE



CONCRET



WOOD



SITE



ELEVATION 1



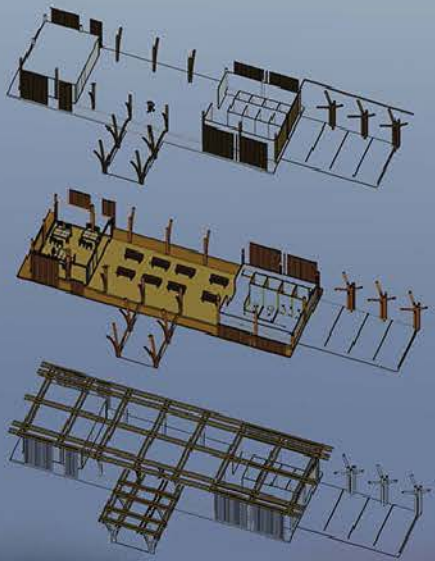
ELEVATION 2



SECTION 1



SECTION 2



PLAN

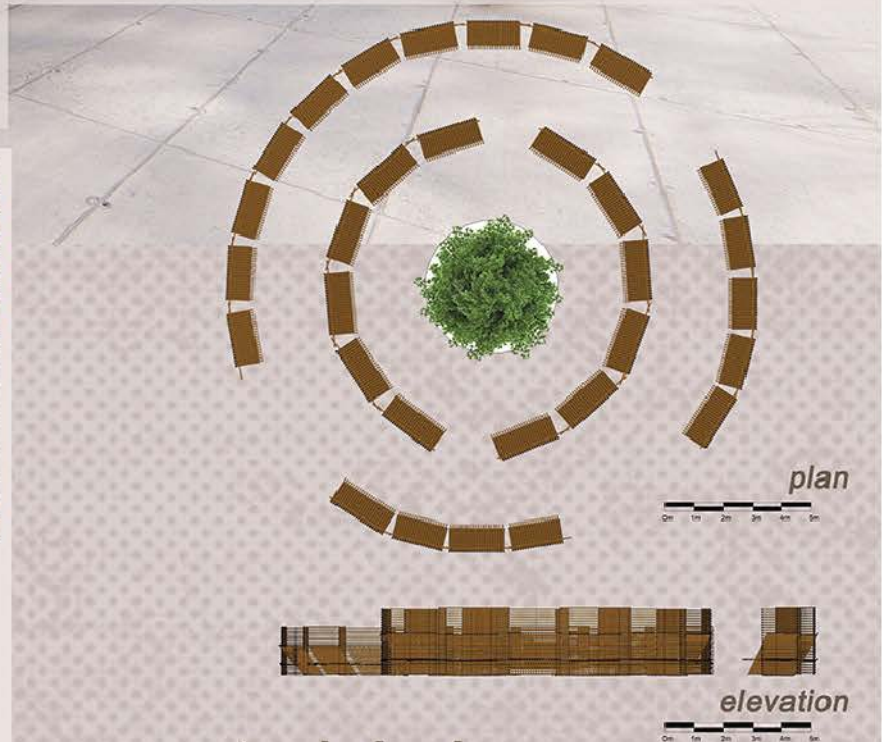




Calмест



- **site**
- CMU canteen
- RB5
- Female dorm 2
- Female dorm 3



conceptual design

Use the lifestyle stories of the hustling student of cmu. Therefore wants to create a space that is different from the context. In other words, the area is calm but still coexists with its own context. By studying the construction of sound filters from local materials to create an area that is calm, meditative and relax in the center of the area of Chiang Mai University where there is a lot of traffic and disorder



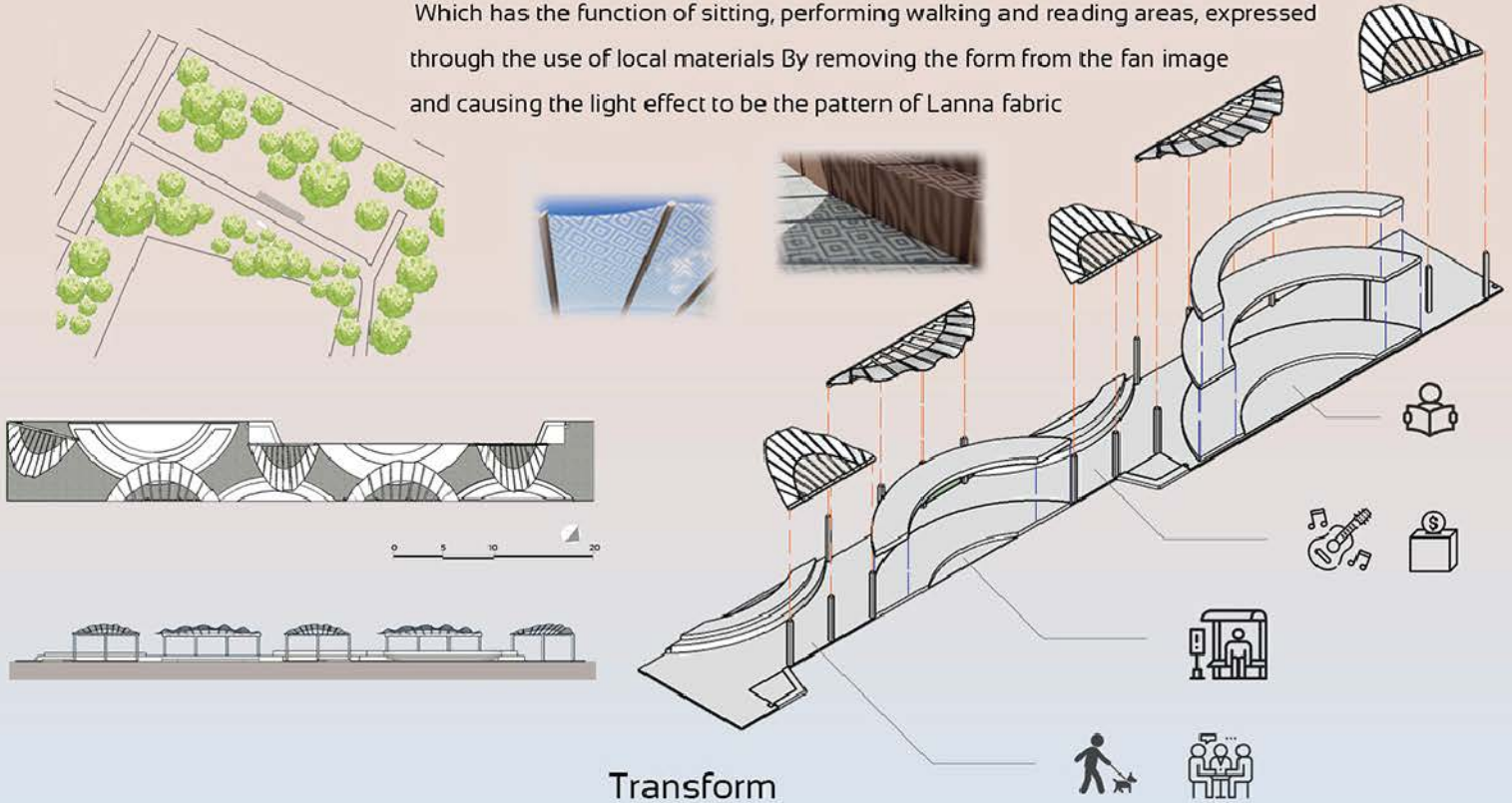
Detail

Scrape the surface of the bamboo to create a rough surface to help absorb the sound.

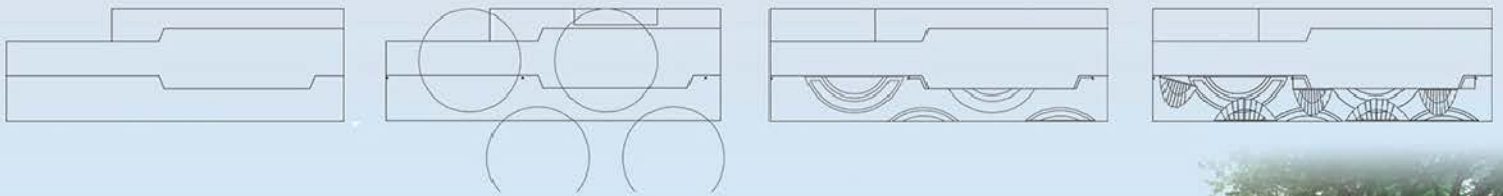
COOL SHADOW

Concept

This new public space Designed by analyzing the activities that occur within the area
Since this area is a space connecting the university campus with the outside community area
Which has the function of sitting, performing walking and reading areas, expressed
through the use of local materials By removing the form from the fan image
and causing the light effect to be the pattern of Lanna fabric



Transform



A00B-A00N

PLATFORM LOCAL
cmu shuttle bus stop in front of cmu



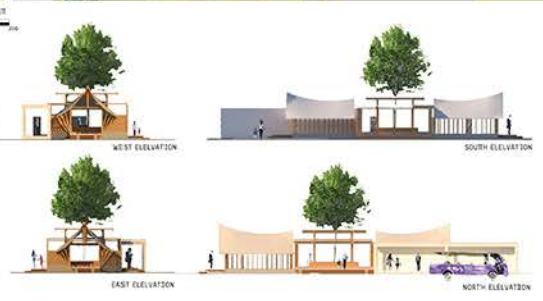
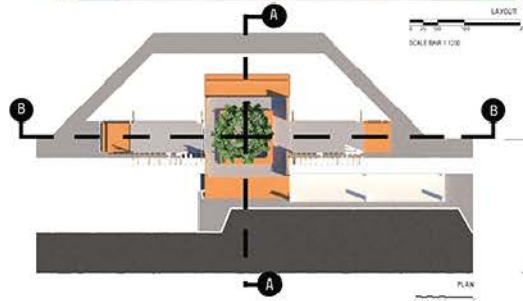
CONCEPT

Space for CMU shuttle bus that transcribe the feeling of the feeling of the trien in the lanna house, which has function to meet and converse, receive guest and rest. There has shade of tree that provide coolness and goodness place. Finally we increase funtion for user who go to shopping malin market in front of chiang mai university.

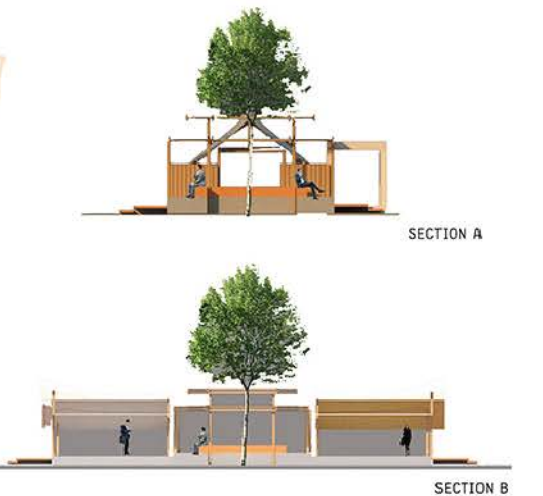
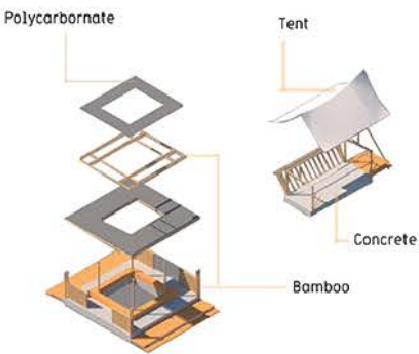


USERS

-  college student and teacher
-  sport mans and runner
-  visiter and tourist



DETAIL DESIGN

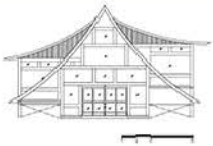


Conceptual Design

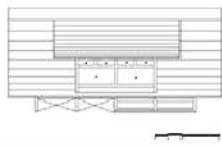
PEGASUS is working space specified for Chiang Mai University students Designed by using Mah-Taang-Maii -- roof structure which is a Lanna style structure as a concept, located in front of the CMU Main Canteen. Which is one place that students use to read books, work and many activities Therefore often not having enough space to use.

This working space will increase the space for reading, working or activities for Chiang Mai University students. And is one option that students think of.

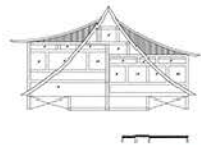
Elevation



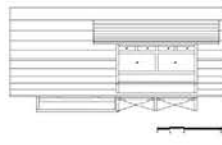
elevation A



elevation B

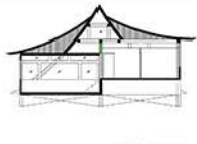


elevation C

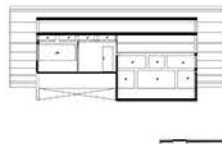


elevation D

Section



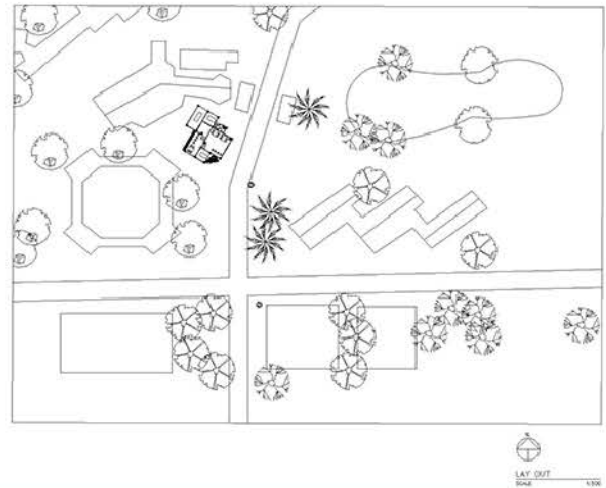
section 1



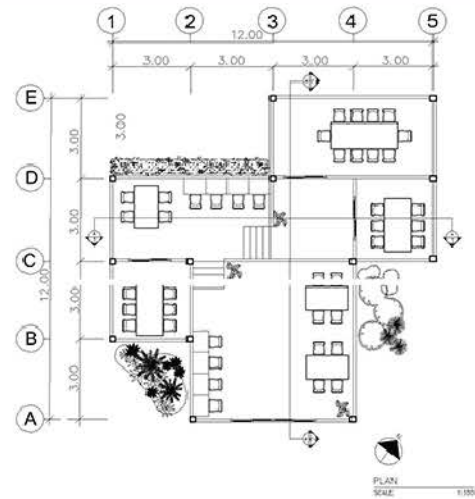
section 2

PEGASUS

Lay out



Plan



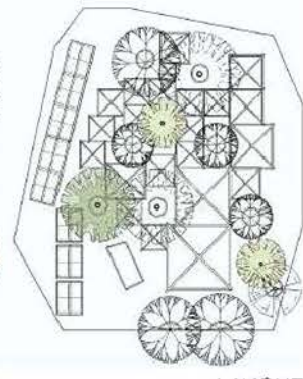
MEMBERS

611710032 Tittaya Gosonhemmanee
611710036 Thunyalak Phomsak
611710045 Pawarisa Worasa

PERSPECTIVE



SITE



LAYOUT



ARCHITEXT DATA
TREE-HUMAN



MEENAI

The building is a space for doing activities. There's providing space to help people manage a space for their activity. So, the zoning create for more private. Moreover, there are sitting spaces for rest. And, there's a path for the users that don't want to join activity. All of these, our project will improve managing amount of people per area at this site.



INTERIOR



ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D

MATERIAL



BAMBOO



CONCRETE





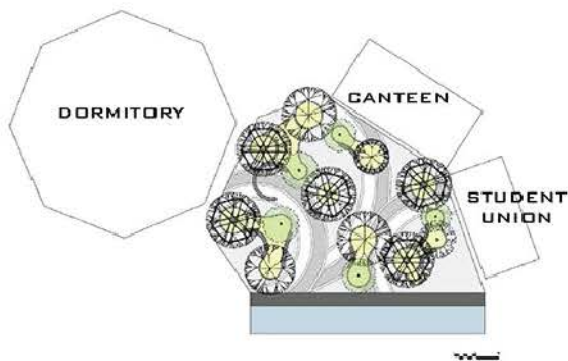
BUTSAPAWAN

CONCEPT

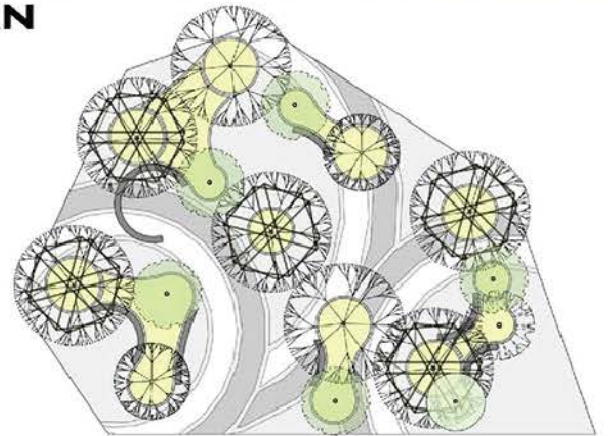
THIS DESIGNING LOCATED ON THE AREA IN FRONT OF THE MAIN CANTEEN OF CHIANG MAI UNIVERSITY. IDEA SPARKS FROM AN OBJECT CALLED TA LAEW, AN AMULET OF LANNA PEOPLE MADE OF BAMBOO, BELIEVED ITS CAN PROTECT USER FROM DANGERS AND ARE ALSO USED IN IMPORTANT CEREMONIES SUCH AS "HAEK NA (AN OPENNING OF HARVEST SEASON)" DESIGNERS BROUGHT THE CHARACTERISTICS OF TA LAEW, THE BAMBOO WEAVE TOGETHER INTO A SQUARE TO CREATE THE SPACE. THIS PAVILION DESIGNED ALSO GIVING SENSES OF SECURE WITH SHADY AND COOL FOR THOSE WHO USE



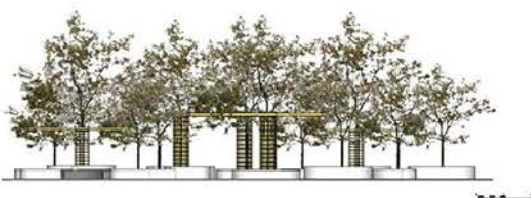
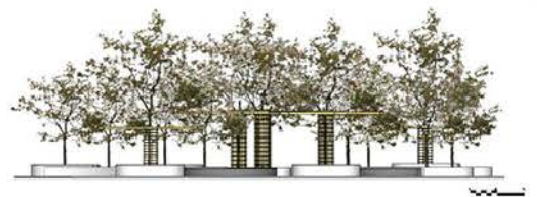
LAYOUT

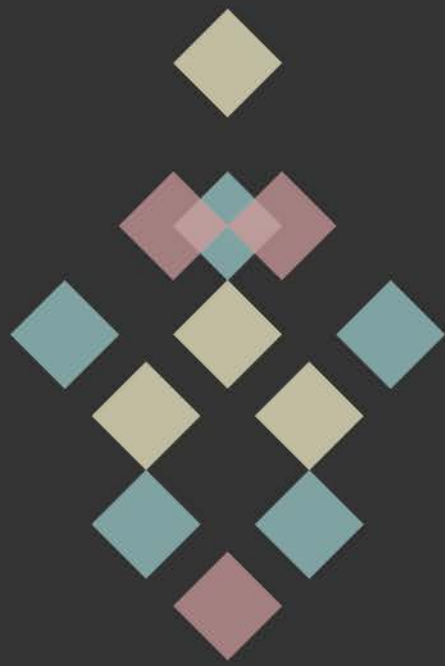


PLAN



ELEVATION







Competition Participants





MIENG

Mieng is a Lanna's appetiser.
It's popular for welcoming the guests.
Nowadays it's fading by the time.

With this concept of Mieng,
We link it to design this multi-activity space,
for visitors to do activities together.



USER

- STUDENT
- PROFESSOR
- and
- EVERYONE

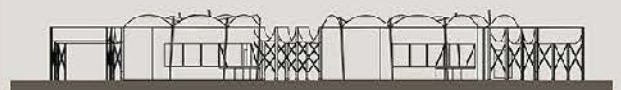
The design might come from folding Mieng or the building that could be folded to keep and reform in alternative ways.



N
PLAN
scale 1:150



LAYOUT
scale 1:500



ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D



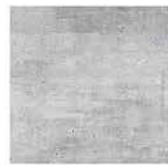
BACK TO BASICS

Background

From site surveying (CMU's Bus terminal), This area is for CMU's-bus to pick CMU's students up. We decided to maintain current program which is "The area for sit waiting bus" and develop current program by design additional to fit user behavior even more.



Project's Materials



Concrete



Bamboo



Greenery

Conceptual design, "Bamboo"

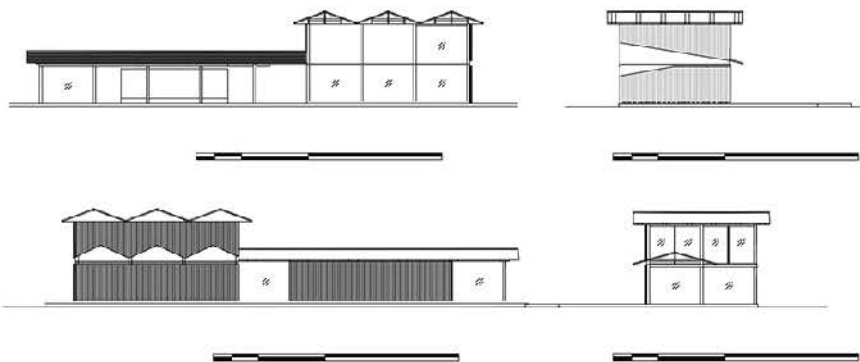
In the part of design, We've chosen the "Bamboo" which is a natural material, local easily affordable thing. Becoming the part of the architectural design; façade, overall design and ornament Bamboo have been used in Chaing Mai for a long time in Lanna people's everyday life, have a repetition and by doing this, it created unique knowledge and culture for Lanna's.

User Groups

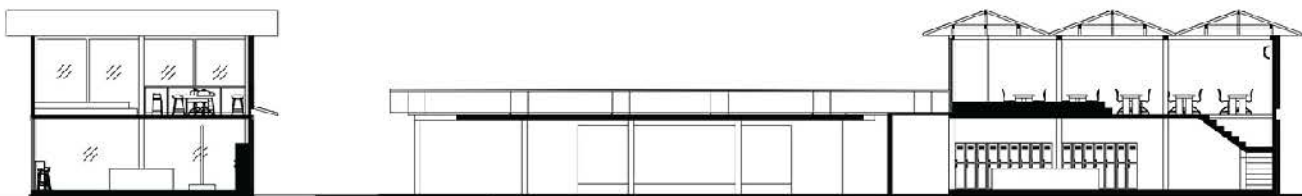
There're 2 kind of the user behavior that we've surveyed which are

1. Temporarily waiting for bus
(these users are CMU's students and CMU's staff)
2. Long-standing user demanding quite a long time working place
(Such as digital nomad, businessman etc.)

Elevations 1,2,3,4, Scale 1 : 200



Section A-A & B-B 1 : 100



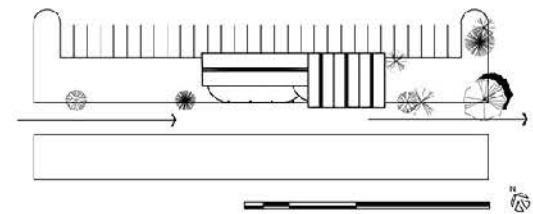
Section B-B

Section A-A

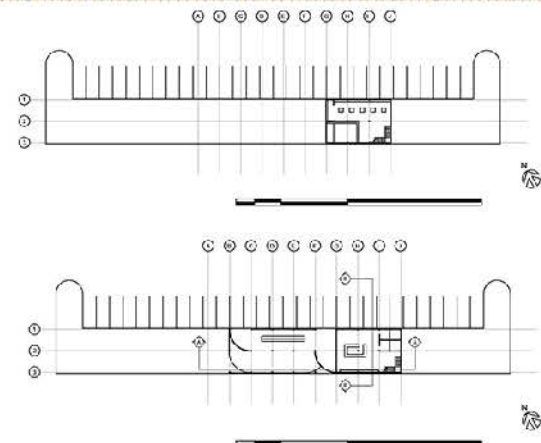
Functions' details



Layout 1 : 500



Plan 1st & 2nd floor 1 : 200



Participants (Student)

1. 6917100xx Mr. Rattasak Morrakotwjitk
2. 601710027 Mr. Thanapong Satapornnannt
3. 601710039 Ms. Napessri Nanekrungron
4. 601710056 Ms. Mananat Tarhataweepat
5. 601710063 Ms. Wanvalee Khamnuan

WHAT ARE THE NUMBER? ARE THEY READY?



the original design is blocking the view of seeing the bus coming by forcing people to look at the view out side of the bus stop.
but the problem is actually people are more want to look at the back side or right side of them as well because when the bus is come, people want to see that is it the right bus for them or not?



swivel chair?
to let people turn around while they are waiting for the right bus number to come

Passenger: what are the number of the bus
Driver: Are they ready



but there is the selling drink machine place on the area that could usefull.



an image of the side view of the bus stop that remove the side cover, one of the solution regarding visibility.



Separate and manage the passenger into particular bus number to help driver recognize the passenger that are ready



the moveable chair that can moved toward bus on the right side automaticly when bus going to arrived helping people to easily see the bus coming on the right side and also give it a sign to the driver that there are ready to go



this is the drawing of the example of the wide mirror that mostly present in the alley, we got an image of this mirror as it contain practical of the mirror and the aesthetic of the mirror in dark alley



this is the image of the mirror which design to reflect both side for driver and the passenger alike. as the passenger and the driver can see other side preparing to ready to go.



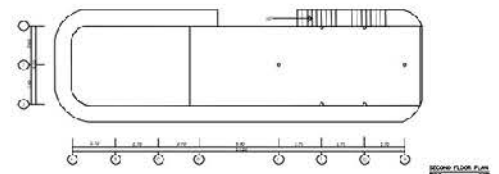
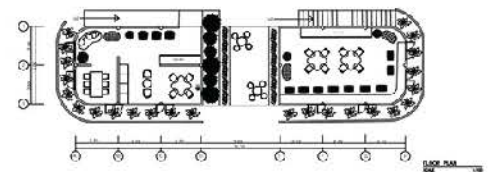
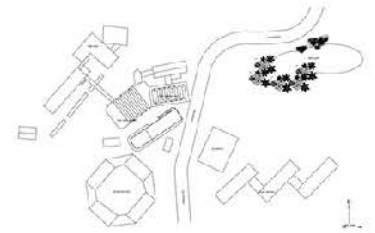


TREST

TEST OR REST

Concept

Public spaces for people to meet to do activities together in any form like the working space for students. Sometimes it may be an area for students to relax during the class. Which reflects the Lanna locality with the use of bamboo materials combined with modernity. To blend it with the surrounding environment.



User



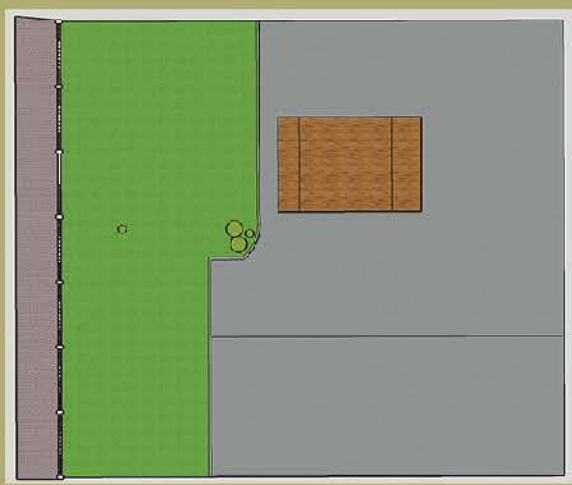
TRANSPORTMER

CONCEPT

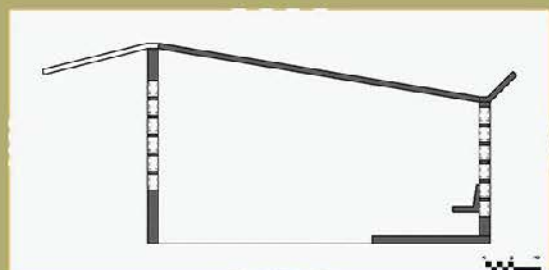
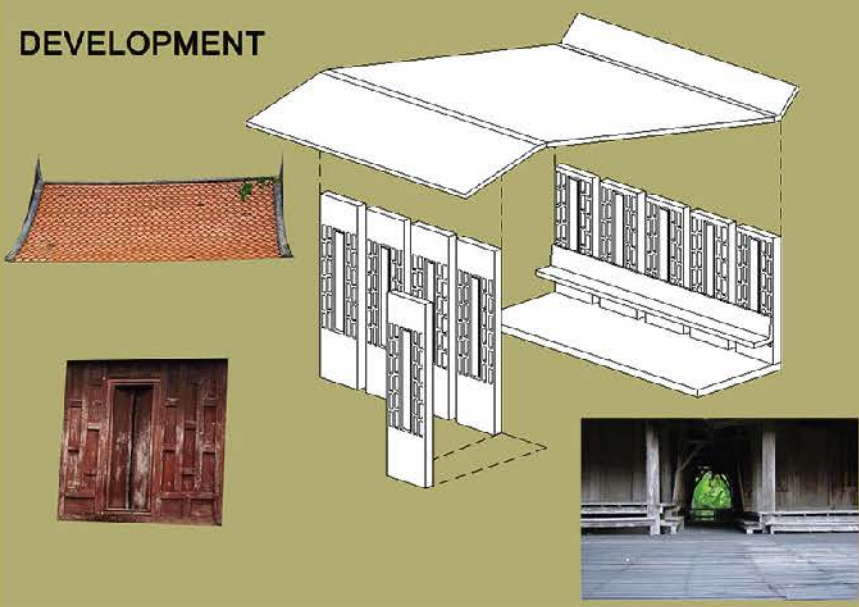
Was inspired by the structure of Thai Lanna Houses by applying to the walls, roofs and terraces to develop the structure, shapes and composition in the design of this work



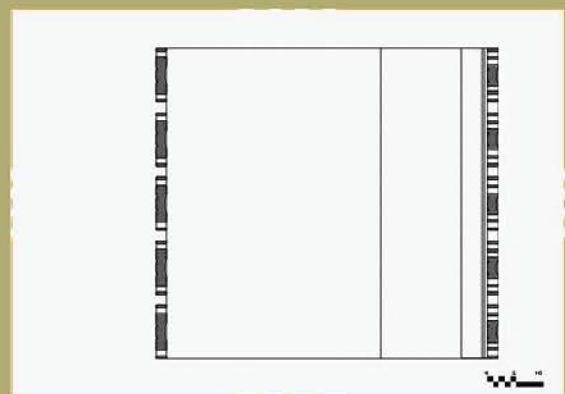
LAYOUT



DEVELOPMENT



SECTION



PLAN

Day and Night

Bright and safe

concept

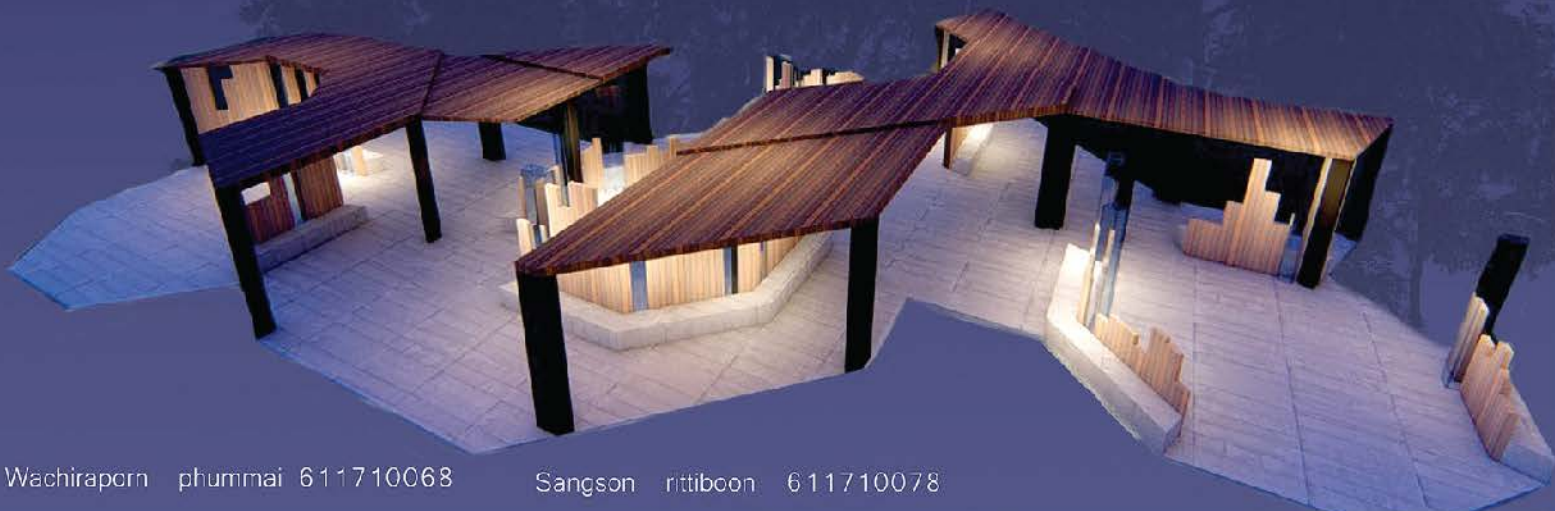
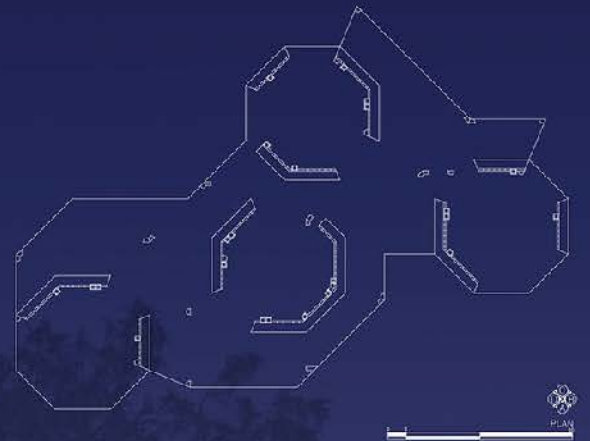
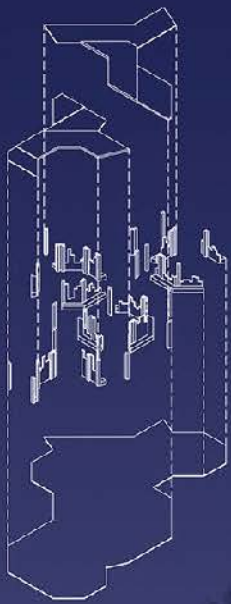
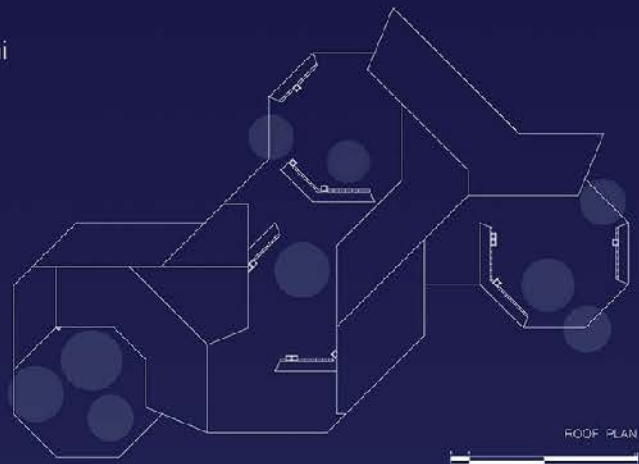
EO lantern is one of the lanna lanterns which are used for decoration in Chiang Mai houses. according to their beliefs, it gives them a good life and prosperity



this public space work was designed based on Chiang Mai custom, set on central CMU area. octagonal shape of lantern from was used to be the main element for design. it respond to uses for waiting for car in the rush hours and setting light on night

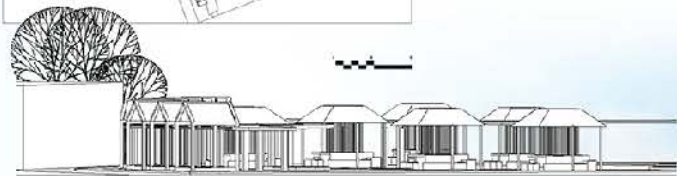
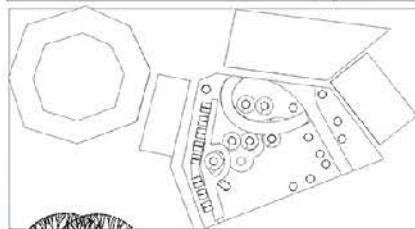
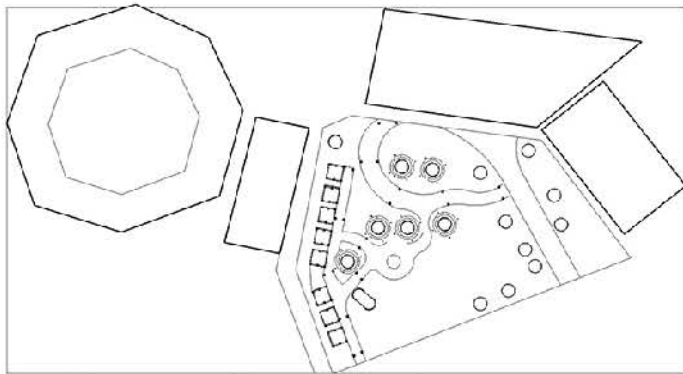
Function

lighting on night seat for waiting for purple cars and friends





COMPLY WITH ARCH



CONCEPT

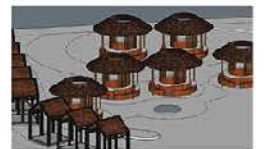
Public space for students and staffs of Chiang Mai University to accommodate people for shopping at the store. Sitting and reading space uses the truth of the material to represent the vernacular of Chiang Mai. The idea comes from the access to the area of the activity area that has a lot of people all the time. A public space design to promote various activities of people to solve problems of the area such as insufficient public seating or have no shelter for rain when it rains and use the space to benefit.



The pathway around the tree arises from human contexts.



Curves give a feeling of relaxation when combined with the surrounding area.



Apply native materials to the environment and climate.



ELEVATION II

ELEVATION I



BOS ANG

CONCEPT

The Bo Sang umbrella is one of the living lifestyles of the sankamphaeng villagers in Chiang Mai. It is a craft that takes time from the villagers became an umbrella. Which is intended to decorate so beautifully until the Rom bo Sang festival

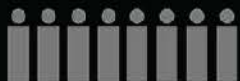
It was created to appreciate the umbrella and join activities with the locals we bring an umbrella to design a public space in front of the dining aarmorchor hall , which is intended to be. the joint activities of several groups and the activities of the University.

DETAIL

structure - Metal , Glass

USER

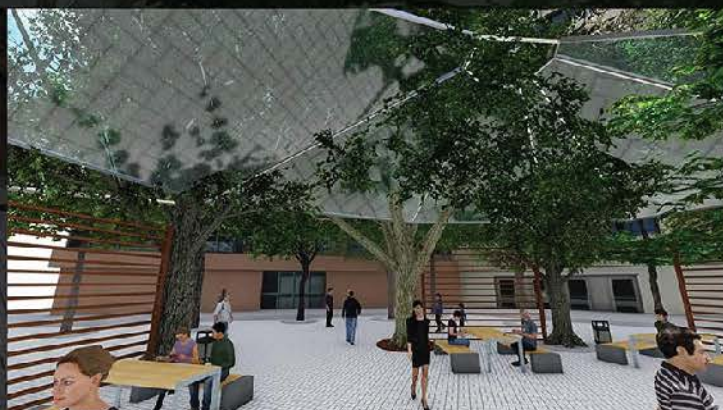
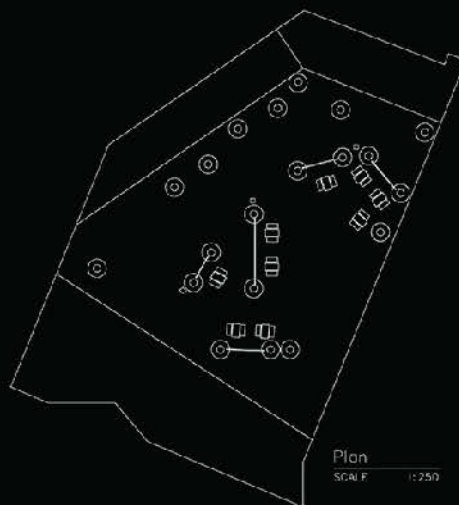
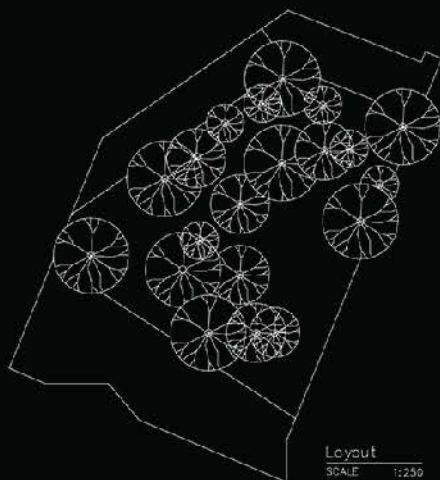
08.00 - 12.00 PM



12.01 - 16.00 PM



16.01 - 00.00 AM

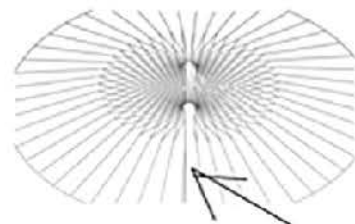
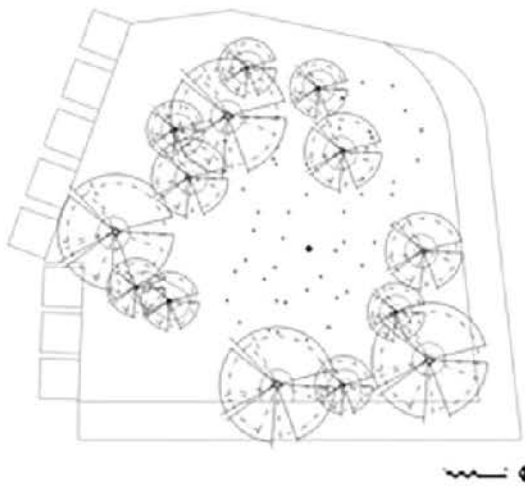




THE NEW WAY

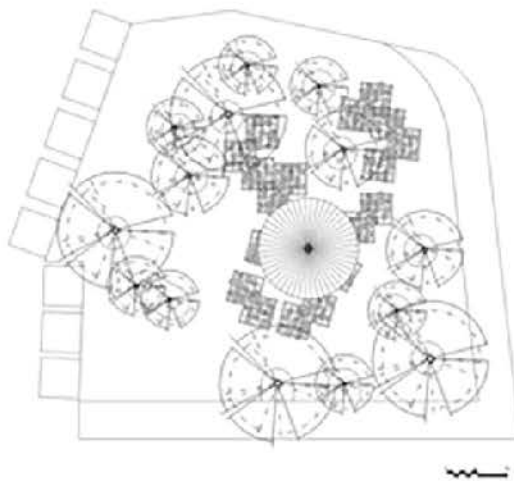
Concept

From education about Lanna's symbol. We are discover identity style of Lanna umbrella and raise color of surrounding context into design.



Engraved of stalk big umbrella.

They are Yee Peng lantern pattern



Step of Lanna umbrellas are feel like have dimension. Increases space way of wind and light.

Color of umbrellas are reference from around environment it make





Bamboo

bamboo wall by cut in half of bamboo and switch bamboo between outer side and inner side.

Brick

Brick blocks are laid apart so that the light can reach.

Wood

The lath is arranged for different distances.

Bamboo

Weaved bamboo is used to make rotating panels to get wind and block light of the sun.

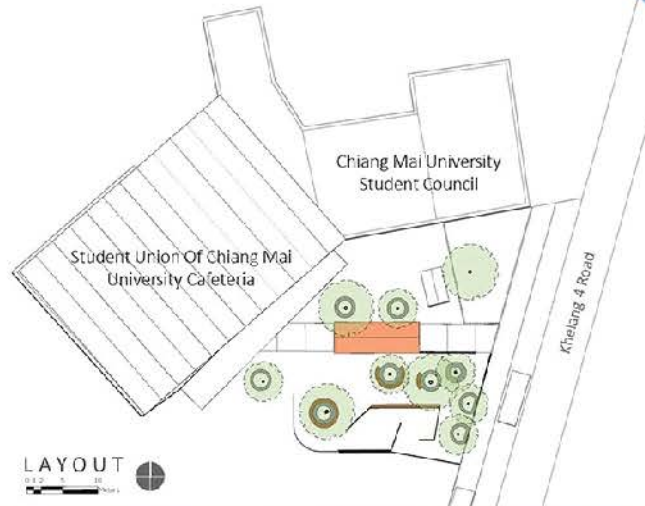
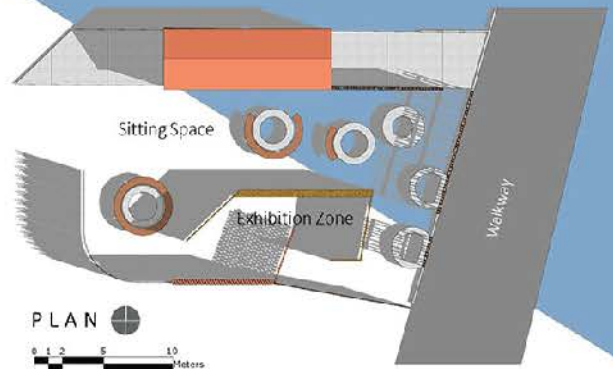
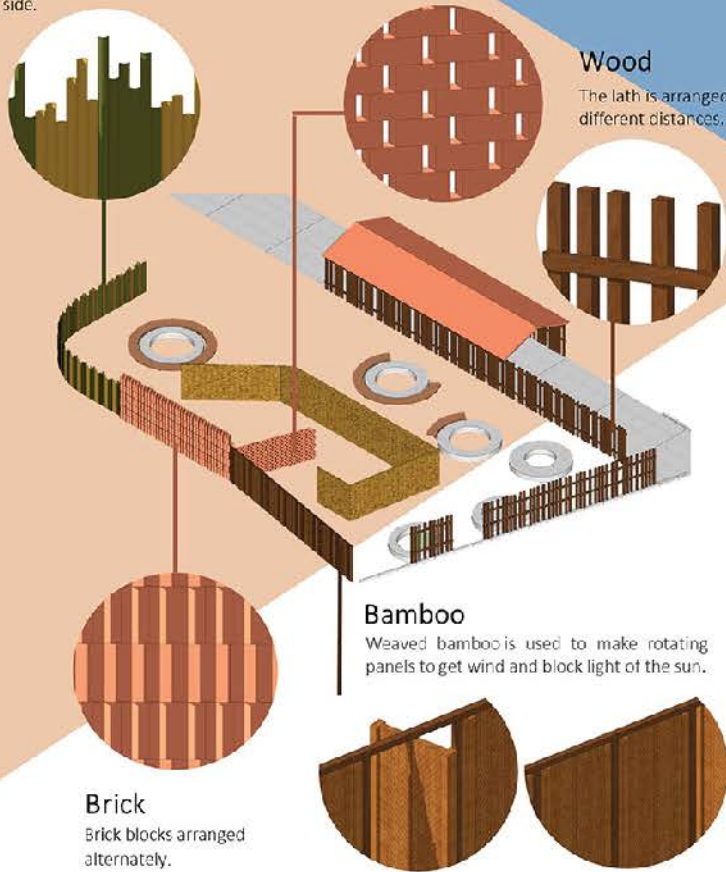
Brick

Brick blocks arranged alternately.

LOCAL EXHIBITION

CONCEPT

Bringing local materials to create space for exhibition area of fine arts students. The wall uses local materials arranged in various ways to be attractive and charming.



NORTH ELEVATION



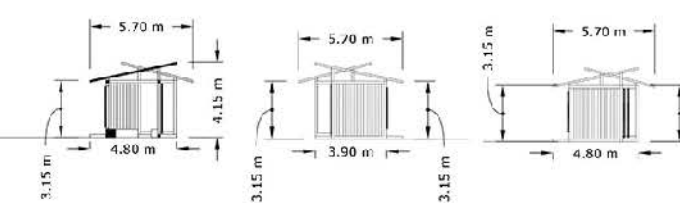
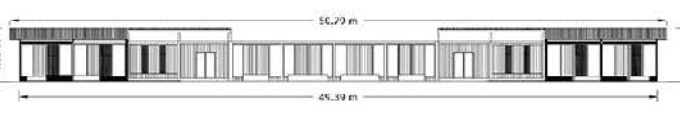
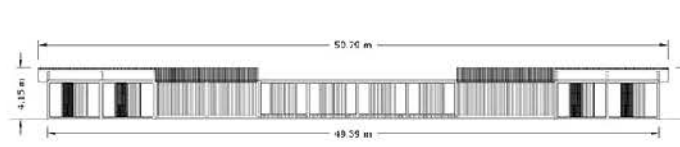
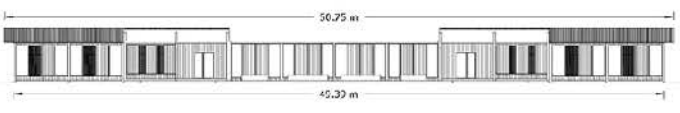
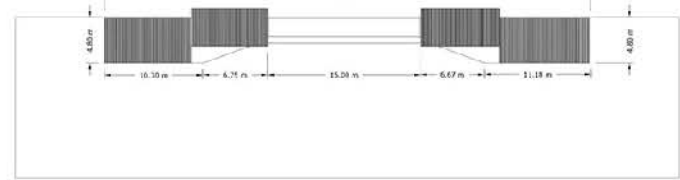
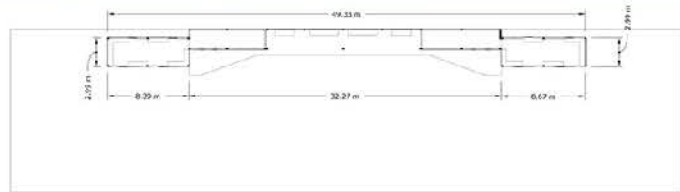
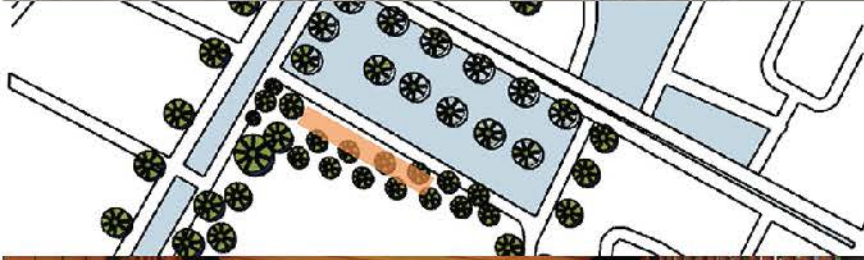
WEST ELEVATION

WAIT A MINUTE

611710013
611710098
611710102



Sitting space that used for waiting cmu electricity transit on the entrance area. By continuously the old waiting seat and add inclosed waiting space. The material twist between local and modern, used bamboo and wood into the wall and battens. The structure made from steel. Used Surface coated glass for reflect trees and natural, and reflect sunlight.

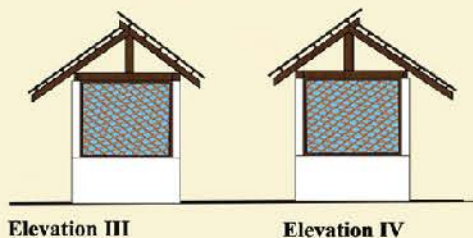
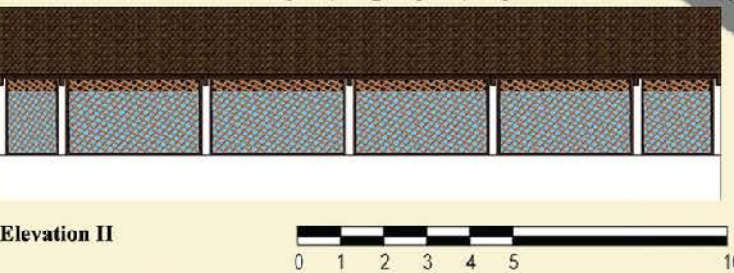
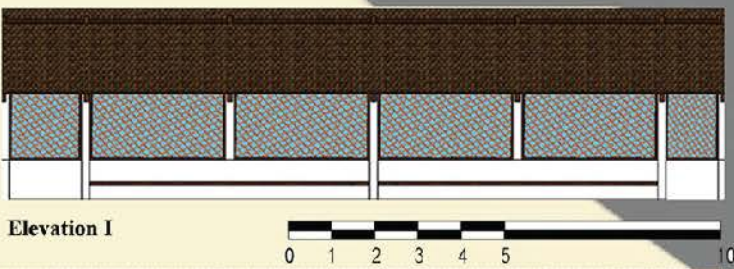
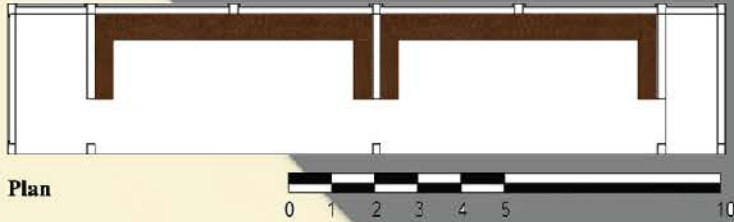
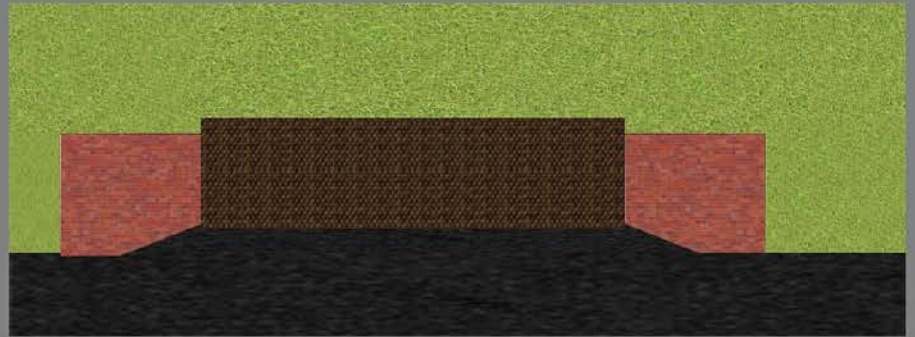




Intra

Concept

From the analysis site at the Purple bus stop and observed the behavior of the student and people of the surrounding area. Have seen the problem in the area that user insufficient used. Then we have renovate to expend the usage area and add more functionality to those who come into use. The design is inspired by WAT Ton Kwain the old temple of Chiangmai, which is used as a shelter of procession and uses natural materials to meet the environment.

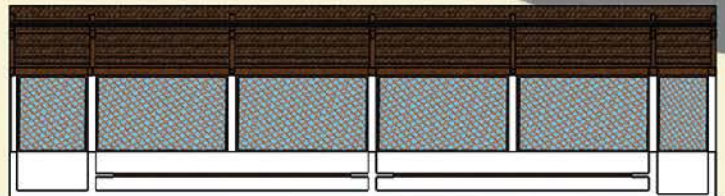


Layout

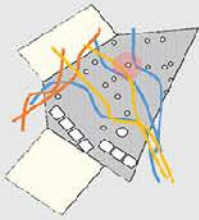


Function

- Sitting area - we have to add more sitting space to those who caome to use.
- Locker - This function is for athlete or student who can keep their luggege when they go somewhere and don't want to take them.



Site



This area was a center of connection point. It was connected to another spot such as purple car stop, student of Chiang Mai university activity building (ormorchor), and female dormitory. Then, it's make people walking quite fast around in this area because it is an open area, there is no relaxing spots or objects to make people stop or walking slower.

There is on tree that always drop it's yellow seeds

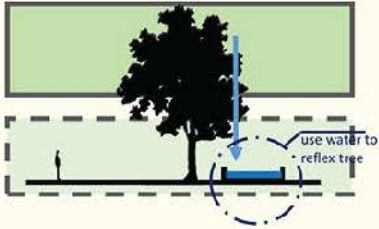
USER



Groups of users around this area is students and most of activities was eating or reading at ormorchor.



CONCEPT



use many texture to create new local space



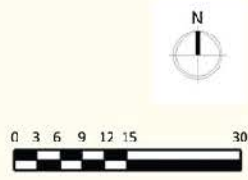
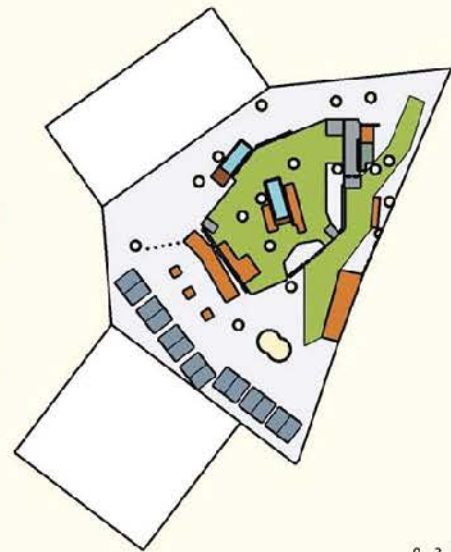
Concept came from looking at user's walking behavior in the area. Then we get an idea about "Tah Torn Yorn" that's mean slowing lifestyle of people in the past. So we created a new public space to make people slow down their movement a little. Then, we using the environment, tree shade, nature, materials, and creating new relaxing spot for supporting the activities in area.

PROGRAM

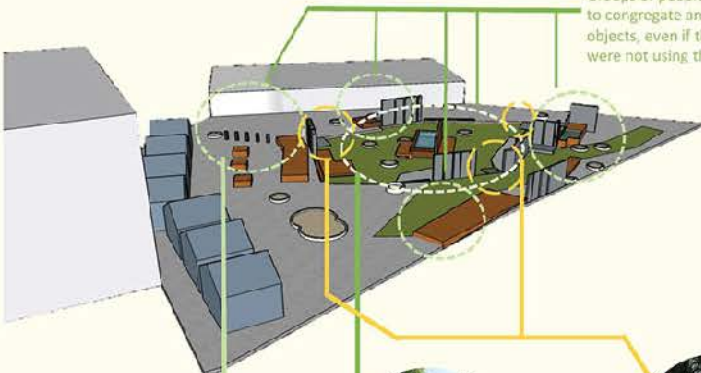


The activities that happened are going to be relax, reading a book, and talking

PLAN & LAYOUT



Groups of people tended to congregate around objects, even if they were not using them.



Detail



The car boundaries is make for not letting car passed through on the other hand it can be assemble spot



Used bamboo to camouflage from sight and between walls ,it has a gap for making it is not looking too dens, on the other hand using bamboo can make it feel like something local.



Slope for the disabled so it have 3 slope in site.



Yellow seeds of tree will make this place beautiful

Perspective

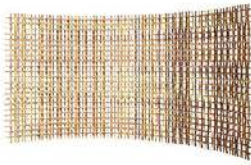


HUG-SAN (ฮักซาน)

CREATED BY : YEAR2 ARCHITECTURE STUDENTS

CONCEPTUAL DESIGN

The additional seats for eating because 7:00 to 09:00 and 11:00 to 13:00 this period, there is not enough space to use. So, we will make the space for eating and sitting around the tree. We weaved the bamboo to created privacy of space for users. The patterns of the facade developed from a pattern of Khantoke (Lanna tray that made by rattan). In terms of layout, it is from the shape of Khantoke to match the context of the area. Furthermore shade of tree can protect the sunlight.



The weaved bamboo pattern developed from Kantoke



Shelf



Table

The consistants of the table are from shape of Khantoke to match the context of the area



Chair



Pattern of Khantoke



ELEVATION 1



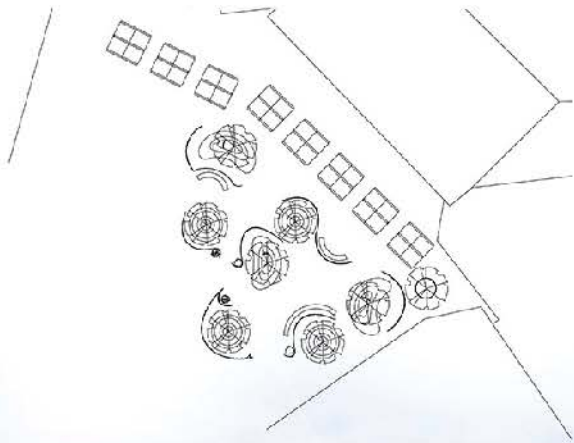
ELEVATION 1



ELEVATION 1

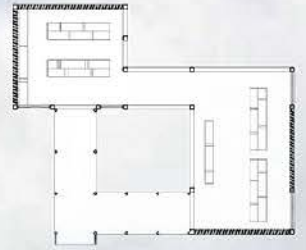


ELEVATION 1



SQUARE

Is a public space design Which is a combination of localization and modernity
The building is designed in a geometric style to show a more modern shape, but the building uses wood to blend in with the surrounding area and has increased the use of local materials such as bamboo in Building decoration Battens to cover the eyes in the food area and also creates a space around the trees that occur to preserve the natural.



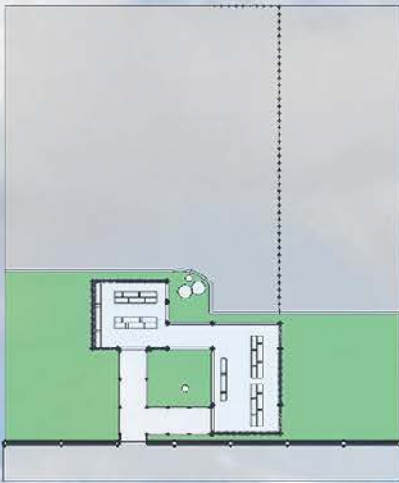
PLAN

PROGRAM

- Waiting Area
- Sitting Space

SITE

Bus Station in front of University



LAYOUT



section 1



section 2



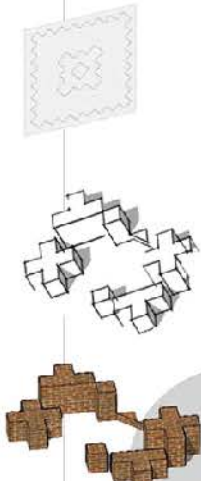
elevation 1



elevation 2



PATTERN



Concept

Chiang Mai is a city that is unique in terms of clothing, such as Mae Chaem's Teen Jek which has exquisite unique patterns that reflect the way of life and culture. And from the survey of the front cafeteria. Found a wide area look like a sarong. Therefore, the sarong patterns are used in designing the table and chair area in the area. The pattern from the sarong that has the characteristics. Therefore, creating an area that is the center of people connecting between people who use the area to do activities together



Site Location



Activity area in front of the university cafeteria

Site Analysis

- Is an area where people always walk through
- Near the cafeteria and female and disabled student dormitory



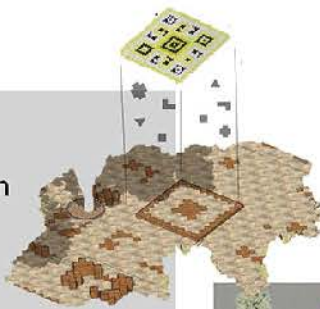
User student, professor, general people



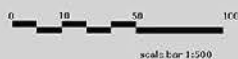
Program Is an activity area and Selling fruits and vegetables, performing music



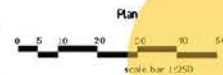
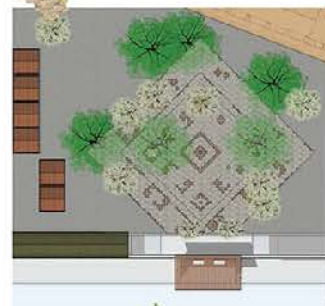
Transform



Layout



scale bar 1:500



Plan

scale bar 1:250



°36 Khompad

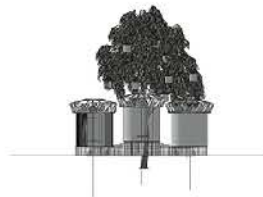
concept

Inspired by Khom-phad Lamp, which is a clear northern lamp that tells the stories from the shadows. After studying the shape of Khom-phad Lamp, we found that its shape can be an interesting space.

Therefore bring to create an area of substance that is an art installation to decorate the area to attract people to and service people in that area as well



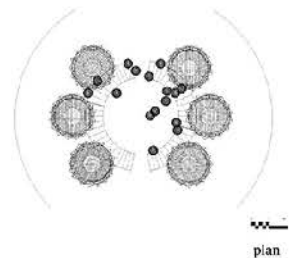
evaluation a



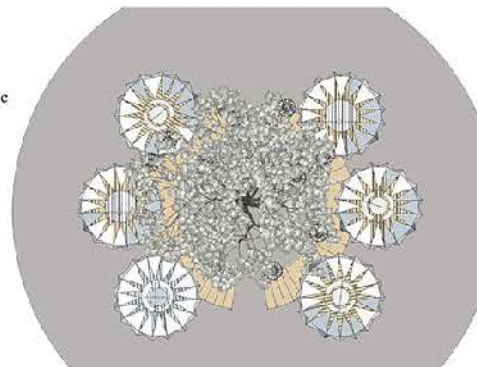
evaluation b



evaluation c



plan





CONCEPT

Inspired by the way of life of people that come together at the Chiang Mai University organization to eat. Do various activities Or meeting together Therefore, it is compared to the nature of bees that gather together to make an activity more efficient. Therefore, creating space for people who want to gather or do various activities In front of the Chiang Mai University organization

SITE

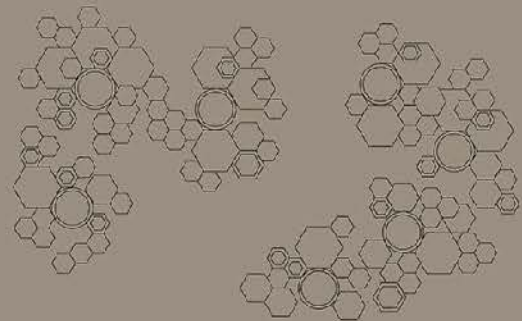


Chiang Mai University Organization

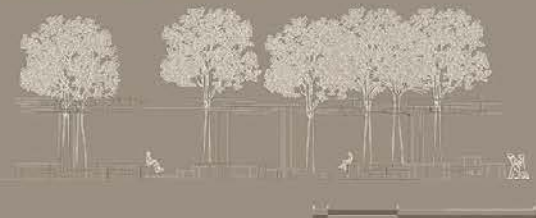
LAYOUT



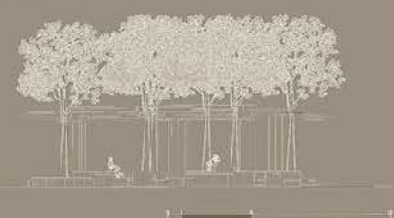
PLAN



ELEVATION I



ELEVATION II





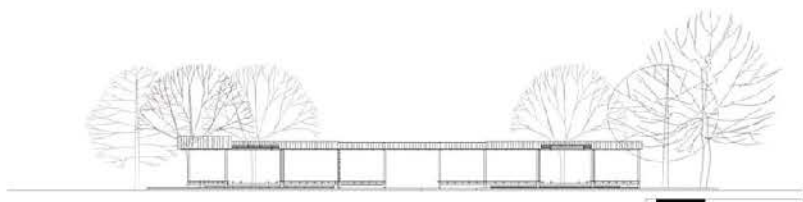
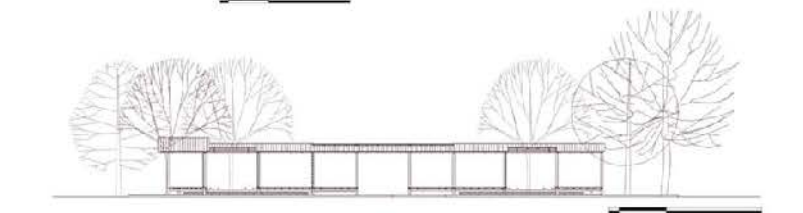
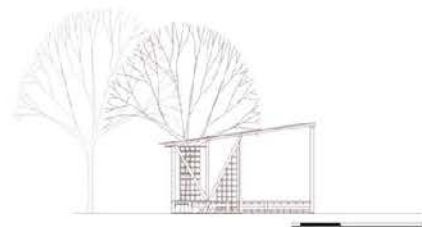
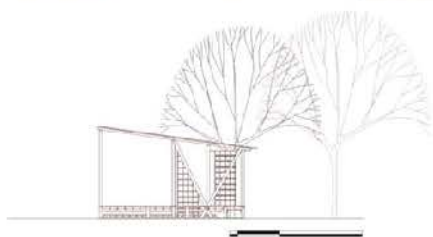
MAI JING

ELEVATION

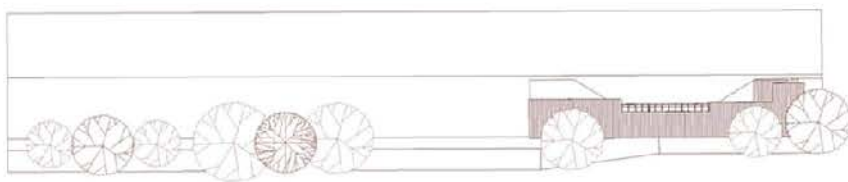
MATERIAL : WOOD

CONCEPT

The true native is the people. People are creating a cultural lifestyle combining the countryside
Building a house with wood is a way of life
 in the local area. Therefore, **building a public building as a bus station**, the building is constructed from timber and building structures, it has a rustic odor
Buildings are viewed around the site area. The wind is fully blown through and sunlight



LAYOUT

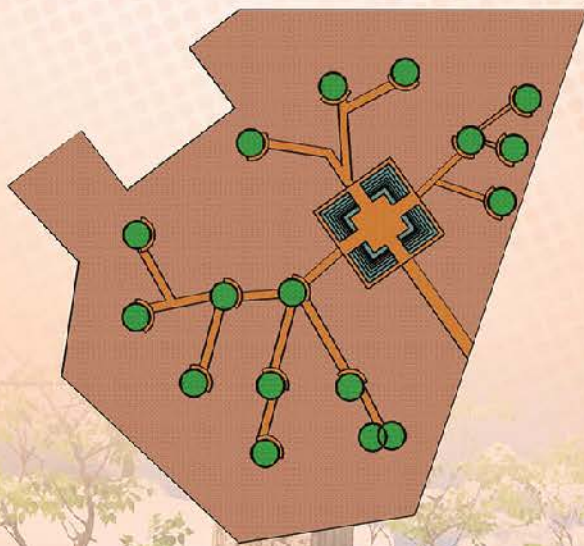


MINIBUS



The concept is inspired from the integration of 16 districts heading to the central of Chiangmai. The design is made up of variety of shapes of Chiangmai nature and surroundings.

The identity of physical geography of Chiangmai is used to create a space, representing the feeling of unity through lines and shapes of geometry, and so this work piece is happened.



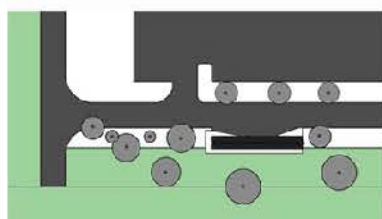


CHALEAW

CONCEPT

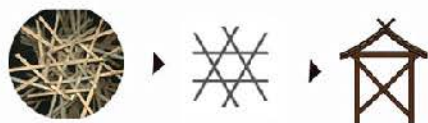
This CMU bus parking inspired by Balief and wisdom called TALAE0 by being used as a component in this architecture. Combined with the shape that is responsive to the space for waiting for buses and runners, it is the contemporary architecture like Chiang Mai.

TALAE0 or CHALAE0 is a type of weaving machine made from bamboo. Come together in a hexagram Which is the belief of the ancients and is a symbol of promise to make damaging or mysterious things that are a bad thing or another omen, as well as various disasters Does not occur in homes or communities, including houses, buildings, and important pieces will be used in ceremonies related to rice and used as a symbol to protect spirits, ghosts and other evil things, often placed in the middle of the rice fields or on the walls of the house.



LAYOUT AT CHIANG MAI UNIVERSITY

TRANSFORM



ELEVATION

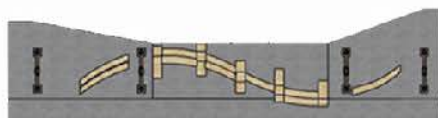


RIGHT



LEFT

PLAN



BACK

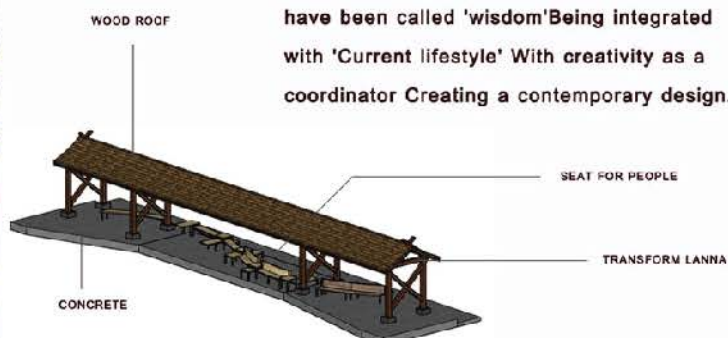
ROOF



FRONT



"When stories of beliefs and past values have been called 'wisdom' Being integrated with 'Current lifestyle' With creativity as a coordinator Creating a contemporary design."





Architecture for multipurpose activities of Chiang Mai University students and people in surrounding context. There is a waiting space for going to the next location and a wide open space to change the feelings of people entering the building.

The design combines Lanna with local houses using wooden materials, the shape of "Horkum" (Lanna architecture in Chiang Rai province) and adapted to the local materials such as bamboo to showcase the identity of Chiang Mai.

MOODA - LANA

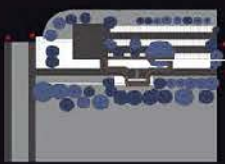


FLOOR 1



SECTION 1

SITE ANALYSIS



@CHIANGMAI UNIVERSITY

AREA : 500

- Transportation - Road
- Walkway - Nature



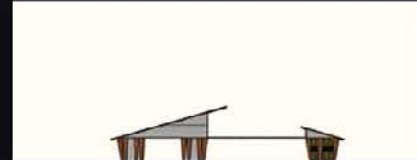
ELEVATION A



ELEVATION B



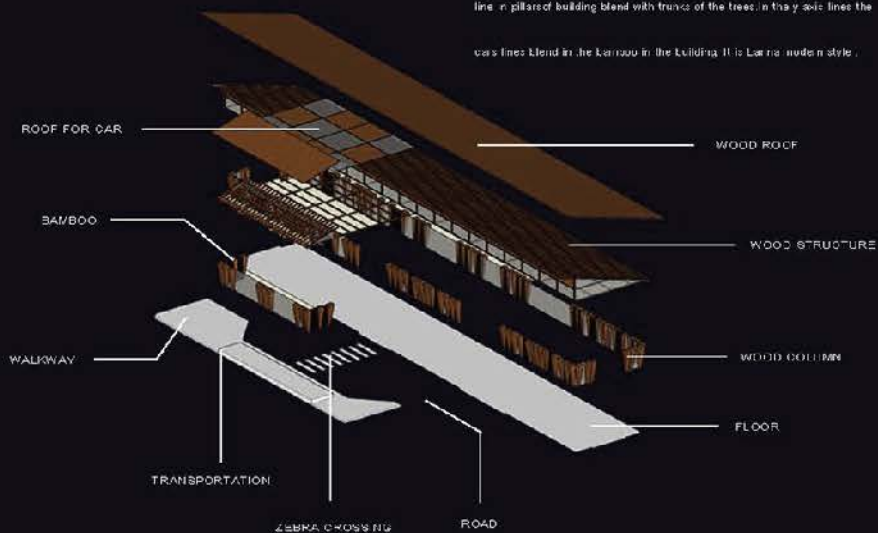
ELEVATION C



ELEVATION D



The wooden and glass element have been used to make this building blend in the environments around it such as trees and cars. To blend in the tree the wooden material or the color of the trees must be used. The x axis line in pillars of building blend with trunks of the trees in the y axis lines the cars lines blend in the bamboo in the building. It is Lanna modern style.





KHANTOKE

The main canteen of Chiang Mai University is the center of Chiang Mai University scholars and personnel that sells many kinds of food along with Northern Thai cuisine. Approximately with Northern Thai people lifestyle that uses Khantoke which is a kind of wooden utensil in Northern Thailand to gather around people mutually. Khantoke is using to collocate various cuisines that are a tradition and identity of Northern Thai. It inherited from Thai local gastronomic culture. Accordingly, we use Khantoke components to creating a new public place.

DEVELOP



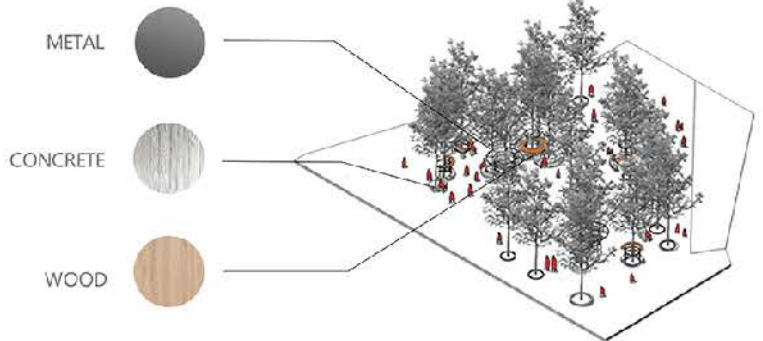
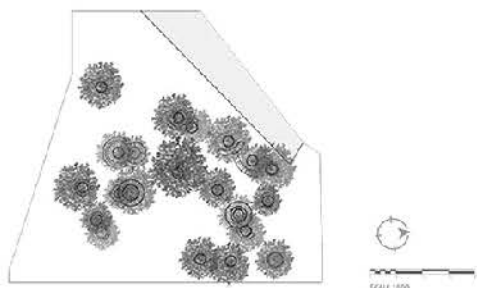
SITE

The main canteen of Chiang Mai University
Suthep, Mueang, Chiang Mai 50200



USER

The main users in this area are scholars and personnel. They usually have breakfast and lunch. Some vendors also sell goods here.



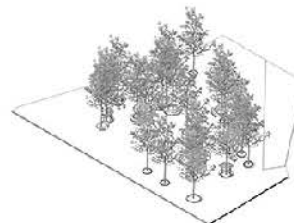
DETAIL



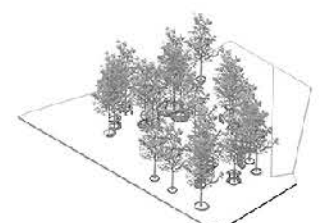
As the area is a hardscape, we are hanging the trees for shady.

The steel frame encompassing the trees helps them from unspecified natural disasters.

Different levels increase to enhance functionality.



Green Area



Sitting Area

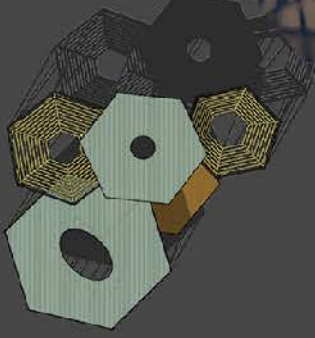


BAANKERD



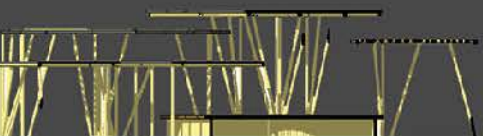
CONCEPT

Inspired by the house in the northern region, that space under a Thai house helps the wind to blow comfortably. There is usually a large stretcher in the center of various activities to sit and chat together. Including welcoming neighbors and dine. It is also the gathering place of children. With a place to sit or hang rope and swaying wood including a hammock tied to the basement for temporary resting. We therefore create a space for sitting together to do various activities that feel like sitting under the house by using local materials to feel the homeland.

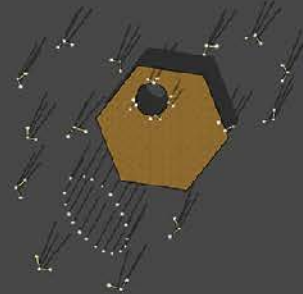


ELEVATION

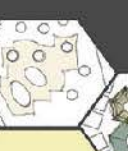
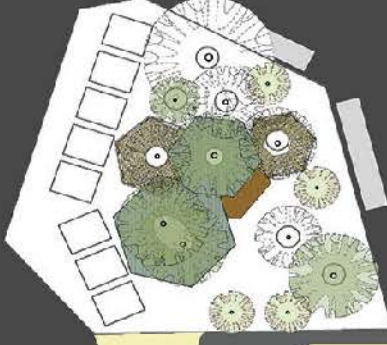
TOP



SECTION



PLAN



HIGH UP

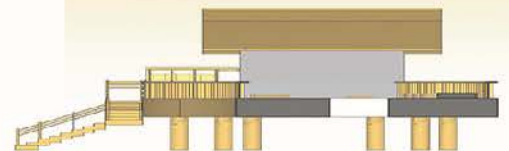
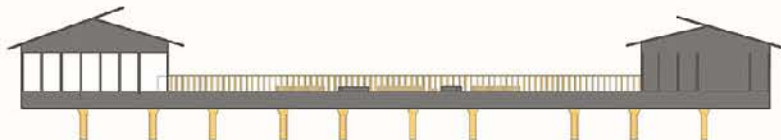
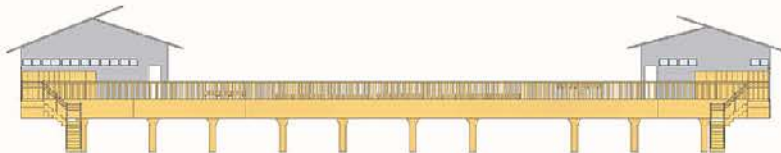
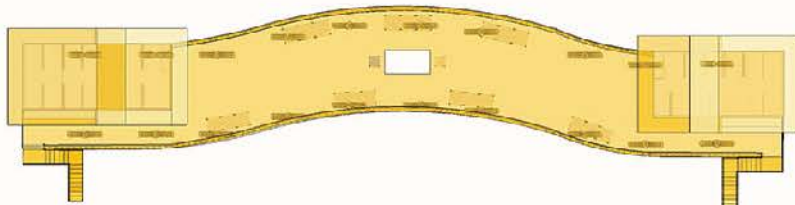
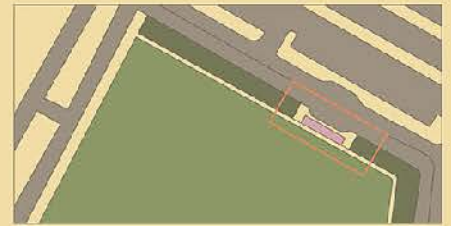
CONCEPT

BY STUDYING THE DESIGNATED AREAS, IT IS FOUND THAT IN THE AREA THERE ARE BUSY PEOPLE DOING SPORTS ACTIVITIES AND A PARKING SPACE, BUT THERE IS NO FACILITY SUCH AS THE BATHROOM, IT OFFERS A BATHROOM WITH A SEATING AREA AND A VIEW POINT, BUT THERE IS A PROBLEM THAT THE AREA HAS A LOT OF SPACE AND HIGH TREES. WE'VE BEEN AVOIDING CUTTING TREES BY MAKING THEM SWALLOW WITH NATURE, FORMING A FREE-FROM-USE BAMBOO THAT IS THE LOCAL MATERIAL OF CHIANG MAI PROVINCE TO BUILD.

FUNCTION



LOCATION



PA - USE



DESIGN DEVELOPMENT
from the elevation line of the mountain.

PROGRAM

This area is a relatively busy area. Both public transport and pedestrians. There are also student fundraising activities that do not have a place for this activity. Therefore designed this area for the usable benefits and in accordance with the activities that occur in the area.



Seating



Playing music



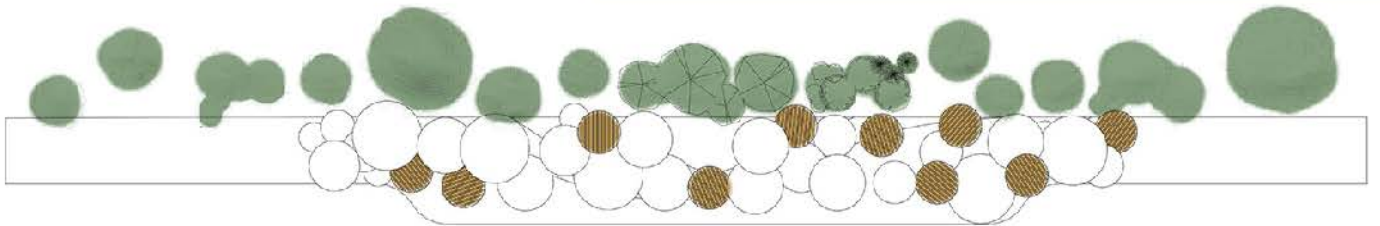
Volunteering



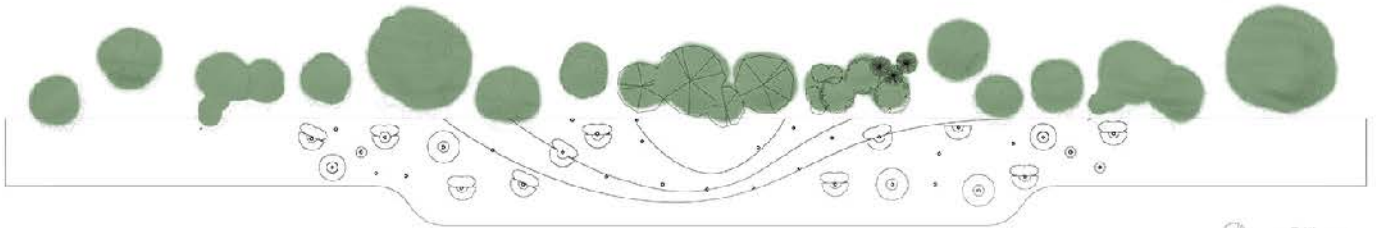
LAYOUT PLAN
SCALE: 1:1000

CONCEPTUAL DESIGN

Due to the nature of Chiang Mai, that is, the mountains, including the area around which there are many trees. Therefore, the elements of nature are used in the design according to the policy of Chiang Mai University which changed to "Green University"



ROOF PLAN
SCALE: 1:200



PLAN
SCALE: 1:200



ELEVATION A
SCALE: 1:200



The conceptual design inspired by traditional Thai fabric patterns. The fabric pattern was analyzed. The designed pattern rearranged the pattern proportion and splay to fit in the site. The pattern pulled up creating space for users



Fabri-c-erner

"LOCAL CREATIVE TO NEW PUBLIC PLACE"

Design By

นางสาว ชานดี เฉลิมโชควัฒนา 601710013

นาย รฤต อรรถอรุณวงศ์ 601710032

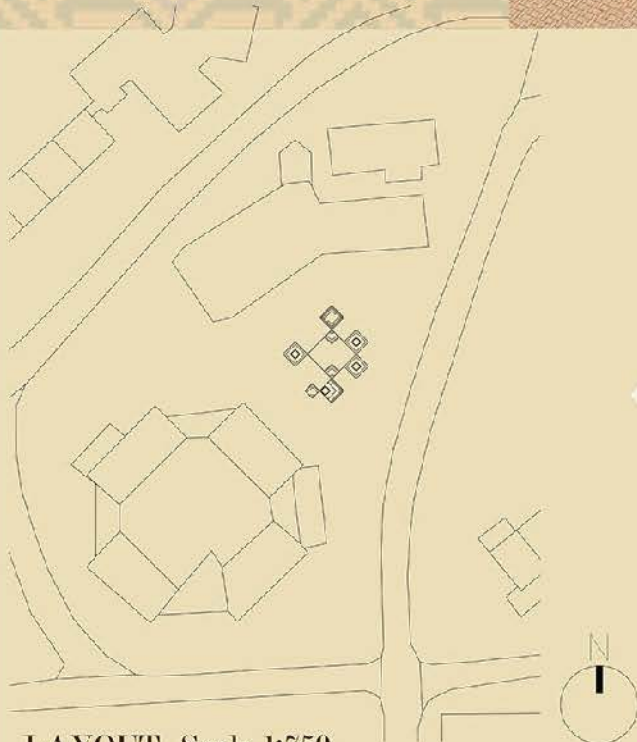
นาย วรวิทย์ ลิ้มเจริญ 601710064

นาย ลินธุ์ แสงอินทร์ 601710076

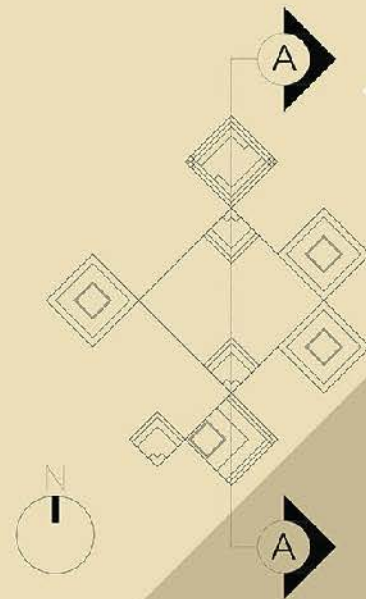
There are 2 mains function

1 Relaxing space for resting and sitting. The seat designed to intersperse around the site. The seat provided for the customer of the market and student in this area.

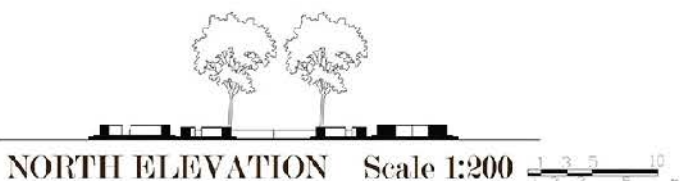
2 Multipurpose activities area for student. According to the student council office located on the site, the activities area is beneficial for a student to provide various activities



LAYOUT Scale 1:750
Activity Space in front of CMU Main canteen



PLAN Scale 1:200



NORTH ELEVATION Scale 1:200



SECTION AA Scale 1:200



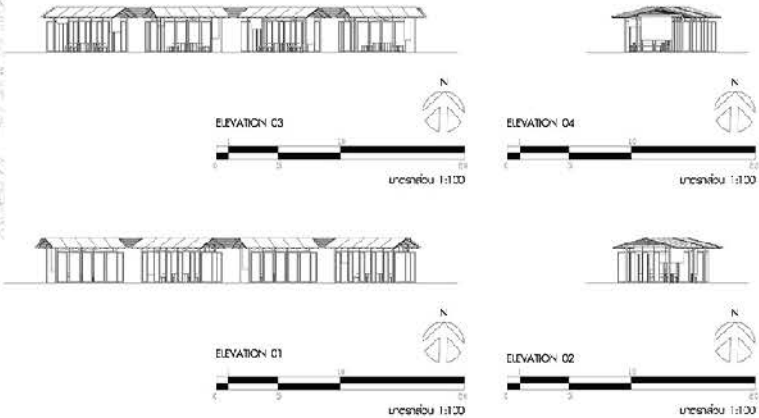
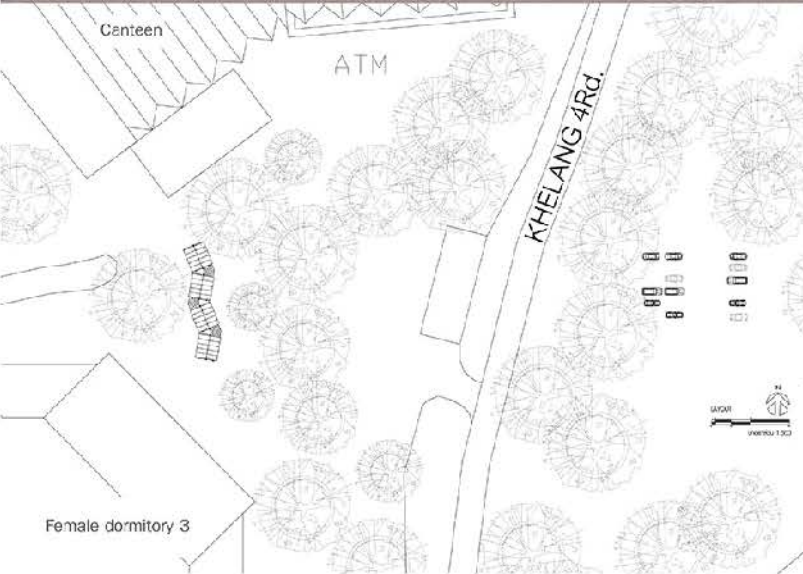
Oasis

Knowledge helps to nourish life.

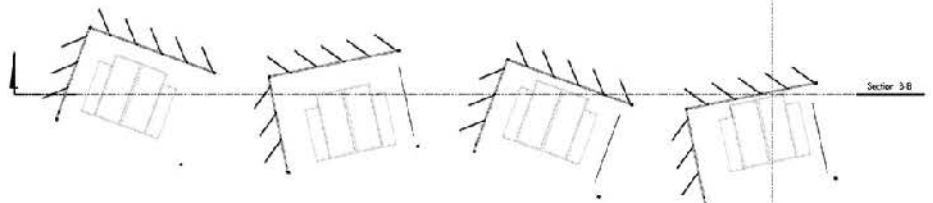
CONCEPT DESIGN

This project, "Oasis", is a place for taking a break, working, or meeting.

It is located in front of the CMU Canteen where lots of students walking through everyday. With a timber structure, it makes Oasis light and clear. By the side of each units, there are the partitions for making space airy and comfy. So we can say that is place is an "Oasis" for the CMU students.



Mood and Tone Natural



PLAN



มาตราส่วน 1:100



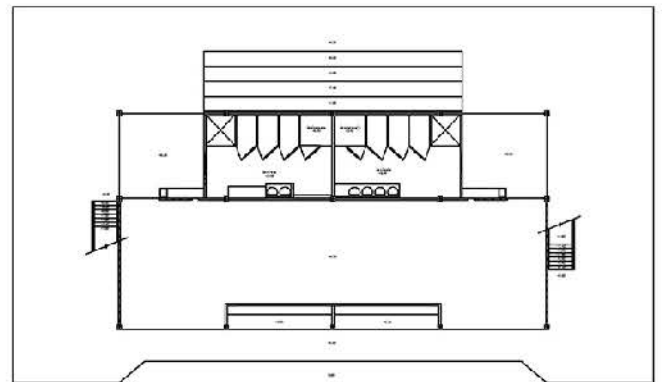
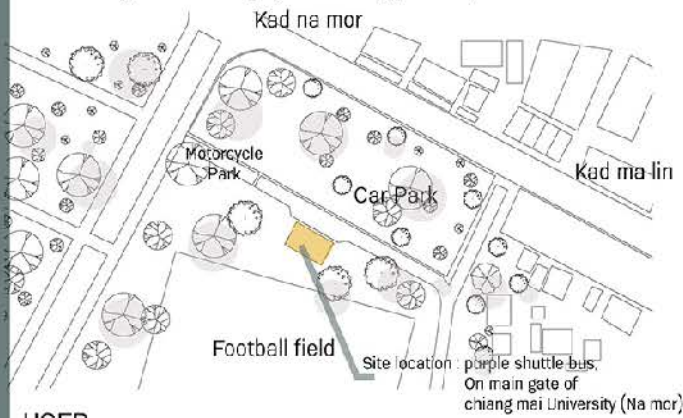
CONCEPT

For being the connection area between the outside and inside the university. Based on the learning concept of the Chiang Mai University transit area with have many students waiting for each station.

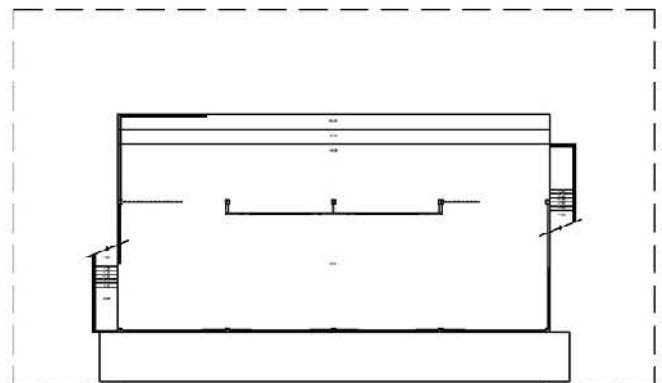
1. Students who go to Kad Nar Mor.
2. Students who play sports.

The functions of this design have the enough places for sitting. The design has more available seats for people placing their stuffs or eating. More ever, the design has a places for chairing their mobile phone and free service rest rooms for male and female.

Behind the building we designed to be the grandstand for people who want to see sport. And the sporters can use this place for relaxing. The wall designed to be the players for taking picture if you want.



1st FLOOR
SCALE 1:250



2nd FLOOR
SCALE 1:250

USER



MATERIAL



ELEVATION SCALE 1:1500



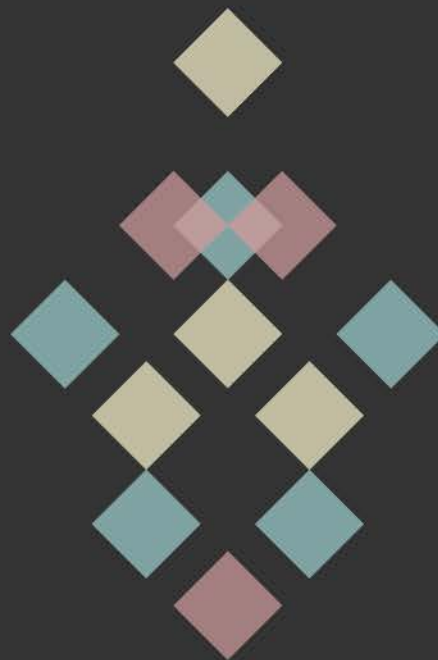
ELEVATION SCALE 2:1500



ELEVATION SCALE 3:1500



ELEVATION SCALE 4:1500



English Skill Improvement Project for Undergraduate Student following
the Policy of the Upgrade of English Language Skill Standard of Undergraduate Student
Faculty of Architecture , Chiang Mai University
Academic Year 2019

