

Final Architectural Design Studio



Design of

GARDEN WALK SHOPPING CENTER

WITH BIOPHILIC ARCHITECTURE APPROACH IN MAGELANG

Aufa Rahima Lailatunnaja
18512092

SUPERVISOR

Ir. Tony Kunto Wibisono, MSc., GP



**UNIVERSITAS
ISLAM
INDONESIA**

INTERNATIONAL UNDERGRADUATE PROGRAM OF ARCHITECTURE



**DEPARTMENT of
ARCHITECTURE**



한국건축학교육인증원
Korea Architectural Accrediting Board



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ACCORD**



DESIGN OF GARDEN WALK SHOPPING CENTER

with Biophilic Architecture Approach in Magelang

Department of Architecture
Faculty of Civil Engineering and Planning
Universitas Islam Indonesia

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AUTHENTICATION SHEET

Final Architectural Design Studio entitled :

Design of Garden Walk Shopping Center with Biophilic Architecture Approach in Magelang

Student's Full Name : **Aufa Rahima Lailatunnaja**

Student's Identification Number : **18512092**

Has been evaluated and agreed on : **19th July 2022**

Supervisor

Tony Kunto Wibisono, Ir.,M.Sc. GP

1st Jury

Arif Wismadi, Dr. Ir.,M.Sc.

2nd Jury

Ilya Fadjar Maharika, Dr.-Ing., Ar., Ir., MA., IAI.

Acknowledged by :

Head of Architecture Undergraduate Program

Yulianto Purwono Prihatmaji, Dr., Ar., IPM., IAI



STATEMENT OF AUTHENTICITY

By signing this form, I :

Student Name : Aufa Rahima Lailatunnaja
Student Number : 18512092
Study Program : Achitecture
Faculty : Faculty of civil engineering an planing
University : Universitas Islam Indonesia

state that all parts of the thesis work / final project entitled

Design of Garden Walk Shopping Center with Biophilic Architecture Approach in Magelang

is a work of its own except the work mentioned in the reference and there is no help from any other party either in whole or in part in the process of making it. The final result of this work was handed over to the Department of Architecture, Islamic University of Indonesia for use for educational and publication purposes, but the intellectual property rights are still owned by the author.

Yogyakarta, 1st August 2022



Aufa Rahima Lailatunnaja

PREFACE

Assalamualaikum wr. wb

Praise the presence of Allah SWT, The One and Only God for the abundance of grace, His gift, and His power so the preparation of the final architectural design studio report titled "Design of Garden Walk Shopping Center with Biophilic Architecture Approach in Magelang" can be completed. The author realizes that the process of drafting and implementing of this report can be done inseparable from the support of many parties, therefore the author wants to express appreciation and gratitude to:

1. Allah SWT., who has given His gifts, instructions, ease, and power in every research process and the preparation of the final project report so that the author can complete it.
2. Both parents I respect and care for, who always give encouragement, support, motivation, and compassion.
3. Ir. Tony Kunto Wibisono, M.Sc., IAI., as supervisor who has an important role in the research and preparation of this final project report, with all his patience and has provided guidance, inputs, and knowledge to the author.
4. Dr. Ir. Arif Wismadi, M.Sc., as 1st jury who has given input, criticism, and advice to the author so that the writing of this report can be better.
5. Dr.-Ing. Ilya Fadjar Maharika, IAI., as 2nd jury who has given input, criticism, and advice to the author so that the writing of this report can be better.
6. Delfin, Jau Fae, Tyas, Ummi, Puspa, Yepe, Faris, Qiqi, Bdur, Krahus and many other author's classmates that have given tremendous supports, knowledge-sharing process, and motivate to jointly complete this final architectural design studio.
8. Author's PWS friends that have supporter the author to finish this Final Architectural Design Studio, and as the place to share each struggle in completing their own final project
9. Last but not least, I wanna thank me, I wanna thank me for believing in me, I wanna thank me for doing all this hard work, I wanna thank me for having no days off, I wanna thank me for never quitting, for just being me at all times.

The author realizes that in the preparation of this report is far from perfection, in terms of language, drafting, and writing. Therefore, the author expects constructive criticism and suggestions that will later become a provision of experience for the author to be better in the future. Hopefully this report is useful for all who read it, as well as the author in particular.

Wassalamualaikum wr. wb

Author,
Aufa Rahima Lailatunnaja

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DESIGN PREMISE

Magelang is a city with the nickname "City of a Million Flowers," based on its strategic location, which is on the main transportation route of Semarang-Magelang-Yogyakarta. As one of the regencies in the Magelang Regency, which has a famous tourist attraction, namely the Borobudur Temple, it is expected to develop potential economic value in the tourism sector to be able to improve the welfare of the surrounding community. This temple is a magnet to attract tourists both from within the country and even tourists from abroad. The large number of tourists visiting Magelang Regency creates potential business opportunities, including handicraft, food, and plant businesses. However, many of the many existing tourism potentials have not been developed optimally.

So to optimize tourism potential, this project proposes the need for a biophilic architectural approach related to the characteristics of the city of Magelang, namely the city of a million flowers that connects nature with humans so that it can be helpful for those who make a design that can solve economic problems and take advantage of tourism potential.

01 INTRODUCTION

1.1 BACKGROUND

1.1.1 POST COVID 19 ECONOMIC AND TOURISM SECTOR IN MAGELANG

From 2020, the Covid-19 epidemic will exert significant strain on Indonesia regarding social and economic factors in addition to health and human considerations. Economic growth has slowed due to the declining global economy and the large-scale social restrictions implemented to stop the spread of Covid-19, which limit economic mobility.

Many provinces that depend on the tourism industry as the primary engine for economic growth can feel the impact of the creative economy and the tourism industry.

Significantly fewer visitors from tourists is the first immediate effect on the tourism industry. Given the enormous number of residents who have tested positive for Corona COVID-19, even several provincial districts in Indonesia that were formerly popular tourist attractions are now closed. The UNWTO (United Nations World Tourism Organization) published an Estimation of the Impact of COVID-19 on International Tourism at the end of March 2020. In 2020, there will be a significant 20 to 30 percent decline in tourist arrivals. This implies that, if estimated, there will be a decline in visitor numbers of between 290 and 440 million.

When considering Indonesian tourism as a whole, the COVID-19 effect has decreased customers for several tourism businesses.





There may be other things that we can focus on as life lessons behind the catastrophic crisis is produced. First, the recovery of tourist artifacts, according to Prof. Janianton Damanik from the UGM Center for Tourism Studies (Universitas Gadjah Mada), is the future impact of the Covid-19 tourism industry. This is a momentum for recovery, improvement, and realignment so that tourism places will be more competitive after the COVID-19 impact. The decrease in visits to the closure of tourist destinations.

Next, improving the quality of tourist objects, ranging from cleanliness, tourist attractions, supporting facilities to service quality. According to Christopher Anderson, a professor at Cornell University Hotel School in Ithaca, New York, the cleanliness aspect in the tourism sector will be prioritized and will be a priority concern later. Then this becomes a place to stop for a moment to evaluate tourist objects, what are the advantages and disadvantages, then what are the opportunities and potentials that can be developed after COVID-19.

The impact of COVID-19 has also brought changes to the culture in tourism, which is later believed to be environmentally friendly, responsible and sustainable.

1.1.2 MAGELANG *"CITY OF A MILLION FLOWERS"*

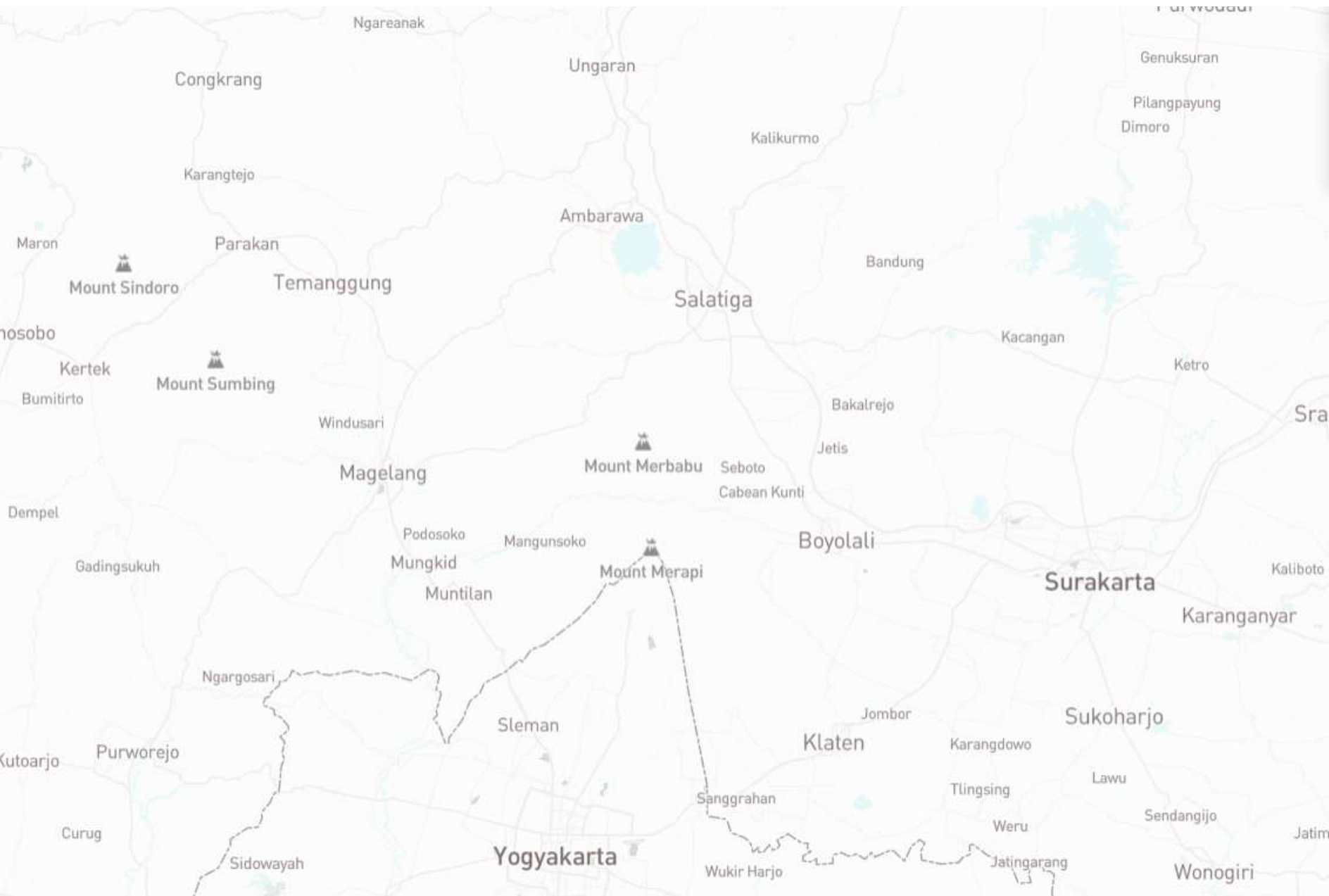
The potential of natural resources for regional development is not heavily relied upon by the city of Magelang. As stated in the Magelang City Vision, "The Realization of Magelang City as an Advanced, Professional, Prosperous, Independent and Just Service City," Magelang City places a greater emphasis on the creation of services in all areas, specifically in the areas of education, trade, tourism, health, and the other regions for the benefit of the local population as well as the community in the surrounding area.

As a destination city (destination) and a transit city, Magelang plays a part in the constellation of regions in Central Java and its environs. Magelang City has a comparatively high level of population movement as a result of its advantageous location. The possibility of numerous visits and activities by migrants from outside the city of Magelang presents a chance to boost revenue for people-related businesses like tourism.

Indeed, the mountains with lush vegetation surrounding Magelang city include Mounts Sumbing, Sindoro, Prau, Ungaran, Telomoyo, Andong, Merbabu, Merapi, Menoreh, and Mount Tidar in the center of the city. The Progo River and the Elo River, two significant rivers, also split the city of Magelang.

Other sources dispute the term Magelang, including folklore, fairy tales, legends, etc. Some claim that the term Magelang derives from the legend surrounding the Keling (Kalingga) people's migration to Java and their wearing of nose bracelets. The prefix "ma," which expresses the verb to wear or use, is added to the word bracelet, making it mean "to wear a bracelet." Therefore, "Magelang" refers to a location frequented by bracelet wearers.

Additionally, many Dutch people used to enjoy gardening since, in addition to serving as a status symbol, it was also a way of life.



1.1.2 MAGELANG AS TOURIST POTENTIAL AND CREATIVE ECONOMY

In the heart of Magelang Regency, between 110o12'30" and 110o12'52" east longitude and 7o26'18" and 7o30'9", sits Magelang City, one of the second-level communities (BPS, 2007)

Specifically, the intersection of the Semarang-Yogyakarta, Semarang-Purworejo, Wonosobo-Salatiga and other nearby cities' transportation routes is where Magelang City is situated. Magelang City can be described as a tiny city with a strategic value that has a draw factor, impact, and destination region and becomes a barometer for the nearby areas thanks to this position as one of the possible capitals.

In terms of meeting needs for food, industry, and other necessities, Magelang City's existence is also very advantageous for the communities around the city. This is bolstered by the fact that Magelang City has a strong economy, making it a good location for trading.

The Magelang municipal administration is conscious that the rapid expansion of the economy and population must be balanced with adequate infrastructure. One of the current local government plans is to build a sizable market that will serve as both a public trading facility and a shopping center.

The possibility of numerous visits and activities by immigrants from outside the city of Magelang presents a chance to boost revenue for crowd-related activities like tourism.

Wilayah Administrasi	Banyaknya Daya Tarik Wisata di Kabupaten Magelang (Unit)		
	2018	2019	2020
Kabupaten Magelang	28	68	69

Sumber : Dinas Kepemudaan,Olahraga dan Pariwisata Jawa Tengah

Picture 1.3 Tourist Attraction

Traveling to Magelang offers an amazing experience and broadens one's perspective on history and culture. While the city of Magelang is situated in Magelang Regency and on the main thoroughfares that link the towns of Semarang and Yogyakarta, judging from the location/position of the area, it is a very strategic city. There are numerous tourist attractions, including temples, mountains, lakes, and picturesque locations. Magelang is, therefore, a popular tourist destination.

According to the BPS Magelang, this city receives a lot of tourists due to its proximity to natural features like borobudur, punthuk setumbu, ketep pas, and others. A commercial mall was constructed in order to accommodate tourists and boost the local economy in Magelang. In order to create a different mood in a retail complex, a comfortable shopping area might be created there.

Bulan	Pengunjung Candi Borobudur					
	Domestik			Mancanegara		
	2018	2019	2020	2018	2019	2020
Januari	321 893	341 685	395 175	11 732	13 402	15 603
Februari	235 303	247 731	234 280	14 088	16 869	11 506
Maret	291 425	262 877	111 908	15 292	16 949	4 213
April	323 325	357 108	-	14 555	17 693	-
Mei	237 315	111 921	-	13 265	15 325	-
Juni	440 194	565 032	2 235	9 031	14 332	2
Juli	291 732	330 191	16 858	27 470	34 347	29
Agustus	176 248	186 159	45 571	30 166	39 300	39
September	198 782	169 998	23 591	20 943	27 163	19
Oktober	204 249	236 847	43 159	14 280	21 290	38
November	250 412	274 059	32 449	10 811	14 665	26
Desember	692 176	664 149	60 473	10 598	10 747	76
Kabupaten Magelang	3 663 054	3 747 757	965 699	192 231	242 082	31 551
Sumber: Dinas Pariwisata, Kepemudaan, dan Olahraga Kabupaten Magelang						

Picture 1.4 Borobudur Temple Visitors

The Mendut Temple and Pawon Temple are part of the Borobudur Temple Complex, which was designated a World Cultural Heritage Site by UNESCO in 1991 because of its extraordinary global significance. Conservation efforts also focus on the surrounding area, which the government designated as a National Strategic Area in 2008 under Government Regulation No. 26 of 2008 about the National Spatial Plan.

1.2 PROBLEM FORMULATION



Non Architectural Issue

The existence of covid 19 so
it reduce the economy in
Magelang

Space needed for
visitors as a tourist
that can be used for all
kinds of users

Architectural Issue

lack of adequate
shopping centers in
magelang

Design Shopping Center
with different experiences
so that can attract visitors

PROBLEM STATEMENT

General Problem

The urgency of the Shopping Center approach in this design is an effort to increase tourist attraction with green architecture in local development. Based on the background of the problem that has been described, the formulation of the problem is as follows:

- How to design a garden walk shopping center in Magelang area that can increase the potential of economic transactions and recreation in post covid-19 pandemic era by applying biophilic concept?

Specific Problem :

1. How to design a garden walk shopping center with biophilic architecture approach?
2. How to design shopping center that applying garden walk concept but still maximize the rentalable space?
3. How to design landscape in garden walk shopping center space ?

Goals & Objectives:

Goals

Designing a Garden Walk Shopping Center in Magelang area as a solution of needs space where people can enjoy the trading activities while also maintain the recreation activities with biophilic approach

Objectives

Shopping center design in Magelang area as a solution of needs space where shopping centers are no longer just shopping, but as a place of recreation with garden walk

1.3 DESIGN LIMITATION

Of course, in designing shopping center that use biophilic architecture approach, it is necessary to have limitations that are used to study, so that the study in this design is not too broad and focuses on the things to be conveyed, analyzed, and discussed, these limitations include the following aspects:

- The design focuses on the area located close to Borobudur Magelang, Central Java which will function as shopping center with concept garden walk
- And there are also architectural limitations regarding architectural aspects using biophilic principles that will be applied to the design.

1.4 DESIGN METHOD

Problem Identification Methods

Identify the issues (architectural and non-architectural) that exist in Magelang and its surroundings so that problems are found to be addressed. The problems at hand can result in a design theme and function.

Data Collection Method

1. Primary Data

Data collected directly by the author by collecting context data of existing location site design Magelang

a. Observation

The author conducts observations using Google Satelite on the selected site that is the area for shopping center

b. Documentation

Figures related to the site and the conditions around the site.

2. Secondary Data

It is the data that is already available so that the author only needs to collect the data. Secondary Data, such

as:

a. RDTR Magelang, RTRWMagelang and other related regulations.

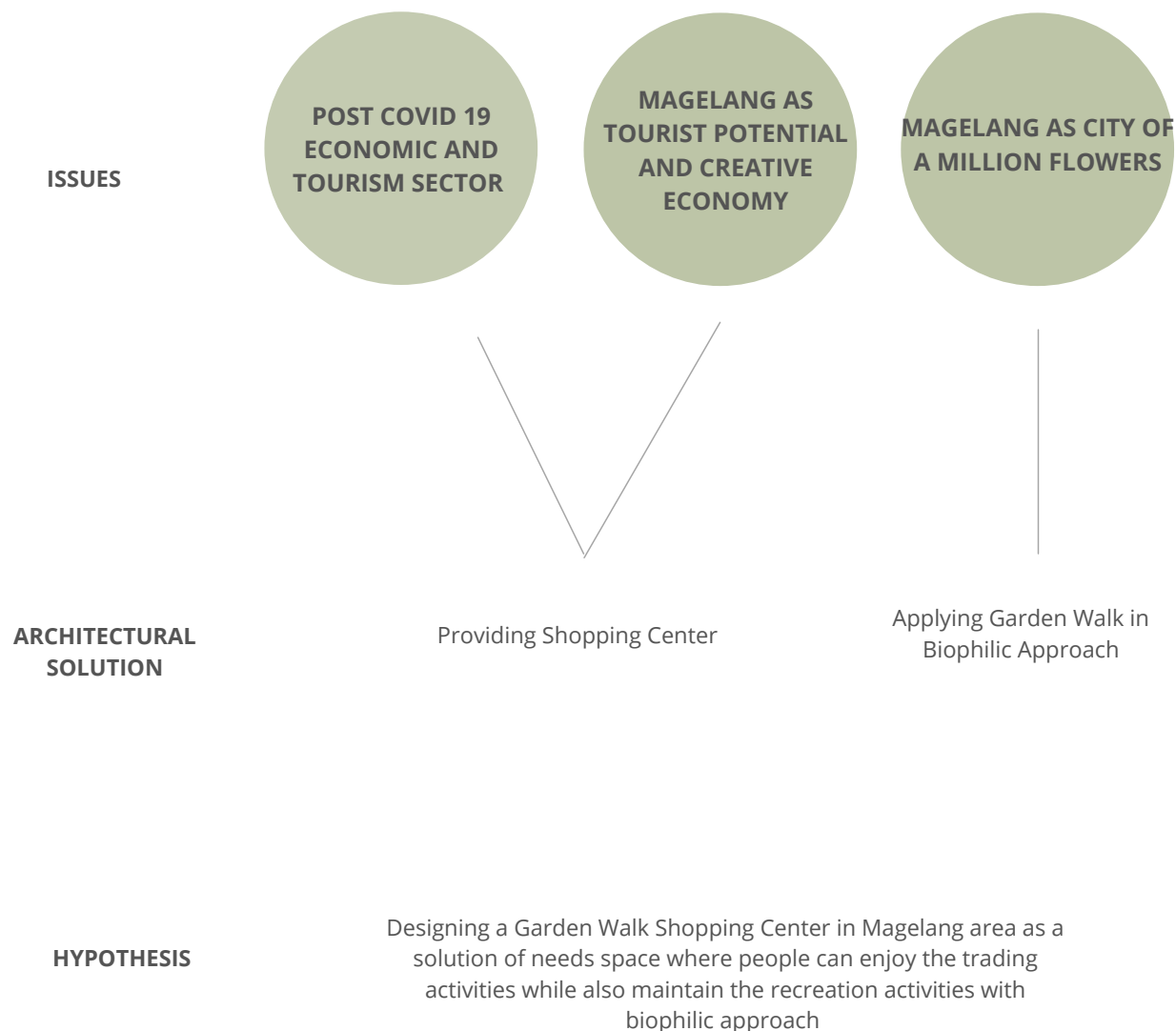
b. Theoretical review

c. Precedent

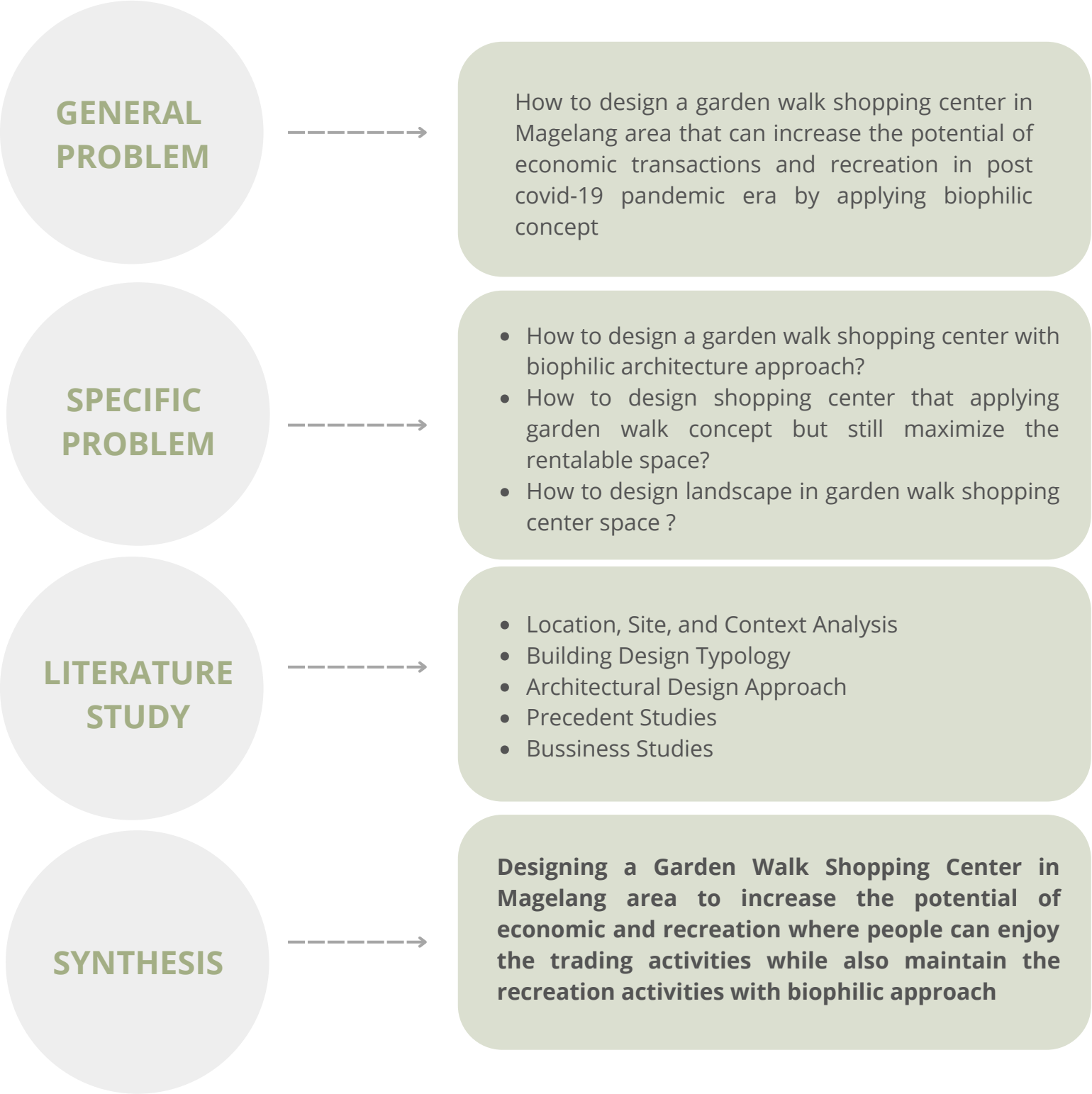
d. Figures and supporting information from the internet.

1.5 PRELIMINARY DESIGN HYPOTHESIS

From the design hypothesis itself, the author want to make shopping center with a concept garden walk in Magelang because from the literature that Magelang is a city with milion flowers gardens The hypothesis obtained is to make a garden walk shopping center which is designed to apply biophilic architecture to achieve economic and tourism development and to build buildings to maintain green space in this area. So that recreation and shopping areas can be created that adapt to the needs of fulfilling the quality of architecture, visitors, and the environment



1.6 DESIGN FRAMEWORK



1.5 ORGINIALITY AND NOVELTY

The design of the Garden Walk Shopping Center with an biophilic architectural approach has never been done by any party. Some themes that specifically or indirectly use shopping center and biophilic architecture as an approach can be found. The issues and focus on the project differ from each other from the author's proposed title.

To avoid plagiarism in the process of preparing reports and planning, these are some of the references used:

1. Design Social & Working Hub Di Kulonprogo Aerocity Dengan Pendekatan Biophilic Allesthesia

Approach : Biophilic Allesthesia

Author : Fadhil Muhammad

Publication : 2016

Concept : Design Social and Working Hub

Similarity : Approach

Differential : Concept, Location

2. Perancangan Garden Walk Shopping Center dengan Pendekatan Arsitektur Hijau di Tangerang

Approach : Green Architecture

Author : Aufa Salsabila

Publication : 2021

Concept : Garden Walk

Similarity : Garden Walk Shopping Center

Differential : Approach, Location

3. Design of Pontianak City Walk Center as New Shopping Center with City Walk Approach on Waterfront Area Pontianak

Approach : City Walk

Author : Joanna Novarinda Carissa

Publication : 2021

Concept : City Walk Shopping Center Center on Waterfront Area

Similarity : Shopping Center

Differential : Concept, Location, Approach

02 PROBLEM AND STUDIES

DESIGN STUDY

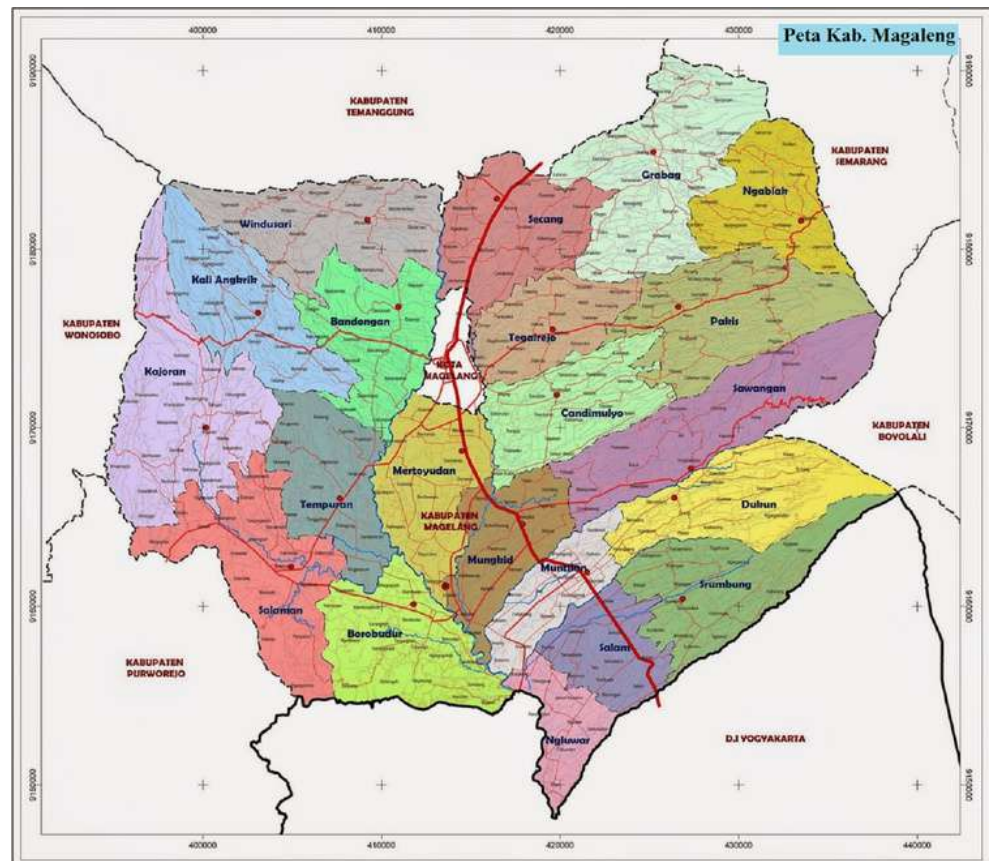
- 2.1 Location, Site, Context Studies and Analysis
- 2.2 The Selection Site Context Analysis
- 2.3 Study and Analysis of Design Approach
- 2.4 Study and Analysis of Design Typology
- 2.5 Study and Analysis of Precedent
- 2.6 Study and Analysis of Bussiness
- 2.7 Summary of Issue
- 2.8 Summary Design Development

2.1 LOCATION, SITE, AND CONTEXT ANALYSIS

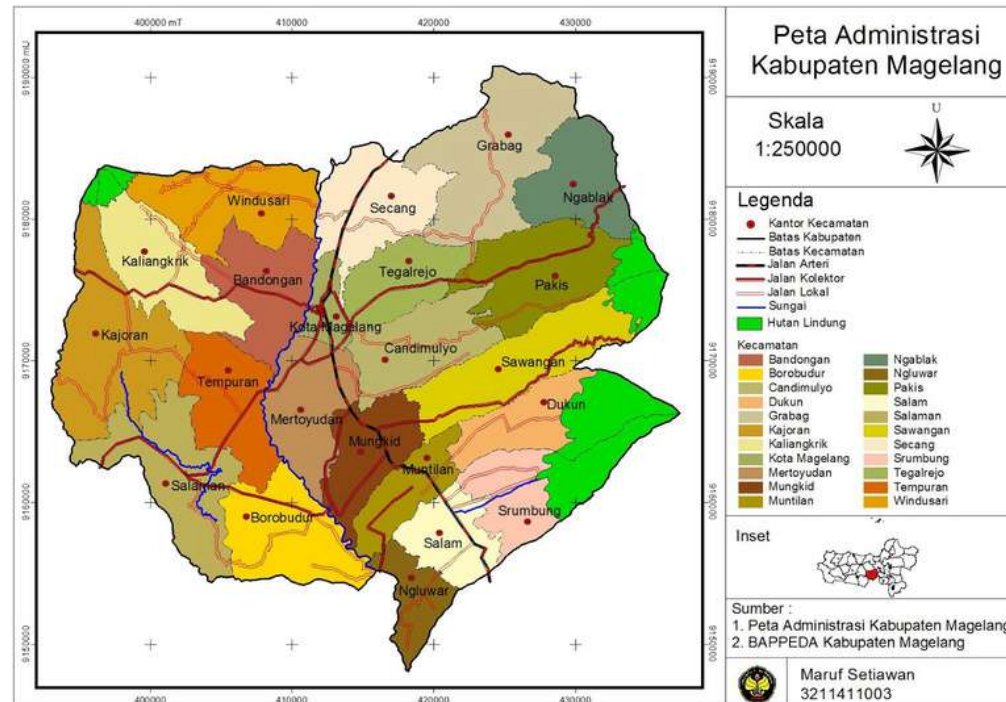
The Site Location

The city of Magelang is situated geographically in the center of the island of Java. There is also Mount Tidar, which is frequently referred to as Java Island's "nail." Due to its location on the major highways Semarang-Magelang-Yogyakarta, Magelang-Purworejo, and Magelang-Temanggung, the city of Magelang enjoys a strategic position.

The potential of natural resources for regional development is not heavily relied upon by the city of Magelang. The City of Magelang focuses more on the development of services in all fields, specifically realizing the creation of services in all areas (Education, Trade, Tourism, Health, and so on) for the city community and the community in the surrounding area, in line with its Vision for the Years 2010-2015, which is "The Realization of the City of Magelang as an Advanced, Professional, Prosperous, Independent, and Equitable Service City."

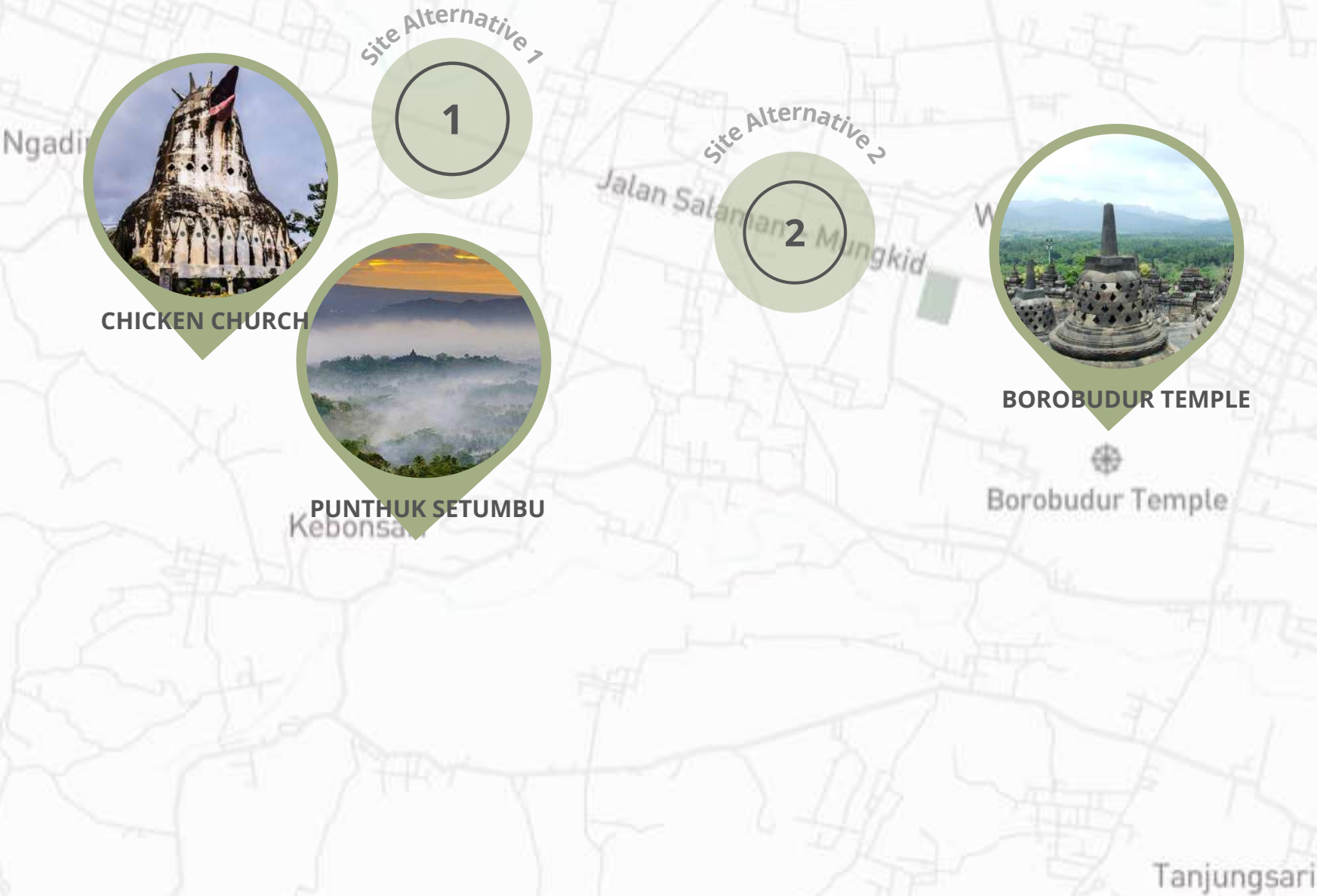


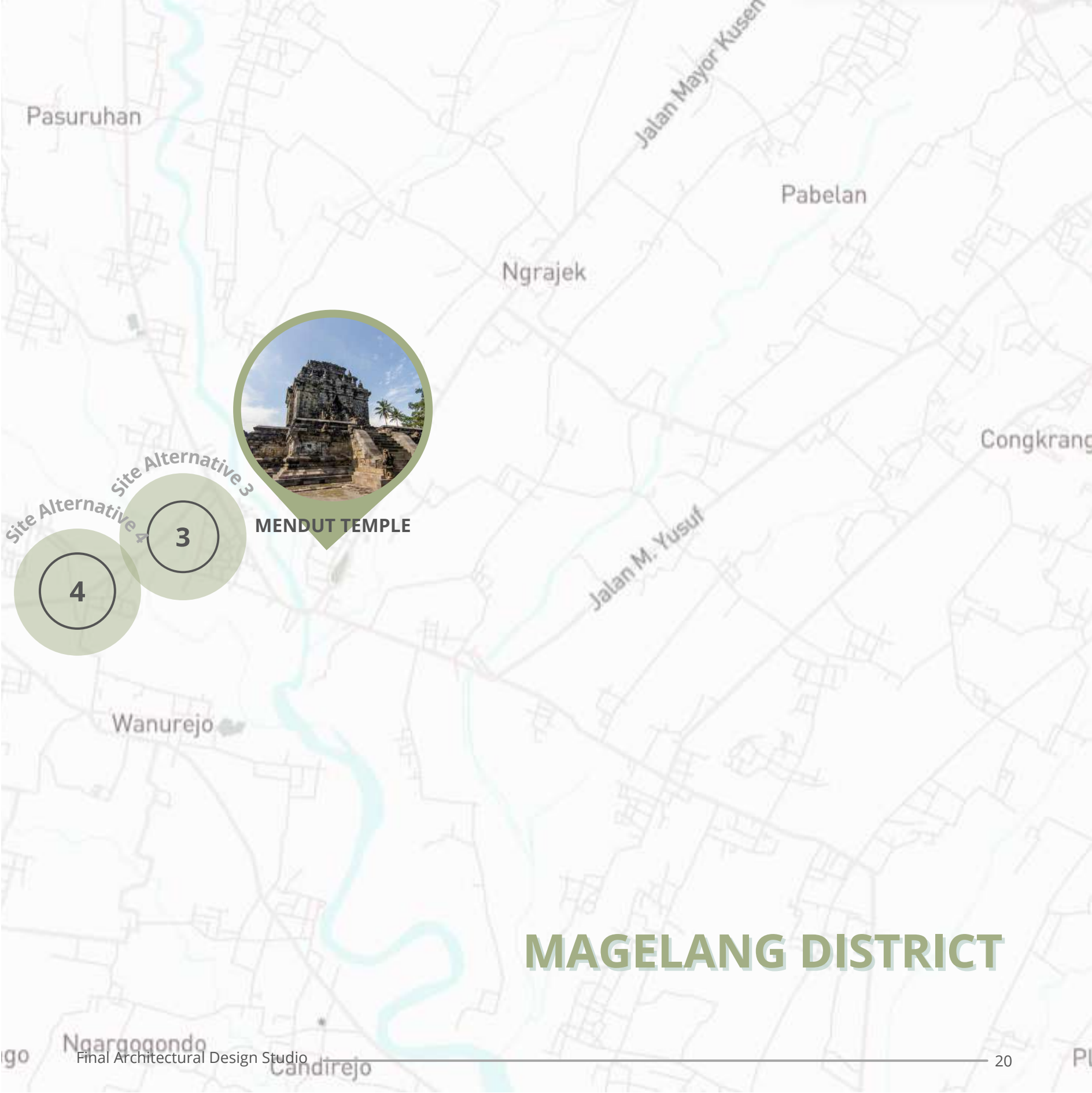
Site Characteristic



As a destination city (destination) and a transit city, Magelang plays a part in the constellation of regions in Central Java and its environs. Magelang City has a comparatively high level of population movement as a result of its advantageous location. The possibility of numerous visits and activities by migrants from outside the city of Magelang presents a chance to boost revenue for people-related businesses like tourism.

2.2 THE SELECTION SITE CONTEXT ANALYSIS





Pasuruhan

Jalan Mayor Kusen

Pabelan

Ngrajek

Congkrang

Jalan M. Yusuf

Wanurejo

Ngargogondo

Candirejo



MENDUT TEMPLE

Site Alternative 3

3

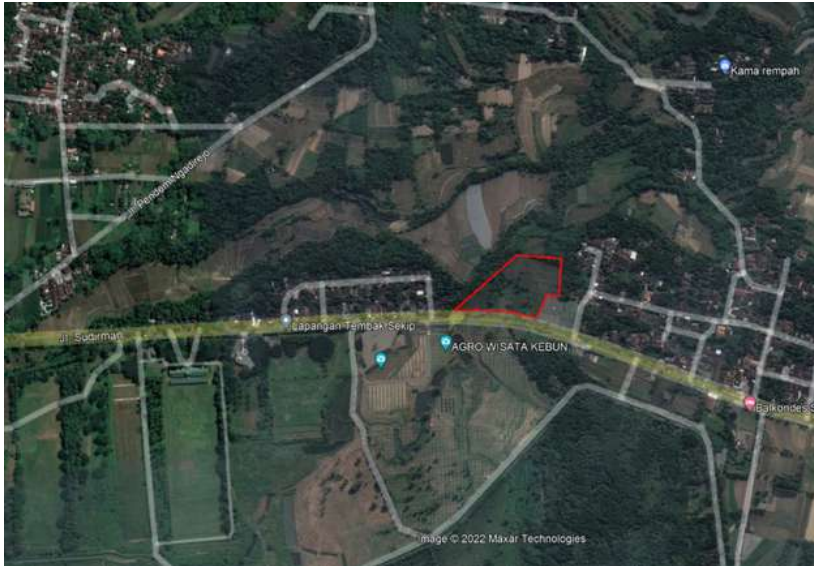
Site Alternative 4

4

MAGELANG DISTRICT

LOCATION 1

Area : 12000sqm



Borobudur : 3km
Punthuk Setumbu : 2.5
Gereja Ayam : 2.8
Agro Wisata

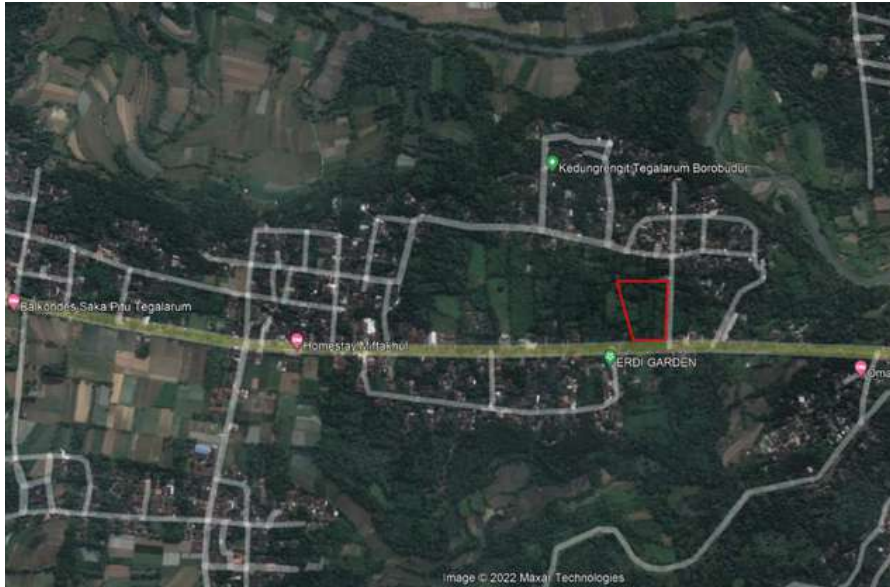
Jl. Raya Borobudur, Borobudur
Kec. Borobudur Kabupaten Magelang
Jawa Tengah

- (+) located close to tourist attractions**
- (-) the road is narrow**
- (+) is in the green area**
- (-) located after borobudur**



LOCATION 2

Area : 9000sqm



Borobudur : 2km
Punthuk Setumbu : 1,8
Gereja Ayam : 1,8
Balkondes

Jl. Raya Borobudur, Borobudur
Kec. Borobudur Kabupaten Magelang Jawa Tengah

(+) located close to tourist attractions

(-) located after borobudur

(+) national road to wates

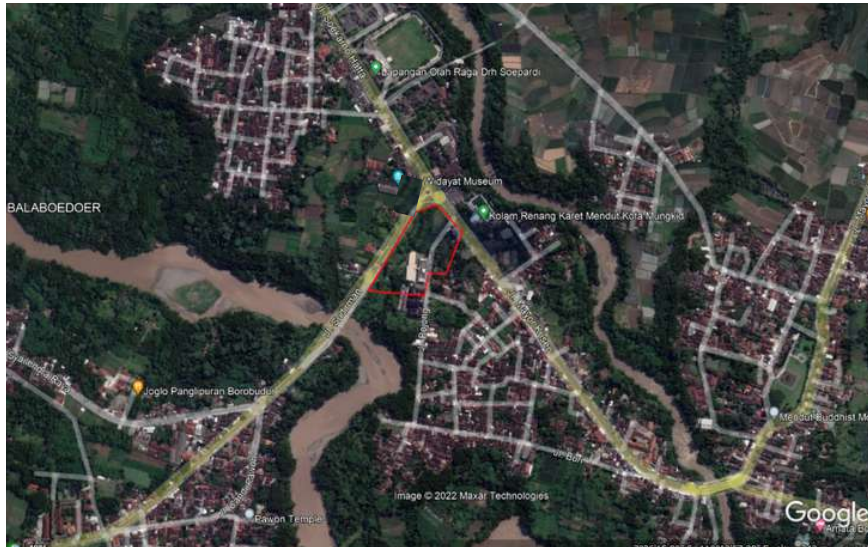
(-) close to settlement



LOCATION 3

Jln. Sudirman

Area : 20,000sqm



Borobudur : 2km
Punthuk Setumbu : 3 km
Gereja Ayam : 2.8 km
Mendut temple : 1km

(+) located close to tourist attractions
(+) is on the main road to borobudur
(-) located at the t junction
(+)-close to the hotel





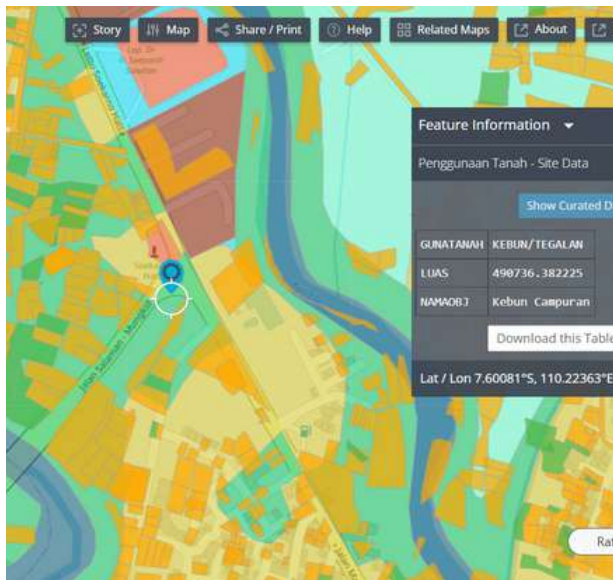
Borobudur : 1km
Punthuk Setumbu : 3 km
Gereja Ayam : 2.5 km
Mendut temple : 1km

(+) located close to tourist attractions
(+) in the area near the settlement
(+) is on the main road to borobudur
(-) in the garden area



SITE SELECTION Jln. Sudirman

Area : 10778 sqm



- (+) located close to tourist attractions
- (+) is on the main road to borobudur
- (-) located at the t junction
- (+)-close to the hotel

THE SITE REGULATION

- The Borobudur Regional Spatial Plan acts as a tool for operationalizing the National Spatial Plan and as a coordinating tool for the implementation of the Borobudur Area development to ensure the preservation of the Borobudur Area as a national Cultural Conservation Area and world cultural heritage.
- Borobudur area included in SP-1

It is part of the Magelang Regency, Central Java Province, including:

Bojong Village, Paremono Village, Pabelan Village, Ngrajek Village, and Mendut Village in Mungkid District; and Wanurejo Village and Borobudur Village in Borobudur District.

- Borobudur area included in SP-2:

Being in a circle with the outermost coordinate boundary:

- 1.A1 412,163.24 East Meridian, 9,164,071.51 North Meridian;
- 2.A2 408,670.73 East Meridian, 9,162,509.39 North Meridian;
- 3.A3 407,083.23 East Meridian, 9,158,977.19 North Meridian;
- 4.A4 408,631.05 East Meridian, 9,155,445.00 North Meridian;
- 5.A5 412,163.24 East Meridian, 9,153,936.87 North Meridia;
- 6.A6 415,854.19 East Meridian, 9,155,405.31 North Meridian;
- 7.A7 417,203.56 East Meridian, 9,158,897.82 North Meridian; and
- 8.A8 415,695.44 East Meridian, 9,162,509.39 North Meridian;

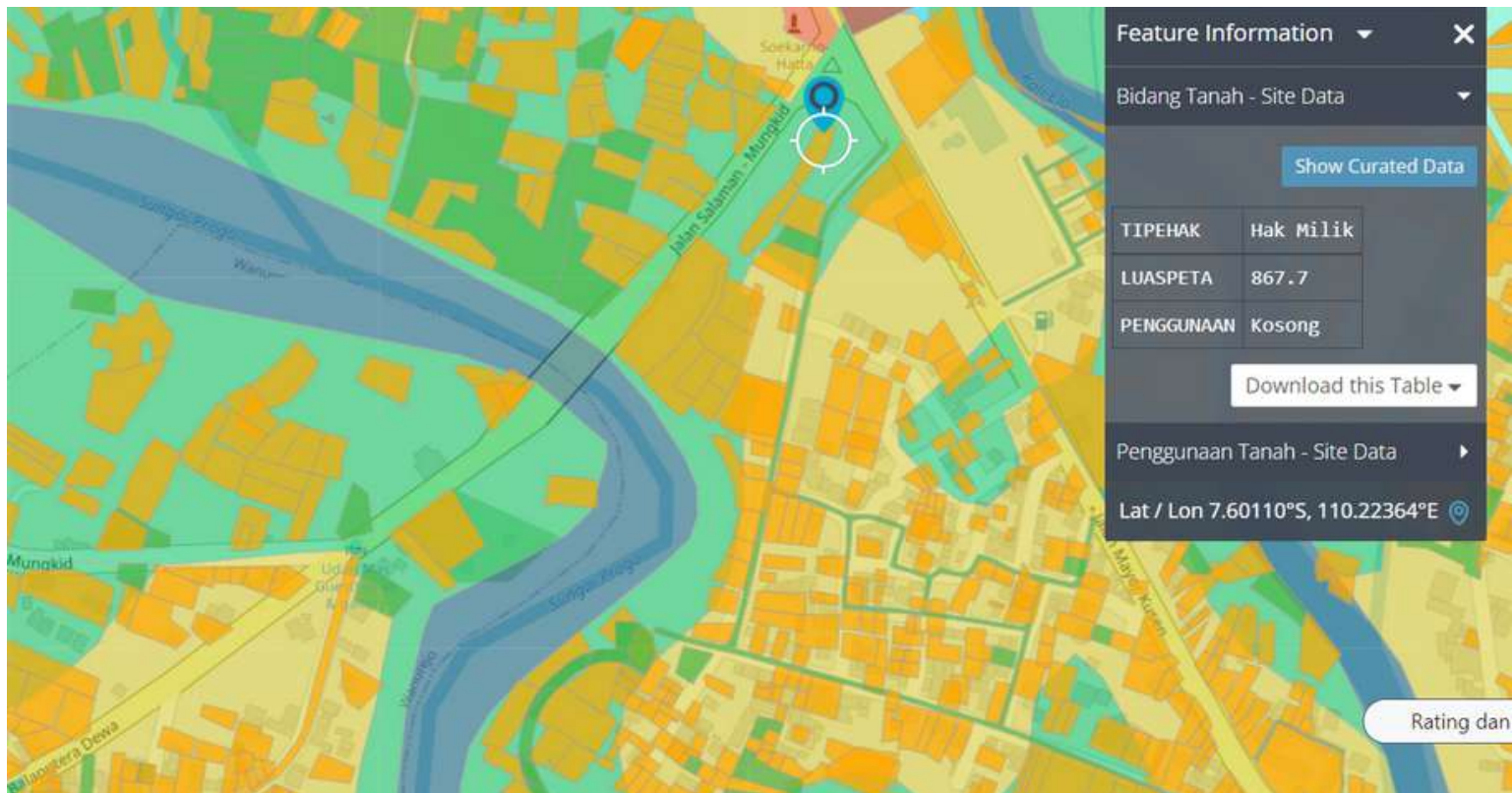
- It is part of the Magelang Regency, Central Java Province, including:

Wringin Putih village, Bumiharjo village, part of Tegalarum village, part of Kebonsari village, Kembanglimus village, Karangrejo village, part of Ngadiharjo village, Karanganyar village, part of Giripurno village, Giritengah village, Tanjungsari village, Taksongo village, Majaksingi village, Ngargogondo village, Candirejo village, part of Sambeng Village, and part of Friendship Village in Borobudur District;
Sawitan Village, Progowati Village, and part of Rambeanak Village in Mungkid District;
Deyangan Village, part of Pasuruan Village, part of Donorojo Village, and part of Kalinegoro Village in Mertoyudan District;
part of Ringinanom Village and part of Sumberarum Village in Tempuran District; and
part of Menayu Village, part of Adikarto Village, part of Tanjung Village, and part of Sukorini Village in Muntilan District.

It is part of the Kulon Progo Regency, Yogyakarta Special Region, including:

part of Sidoharjo Village and part of Gerbosari Village in Samigaluh District; and
part of Banjaroyo Village in Kalibawang District.

REGULATION OF SITE



- BCR = 60%
- FAR = 3,0
- Building Height= max. 3 Floor
- GSB = 5 m
- BCR = 60%
= 60% x Land Area
= 60% x 20,000 sqm
=12,000 sqm
- FAR = 3,0
3 x 12,000 sqm = **36,000 sqm**
- KDH min 30%
6,000 sqm

SITE MICROCLIMATE ANALYSIS

SUN ANALYSIS

09.00 AM

12.00 PM

16.00 PM

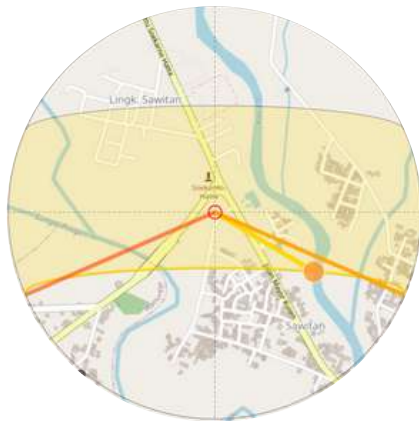
MAY



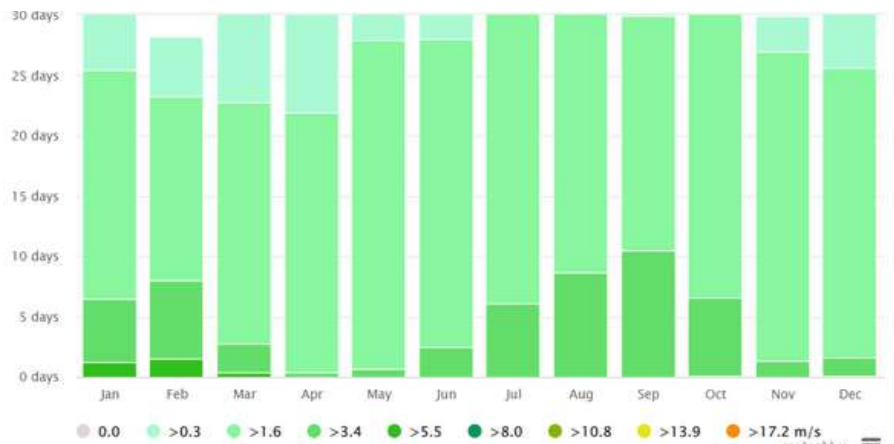
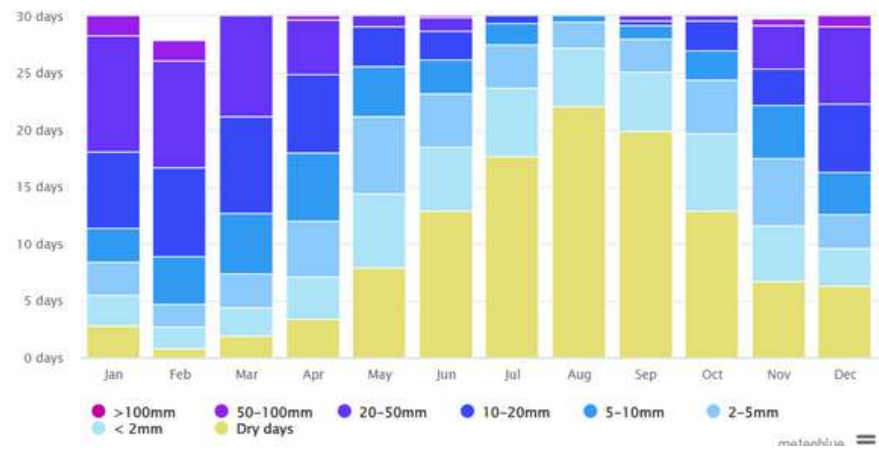
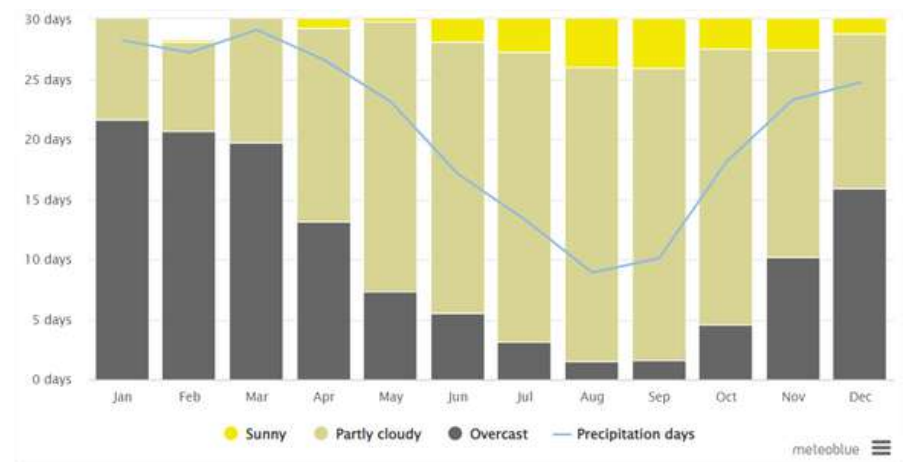
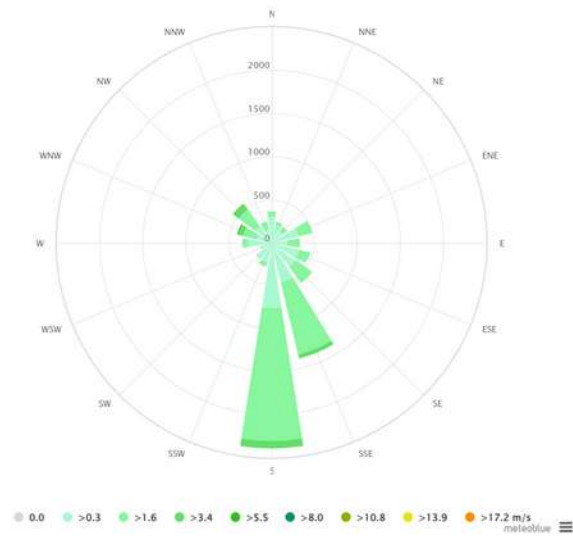
SEPT



DEC



WIND AND PRECIPITATION

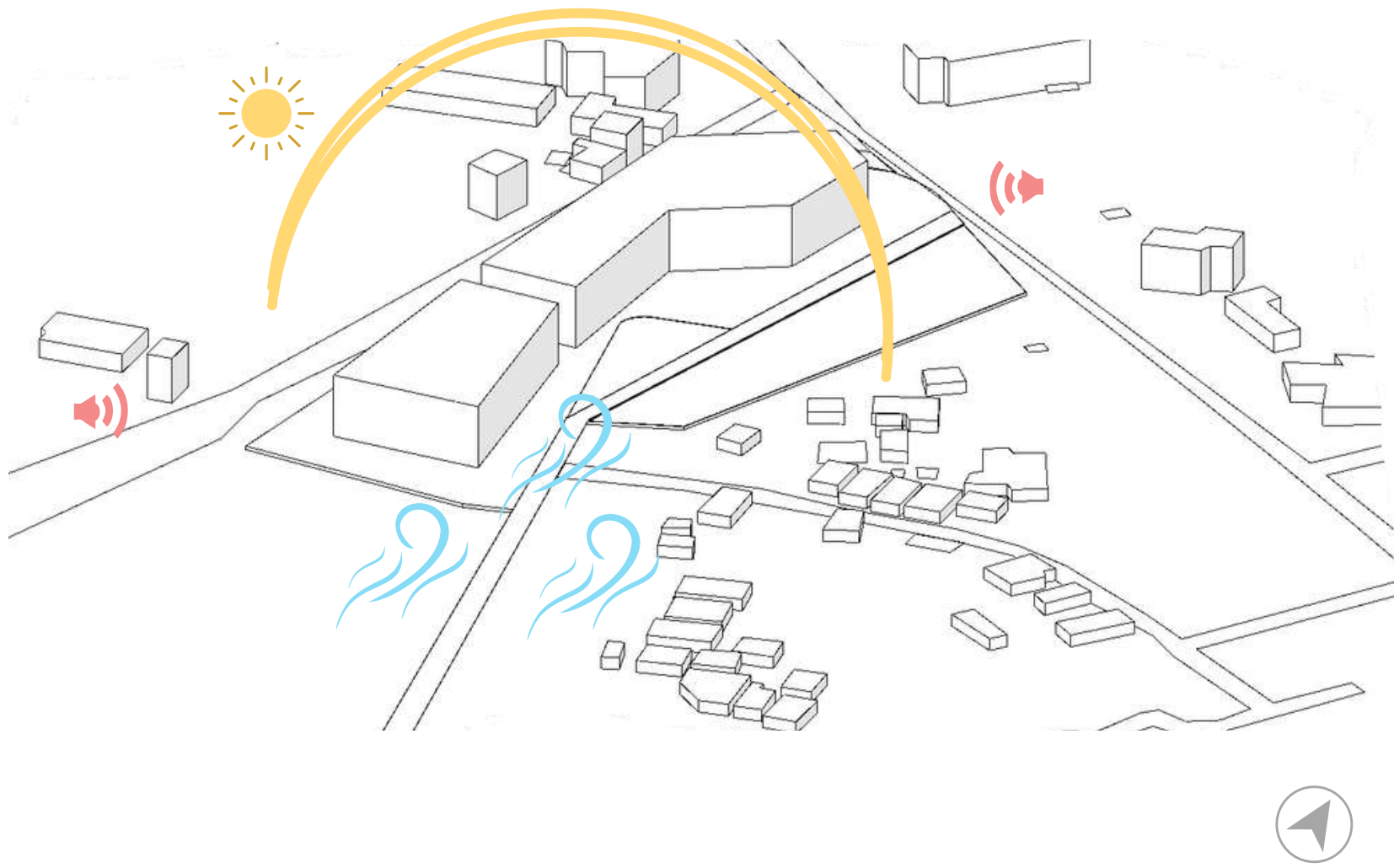


February had the strongest wind speed of 5.5km/h for 5 days and mostly wind direction of the the site goes from south to the north

August is the driest month with 22 days and January the most rainy

August only has 1.5 days to be cloudy while January has 22 days to be cloudy

ANALYSIS



2. 3 STUDY AND ANALYSIS OF DESIGN APPROACH

2.3.1 BIOPHILIC ARCHITECTURE

Definition of Biophilic Architecture

Architecture conceptually based on Biophilia, also known as "Biophilic Architecture," aims to improve the quality of life by introducing greenery, which positively impacts people's physical and mental health. When the biophilia concept is applied to architectural design, artificial structures (buildings) and the natural environment are in balance and harmony. The essence of the biophilic notion is to design a form with space where there is a relationship with nature as a fundamental human need. A growing body of scientific evidence indicates that being linked to and experiencing everyday contact with nature makes people more creative, productive, joyful, and healthy.

Biophilic Architecture Pattern

Based on Mel Cameron (2020) The biophilic design in the building has 14 patterns which are divided into 3 sub, namely:

Traits in Spatial Patterns

1. Visual Connection with Nature

A view of natural materials, processes, and living systems visually link to nature. This connection to nature has had the most significant therapeutic effects compared to all other biophilic patterns. A visual connection to nature has been shown to boost mental health and alertness, lower blood pressure and heart rate, and our general attitude and happiness.



Figure 2.1 Visual Connection with Nature

Source : The Biophilic Designer

2. Non-Visual Relationship with Nature

Non-visual Connections to Nature include the tastes, smells, sounds, and textures typical of being in the natural world. Flowing water, fragrant flowers, textured and natural materials, gardening, natural ventilation, pets, and audible sounds that are either artificially created or natural sounds that are reminiscent of nature are examples of this pattern (Browning et al. 2014).

Non-visual links to nature have been linked to lower levels of the stress hormone cortisol and systolic blood pressure (Park et al., 2009). Additionally, enhancements in psychological and cognitive function.

3. Non-Rhythmic Sensory Stimulation

Non-rhythmic Natural diversions provided by sensory stimuli encourage rest and a pause from an activity. The primary health advantages are seen when performing jobs that need quick visual concentration, like operating a computer, because the utilization of natural sensory stimulation subtly draws the brain's attention and encourages temporary mental pauses from work. These little interruptions, which can last up to 20 seconds, can improve attention span by allowing the eye muscles to relax and the lenses to flatten. On the other hand, headaches and exhaustion can happen if eye muscles are kept tight by focussing for an extended period (more than 20 minutes).

4. Thermal Variability & Airflow

Airflow and Thermal Small fluctuations in airflow, temperature, relative humidity, and different thermal materials are referred to as variability patterns because they resemble those seen in nature. Therm comfort is a key element that controls inhabitants' levels of productivity, tranquility, and health in the home.

5. Presence of Water

Exploiting the noises that water makes, the chance to touch it and the ability to see across it are all possible ways to forge a biophilic connection. Multi-sensory interactions with water might enhance the perceived health benefits by potentially reducing stress levels through an auditory and tactile link (Alvarsson et al., 2010). Even the addition of a single tiny water element can encourage this multi-sensory interaction. Intriguingly, a study indicated that repeatedly being exposed to the same body of water did not lower interest levels over time and could even enhance cognitive performance by restoring memory and boosting concentration (Biederman & Vessel, 2006).

6. Dynamic & Diffuse Light

Dynamic and sporadic Light affects different levels of light and shadow to mimic shifting lighting conditions found in nature. In the constructed environment, daylight is frequently highly desirable, and dynamic and diffuse light can benefit human circadian rhythms (Browning et al., 2014). This pattern's objectives are to sustain circadian cycles and stimulate the eyes to elicit a favorable psychological reaction. Design considerations advise balancing dynamic and diffuse light when transitioning indoors to outdoor spaces. They also suggest including circadian lighting in areas used for most of the day.

7. Connection with Natural System

Connecting with natural systems stimulates a healthy relationship between people and nature. This link encourages a bond with biological processes, seasonal awareness, and temporal shifts. Because the experience is frequently predictable, the observer can unwind (Browning et al., 2014). Simply looking out to a deciduous tree or using materials that change with time to build can integrate the pattern. This design encourages people to take care of the environment and ecosystems by reinforcing their understanding of natural processes.

Natural Analog Pattern

8. Biomorphic Shapes & Patterns

By using symbolic design components, this biophilic pattern hopes to inspire people to feel a connection to living things. It is ideal for them to be introduced and create an aesthetically pleasing environment for the occupant, which could improve cognitive function and lessen signs of stress (Browning et al. 2014).

9. Material Relations with Nature

The term "A Material Connection with Nature" refers to the natural-derived materials, grains, textures, and design features that represent the regional environment and provide a sense of place.

This design incorporates several natural materials to evoke favorable cognitive responses. Natural materials used in the design are typically somewhat produced and altered from their original state. However, this modification enables using natural materials in various ways, such as marble bench tops and timber flooring/wall paneling.

10. Complexity & Order

Intricate "sensory information that corresponds to spatial hierarchy comparable to those found in nature" can be found throughout Complexity and Order (Browning et al. 2014, p.42). This design strives to create fractal geometries and symmetries that are pleasing to the eye and encourage a beneficial psychological or cognitive outcome (Salingaros, 2012). The difficulty with this pattern is striking a balance between a complex and visually nourishing setting and one that is overwhelming and stressful. Examining fractal geometries, view preferences, and the beneficial physiological reactions to the fractals seen in nature has helped advance research into this pattern (Joye, 2007).

Nature of Spatial Pattern

11. Prospect

The Prospect Pattern contends that because they have provided us with possibilities for monitoring and planning throughout our evolutionary history and boosted our chances of survival, we tend to favor vast views over landscapes (Beatley, 2016).

12. Protection

This pattern's primary goal is to provide residents with a small, secure area that encourages stimulating activities inside a larger room. The second goal is to reduce visibility into the haven. In architecture, the more sides (protection) there are, the more stimulating the experience will be. However, total closure that is too much protection and does not connect to the environment will not create a sense of refuge.

13. Mystery

Japanese gardens are an excellent example of mystery with their many meandering paths, hidden main focus points, and mazes. The mystery pattern encourages mobility and exploration through a place to lessen stress and aid cognitive recovery. Unsurprisingly, continued exposure can cause this pattern to deteriorate over time.

14. Risk / Danger

Risk/Peril is characterized as a situation with some element of risk and a trustworthy safeguard. This design pattern aims to elicit responses related to our childhood development of problem-solving, curiosity, and risk-taking abilities.



2. 4 STUDY AND ANALYSIS OF DESIGN FUNCTION

2.4.1 SHOPPING CENTER

Definition of Shopping Center

The mall, as defined by the International Council of Shopping Centers or ICSC (2013), is a structure with a parking lot for building users and several planned and designed retail and commercial activities. Furthermore, shopping centers are one (1) or more buildings designed vertically or horizontally, according to the Presidential Regulation of the Republic of Indonesia Number 112 of 2007, Concerning the Arrangement and Construction of Traditional Markets of Shopping Centers and Modern Stores.

Based on the aforementioned sources, it can be deduced that a mall is one or more large structures that are built vertically or horizontally with an architectural design resembling a recreation room and arranged to connect two or more densely populated points that are encircled by retail or sales locations serving a variety of needs related to commercial activities. Before entering the retail stores, mall visitors can enjoy themselves by strolling around and perusing the merchandise. To conduct trade activities with the customers, the building has space rented or sold to persons who own enterprises in the mall.

Types and Classification of Shopping Center

a. Based on the Type

Shopping malls feature the category of retailers known as Semi Demand (half demand), i.e., those who sell products to meet everyday necessities. The products include apparel, food, beverages, gadgets, literature, toys, and recreational equipment. 210 (Marlina, 2008)

b. Based on Area

40,000 to 150,000 residents (on a regional scale) are served by the district-class shopping complex, which has a building area of between 10,000 and 30,000 m². Top junior department shops, supermarkets, and convenience stores make up the sales units. (1959:127 Gibbert)

c. Based on Selling

Shopping centers sell products in single or small quantities. Because there are more buyers and a wide variety of goods, shopping centers are appealing. To fit a range of tall merchandise, the display area for goods intended for sale must be large. On the other hand, the warehouse merely needs a space with lower proportions. The mall's loading area is not a crucial location. Marlina (2008) page 217

d. Based on the Location

Malls are included in the retail category percent, an open-air shopping complex overlooking a free open space when viewed from the location. The site's location can determine the area with the best view or develop green open areas inside the building. (McKeveer 1977, p. 38)

Shopping Center Objectives

A shopping center's primary objective is to meet the requirements of both locals and visitors by supplying various goods in one location. By integrating regional and contemporary products, these demands can be met for leisure and more fundamental necessities like food, drink, clothing, and so forth. Additionally, establishing this shopping center will increase government revenue because of taxes from the trading location.

Shopping Center Function

This shopping center's existence serves multiple purposes that can be divided into primary, supporting, and supplementary roles. It does not just fulfill one activity. These divisions of these functions are described as follows:

a. The primary purpose

the establishment is to accommodate guests' purchasing needs.

b. Supporting Role

Along with serving as a method of shopping, malls also serve as a means of satisfying tourists' requirements for amusement and relaxation.

c. Corresponding Functions

This shopping center's existence also fulfills the needs of the mall's show events and exposition facilities.

Shopping Mall Facilities

Based on the functions that will be fulfilled, the following are the specifications for: the facilities that can be concluded in the Shopping Mall based on Mc Keveer (1977) and similar object studies:

a. Main Facilities

The most crucial facility for fulfilling shopping activities is retail/tenant, which various products with different brands will rent. Additionally, a plaza facility serves as a connector between the businesses that are available and can be used as open space in the mall.

b. Supporting Facilities

The mall has recreational amenities that can be used for enjoyment. Facilities like the food court, game zone, and movie theater are available, and they may all be leveraged to generate additional foot traffic to the mall.

c. Complementary Facilities

Complementary facilities are only operational during specific times of the year and stop operating at the mall. Facility The stage and exhibition arena are shown here.

d. Service Facilities

All activities within the mall will benefit immensely from the presence of service facilities. Toilets, a management office, parking, and utility rooms are service facility amenities.

Design Principle

The general concepts that act as recommendations while developing a mall that includes general principles, management, and location components are as follows:

a. General Principles of Shopping Mall Design

This project's budget includes integrated structures with an emphasis on recreation areas that are accessible from shopping malls, as well as the construction of additional mall support services. The building's design also considers the area's architectural traditions. Using inexpensive resources while still being environmentally beneficial. The use of canopies in various locations, such as drop-off zones, parking lots, and plazas as shade, and the use of landscaping create an environment that helps the neighborhood feel at home and lasts longer inside the mall (McKeveer, 1977:108-113)

b. Project Management Principles

The general principles of management for malls are more likely to be purely managed systems by the private sector with due regard to government regulations and permits particularly with regard to commercial buildings. There are several important things that must be managed in shopping mall planning, namely Administration, Promotion, Operations, Maintenance (Marlina, 2008: 212).

c. Location Requirements

Based on the literature study and comparative studies, it is concluded that the location criteria are general as follows:

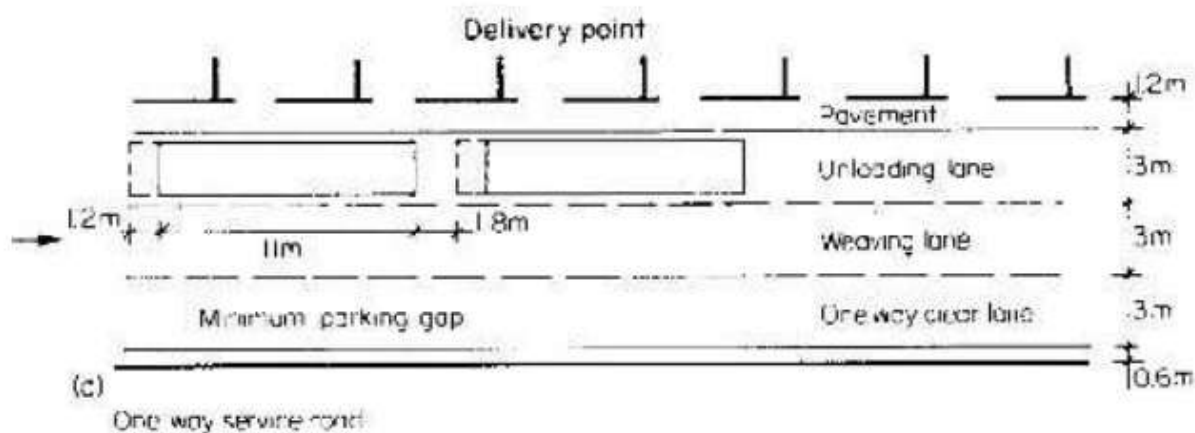
- 1) The location is close to settlements or tourist attractions that are crowded.
- 2) Has a fairly wide access road (about 8 meters or more).
- 3) The site location is visible from the road and easy to reach.
- 4) There are adequate and functioning utilities.
- 5) Topography of the site with a slope of less than 5%.
- 6) Regular tread shape so it is easy to place the mass of the building.
- 7) The site location is surrounded by important accesses

Shopping Center Circulation System

While Beddington (1982) describes several circulation patterns for loading and unloading dock as shown below:

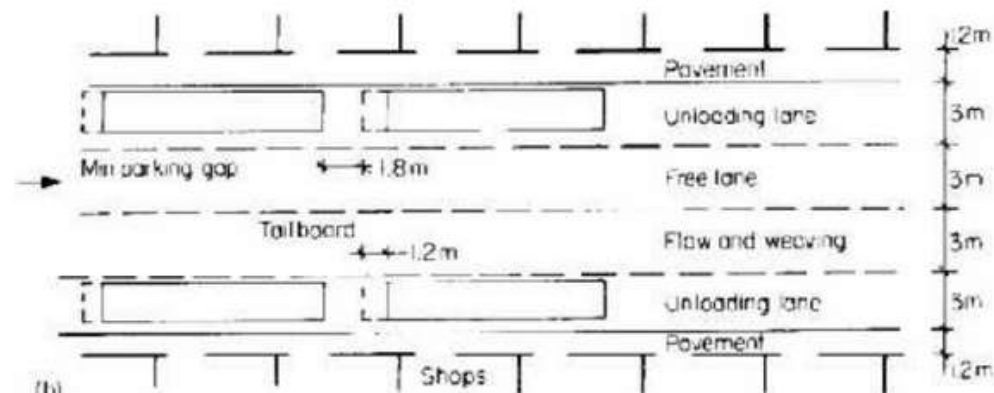
a. One lane service system

The one-lane service system utilizes one lane (left/right) to serve as loading and unloading goods



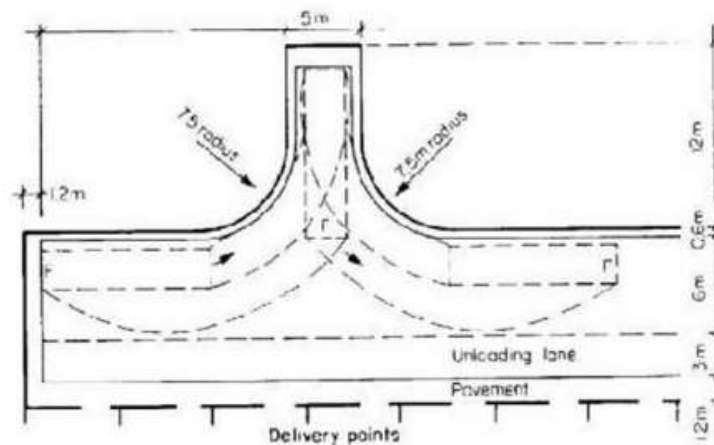
b. Two lane service system

The two-lane service system utilizes 2 side lanes for loading and unloading



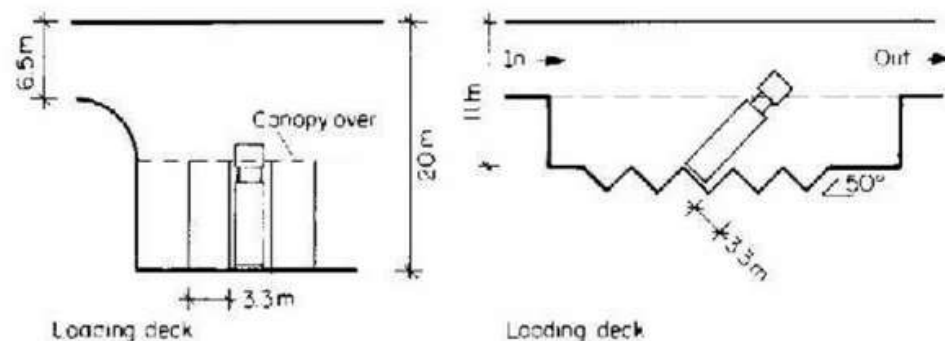
c. T system

The T system is an alternative in tight spaces and for smooth circulation so the goods truck does not need space to turn back again



d. Loading Deck Pattern

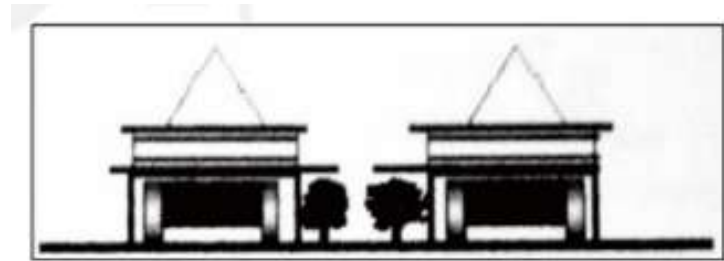
In loading and unloading goods, trucks often have to park and wait turn, following the pattern described in Beddington (1982)



Shopping Center Typologies

OPEN SHOPPING CENTER

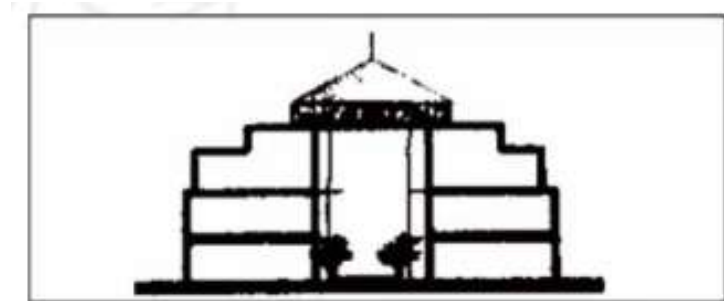
Weather protection is provided in a shopping center that is open in design and exposed to the sun by utilizing the umbrella continuously across the storefront. The technological requirements for execution are simple, which has the benefit of lowering the cost, but the problem is that it is difficult to move between different merchants due to climate control restrictions.



Picture 2.2 Open Shopping Center

ENCLOSED SHOPPING CENTER

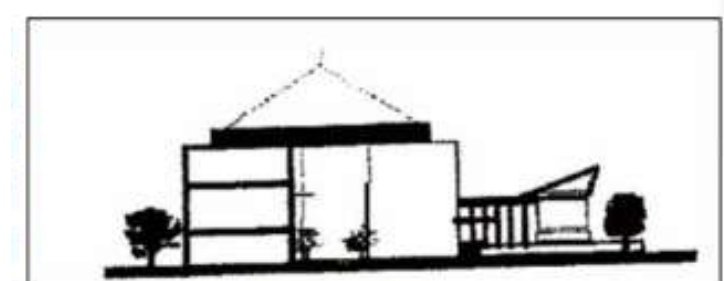
Controlling the climate is a benefit (convenience). This mall has a roof protector, protecting it from the elements. Even though it has air conditioning in every room and incurs additional expenses for power, the loss is in the form of expensive financing.



Picture 2.3 Enclosed Shopping Center

INTEGRATED SHOPPING CENTER

It combines open-air mall shopping and indoor mall shopping. This design is emerging in response to the lost energy required for control and the high technical expenses of production and upkeep in abandoned shopping malls. This shopping center attempts to focus on drawing customers. It has a closed portion in the middle that serves as a focal point and a visitor magnet.



Picture 2.4 Integrated Shopping Center

Source: Rubeinstein, H. M., Central City (1978)

Shopping Center Elements

The mall has the following components, according to Aji Bangun and Harvey M. Rubenstein in Nurrachman (2011):

a. The atrium

The atrium, which extends from the first floor to the top, is an open area that receives sunlight directly and serves as the building's orienting hub.

b. Primary Magnets

The mall's primary magnet acts as the focal point, or what may be referred to as a landmark, in the mall. Because it requires a broad area, the primary magnet or anchor is most effectively placed at each end of the corridor.

c. Secondary Magnets

One of the crucial components of the mall that allows it to be called a shopping center is secondary magnets, or retail-retail. The location of the primary magnet, which is the main draw in the mall's center, is taken into consideration while placing secondary magnets.

d. Corridor

A corridor is a place where mall patrons can move about. There are two types of corridors in the mall, and they are as follows: 1. The Main Hallway, which is a corridor that is separated from the shops and is around 15 meters wide.

A corridor called Additional Corridor (Secondary) is situated next to the principal corridor. The secondary corridor is at least six meters wide.

e. Street Furniture

A design that blends trees and the street is called "street furniture." In addition to plant pots and trash cans, additional types of street furniture include statues, benches, ponds, lighting, and street lamps.

Based on the aforementioned research, the shopping center design has atrium components with voids to allow natural lighting into the building, with anchor tenants strategically placed at the end of the corridor to serve as their main draw. As an addition to the site plan, the landscaping for malls sometimes includes street furniture features to enhance the aesthetics and provide visitors with a comfortable environment.

2.4.2 THEMATIC MALL

Definition of Thematic Mall

Thematic is a form that incorporates a concept into a specific theme or topic of discussion to ensure that the relationships between these concepts are integrated.

A mall is a particular kind of shopping center designed as a closed structure with controlled temperature and a regular walkway that runs between little stores adjacent to one another.

Based on a few of these definitions, it can be inferred that a mall, or the meaning of an architectural mall, is a place for gathering and recreation in addition to a shopping center with a shopping complex where buying and selling activities and the exchange of goods and services take place.

A shopping center known as a "thematic mall" has a specific theme or subject so that various stores can be integrated.

2.4.3 GARDEN WALK

Definition of Garden Walk

Bander (1978) claimed that the Garden is a restricted location to enjoy fun. Consequently, the garden is a small area utilized for recreation. The name Garden is derived from the Hebrew terms gan and eden, which refer to a finite amount of money whose shape can alter and is constructed with the least amount of construction and the greatest quantity of raw natural elements. The words gan den protection or a fence, and eden, which denotes joy or amusement.

Garden Walk is a sizable garden situated in an open area that serves as a strolling and recreation area and a place to play or unwind for a bit.

Garden Walk is a park for pedestrians that is intended to be as appealing and comfortable as possible to allow people to relax for a while and rehydrate while visiting this retail mall.

Materials of garden walks

There are a virtually limitless number of materials available for garden walks:

- Brick or stone onto a concrete basis. Additionally, utilitarian concrete gives excellent flexibility and durability. Its stark commercial aspect can be covered up with pebble aggregates, brick borders, stains, textures, and colors. In fact, patterned concrete may be made to resemble almost any material. Bricks and pavers made of modular concrete and crushed stone come in a wide variety of sizes, hues, and forms.
- Sod: In flower gardens, a sod walk seems natural, but keep in mind that a grass requires ongoing maintenance. Lawn paths must be mowed and edged every day for at least a week.
- Gravel: To create a harder surface if you don't like the crunch of gravel underfoot, layer it over finely crushed stone.
- Mulch: A simple layer of pine needles, wood chips, or shredded bark can serve as a rustic trail.

Element of Garden

1. Garden Bones

Of all the garden design elements, garden bones are the most difficult to incorporate. Like a building or a story, it requires a solid structure before starting to fill in the details. Where all the plants are the same size or height, it is a boneless garden. Small trees and shrubs are often used to provide garden spines and classic spruce.

2. Color

Color is the biggest stumbling block for garden designers. It's interesting how many people can tell whether it looks good in bluish-red or orange-red, but most can't tell the difference between red flowers. To have a particular color preference orange or yellow in the garden is a fun color palette. by noting the relationship between complementary colors, such as blue and yellow, which make their opposites appear more alive; harmonious colors, such as yellow and green, which seem to shift gently in shades; so the color element is very useful to cool the garden

3. Focal Point

When in the garden, one's attention is frequently drawn to minute things like weeds that appear out of nowhere and snail damage to host plants. A garden should ideally not be visible at first look. This should be a peaceful discovery. Including a focal point in your garden is a simple method to do this. The purpose of the focal point, which might be a huge plant, building, or adornment, is to draw attention to the surrounding plants.

4. Texture

Plants with different textures highlight each other's main attributes. some people may like soft, wavy plants, but the whole garden will look blurry. so it takes a coarser leaf texture or leaves that are wide and thick. It is this contrast that gives the garden a sharper definition and prevents it from looking two-dimensional

5. Sound

it is the voice that breathes life into the garden. Whether it's the rustling of plants, the sound of pebbles crunching underfoot, the chirping of birds, or the dripping of water, the sound must be considered and planned. It can be as easy as using seed plants for birds or as complex as a series of waterfalls.

2.4.4 CRAFT

LOCAL ART AND CRAFT

Horn Craft

The public knows Pucang Village, Sepang District, Magelang Regency, as a hub for producing wooden crafts. Additionally, the village has a distinctive quality. Local craftsmen have carried out this occupation for decades or from generation to generation. They also use buffalo horns to create a variety of trinkets and accessories. The type of crafts made using buffalo horns is enormous. For them, buffalo horns are like moldable paper that can be made into any shape. For instance, jewelry holders, bracelets, combs, prayer beads, cangklong pipes, scraping implements, and many more. This distinctive craft is not only being offered on the domestic market; it is also being sold in Singapore, Japan, Hong Kong, America, Germany, and other foreign markets. This craft has become one of the pride of the Magelang region and is particularly well-liked by foreign tourists.

Bamboo Craft

Around the Borobudur area, there are many bamboo craftsmen in Sidodadi Village, Tegalrejo District. Various bamboo crafts ranging from baskets, bags, wall decorations, lamp decorations, chairs, tableware and so on, are the results of their crafts.

Aluminum crafts

Kitchen utensils from aluminum are usually identical to factory-made items. However, in Magelang Regency there are aluminum craftsmen who produce various types of kitchen utensils such as wok, kettle (kettle), cormorant, soblok, and so on.

Temple Craft

Kitchen utensils from aluminum are usually identical to factory-made items. However, in Magelang Regency there are aluminum craftsmen who produce various types of kitchen utensils such as wok, kettle (kettle), cormorant, soblok, and so on.



Batik Craft

Batik has become an inseparable part of Indonesian culture. Almost every area has batik with patterns and motifs that show the characteristics of the area. Batik craftsmen in Magelang Regency are spread over several areas including Batik Sleker Asri in Gandusari Village, Bandongan District and Batik Saniyya in Tamanagung Village, Muntilan District. The various patterns and motifs applied to batik represent the natural surroundings, for example the Borobudur temple stupa motif made by sleeker beautiful batik, and the bamboo tree motif in saniyya batik. There are batik-making techniques using canting (writing) or using stamp techniques, and coloring using chemicals or natural dyes



Clay Craft

This crafter from Magelang is able to create clay into various shapes of characters according to consumer desires, so it is very suitable to be used as gifts, wedding souvenirs, wedding gifts, graduation gifts and so on. The advantages of yoorra clay products are custom products and fine finishing details.

Pottery Craft

Karanganyar Village, Borobudur District is a Small Industry that focuses on pottery products. Various kinds of pottery products are produced, ranging from small to large. Along with the times, the pottery business in Karanganyar Village has developed into vocational-based educational tourism. Tourists are invited to get involved and practice directly in making pottery crafts and later the results of these practices can be taken home as souvenirs. Every day, many tourists visit both domestic and foreign tourists



2.4.5 LUXURY PLANTS

LUXURY PLANTS

As we know that Magelang is a city of a million flowers, while the philosophy of flowers itself is:

- Give beauty
- Provides economic benefits
- Describing the synergy of life

The ornamental plants came from 14 activists of ornamental plants and aquascapes in Magelang and its surroundings. This ornamental plant is in great demand by the public. Not only because the plants are beautiful, they are also profitable.

- **anggrek**
- **anthurium bunga**
- **anthurium daun**
- **dracena**
- **euphorbia**
- **hanjuang**
- **mawar**
- **pakis**
- **sedap malam**
- **sri rejeki**
- **soka**
- **philodendron**
- **palem**
- **melati**



2.4.6 FOOD

The food tenant in the mall can attract the attention of visitors, both for small children and families, so it is suitable to be placed in a shopping center that provides food as a tenant. Besides being able to be used for recreation, it is also used as a place to rest, so the presence of food is very necessary because the biggest influence is on food

Regional Food

Not only the tourism sector, Magelang also has a myriad of delicious culinary delights to be proud of. Each region in Indonesia has its own characteristics, including food. Previously, various kinds of regional specialties that could only be found in their place of origin. However, along with the times and technology, regional specialties can be found in other areas. Regional food is created with cultural differences and available food ingredients. Food processing in each region is certainly different, resulting in various types of food with different characters.

Local Food



Food Tenant



2.4.7 ACTIVITIES ANALYSIS

User Analysis based on the function of the shopping center building that will be made in the form of:

No	Type of User	Activity	Zoning	Room Type
1.	Visitor	Searching Information Walking Shopping Eating, Drinking Working Sanitary Pray Bank Transaction Parking	Public Public Public Public Public Private Public Public Public	Lobby, Receptionist Corridor, Garden Shop Restaurant, Cafe Workshop Toilet Musholla ATM Center Parking Lot
2.	Tenant	Display items Negotiation Payment Store Goods Sanitary Pray Parking Loading	Public Semi Public Public Public Semi Public	Shop Toilet Musholla Parking Lot Loading Deck

No	Type of User	Activity	Zoning	Room Type
3.	Management Service and Manager	Coordination Work Administration Store Goods Control Security Maintenance Eat, Drink Rest Sanitary Pray Parking	Semi Public Private Semi Public Semi Public Private Private Semi Public Private Private Public Public	Meeting Room Manager Room Administration Room Storage Security MEE Room Cafeteria Janitor Room Toilet Musholla Parking Lot

So it is concluded that it has 3 type of user, namely visitors, tenants, and also management. Management is also in the form of services so that later a room will be created based on the activities that have been carried out

SPACE ORGANIZATION

based on space organization which is distinguished by zone and also the presence of lighting, view, access, and acoustics

No	Room	Natural Lighting	View	Acoustic	Accessibility	Zone
1.	Lobby	●	●	●	●	Public
2.	Parking Area	●	●	●	●	Public
3.	ATM Center	●	●	●	●	Public
4.	Musholla	●	●	●	●	Public
5.	Toilet	●	●	●	●	Private
6.	Retail Tyoe A	●	●	●	●	Public
7.	Retail Type B	●	●	●	●	Public
8.	Retail Type C	●	●	●	●	Public
9.	Food Court	●	●	●	●	Public
10.	Cafe	●	●	●	●	Public
11.	Restaurant	●	●	●	●	Public
12.	Kitchen	●	●	●	●	Private
13.	Workshop	●	●	●	●	Public
14.	Storage	●	●	●	●	Private
15.	Administration Room	●	●	●	●	Private
16.	Management Room	●	●	●	●	Private
17.	Meeting Room	●	●	●	●	Private
18.	Janitor Room	●	●	●	●	Private
19.	Electrical Mechanical Unit (ME)	●	●	●	●	Private

SPACE PROGRAMMING ANALYSIS

Corridor Analysis

The analysis of the amount of space in the corridor design refers to the user analysis and the standards that has been reviewed in the previous chapter. Corridors in this design are divided into two, namely corridors inside buildings (inner spaces) and corridors outside buildings (outer spaces). Then divided into 2 types based on the amount of space that is adjusted to the number of visitors and activities that occur.

No	Space Type	Space Need	Area(m2)	Total Area
1.	Interior	Major Corridor	120	120
		Secondary Corridor	32	32
2.	Exterior	Major Corridor	1000	1000
		Secondary Corridor	300	300

Retail Analysis

Analysis of the amount of retail space or shops tailored to the needs of visitors and tenants. Based on the pattern of laying and function, shops are divided into two, namely major units and small units. Major unit is the main part that becomes the magnet of this shopping center design.

No	Space Type	Space Need	Area (m2)	Capacity	Total Area
1.	Major Unit	Receptionist	5	3	5
		Lobby	25	50	25
		Retail Type A	496	40	496
		Food Stall	12	2	12
		Cafe	300	30	300
		Garden	300	300	300
		Workshop Area	124	10	124
2.	Small Unit	Retail Type B	266	20	266
		Retail Type C	124	10	124

Management, Service and Support Room Analysis

The amount of space for management, service, and support functions is adjusted to user reviews and data related to shopping centers.

No.	Space Type	Space Need	Area (m2)	Capacity	Total Area
	Management Room	Main Director	9	3	9
		Direct. General OP	6	3	6
		Direct. Financial OP	6	3	6
		Production	39	12	39
		Marketing	39	12	39
		HRD	27	10	27
		Living Room	10	5	10
		Pantry	6	2	6
		Lavatory	8	4	8
	Service	Technician	5,5	4	5,5
		Security	36	12	36
		Janitor Room	20	10	20
		Pantry	6	6	6
		Storage	20	20	20
		Loading Dock	300	100	300
		Control Room	10	2	10
		Generator Room	5	2	5
		Water Pump Room	12	2	12
		AHU Room	5	2	5
		Server Room	10	2	10
		Emergency Stair	24	6	24

No	Space Type	Space Need	Area (m2)	Capacity	Total Area
	Supporting Room	Smoking Room	15	2	15
		Nursery Room	10	2	10
		Musholla	42,5	2	42,5
		ATM Center	32,84	1	32,84

Parking Space Needs Analysis

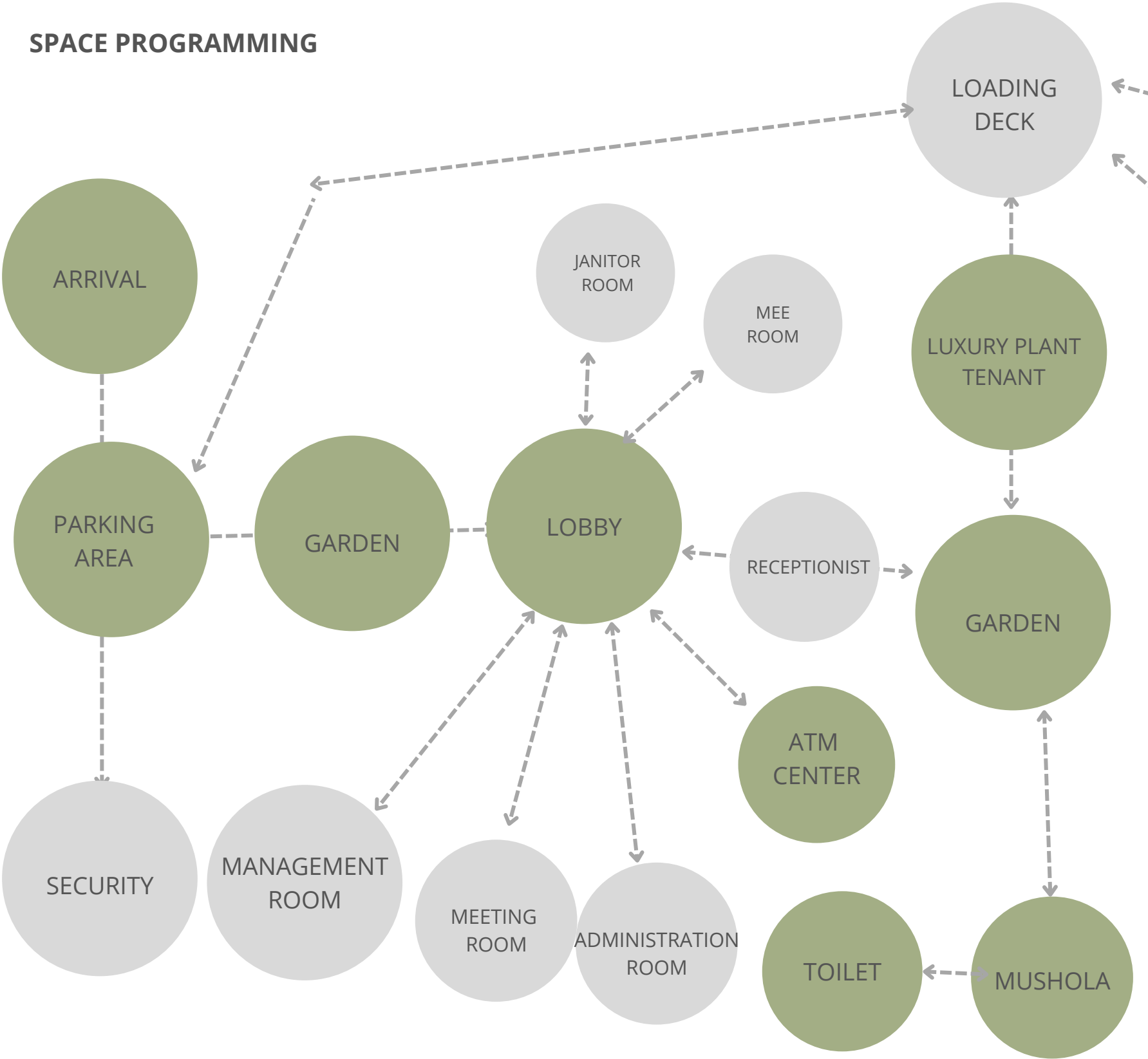
No	Space Type	Space Need	Area (m2)	Capacity	Total Area
	Parking	Motorcycle	1,4	1	1,4
		Car	12,5	1	12,5
		Bus	36	1	36

ROOM PROGRAMMING ANALYSIS

No.	Space Type	Space Need	Number of Space	Total Area
	Major Unit	Receptionist	1	5
		Lobby	1	25
		Retail Type A	2	496
		Food Stall	122	12
		Cafe	1	300
		Garden	1	300
		Workshop Area	1	124
		Hall	1	376
	Small Unit	Retail Type B	6	266
		Retail Type C	32	124
No.	Space Type	Space Need	Number of Space	Total Area
	Management Room	Main Director	1	9
		Direct. General OP	1	6
		Direct. Financial OP	1	6
		Production	1	39
		Marketing	1	39
		HRD	1	39
		Living Room	1	10
		Pantry	2	6
		Lavatory	4	8

No	Space Type	Space Need	Number of Space	Total Area
	Service	Technician	1	5,5
		Security	1	36
		Cleaning Service	1	20
		Pantry	1	6
		Storage	1	20
		Loading Dock	1	300
		Control Room	1	10
		Generator Room	1	5
		Water Pump Room	1	12
		AHU Room	1	5
		Server Room	1	10
	Supporting Room	Emergency Stair	1	24
		Smoking Room	1	15
		Nursery Room	2	10
		Musholla	2	42,5
		ATM Center	1	32,84

SPACE PROGRAMMING





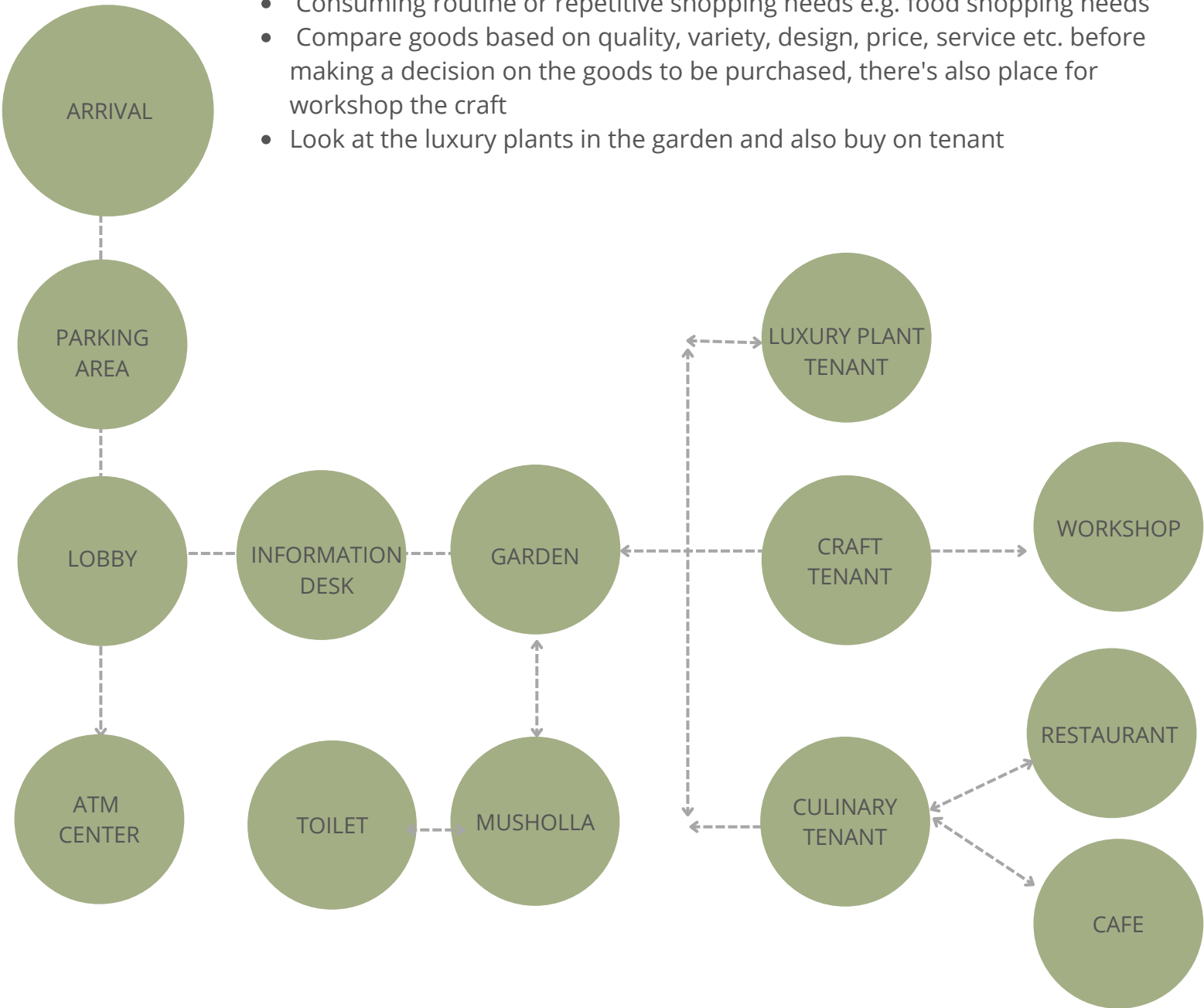
ACTIVITIES FLOW ANALYSIS

Visitors

Visitors

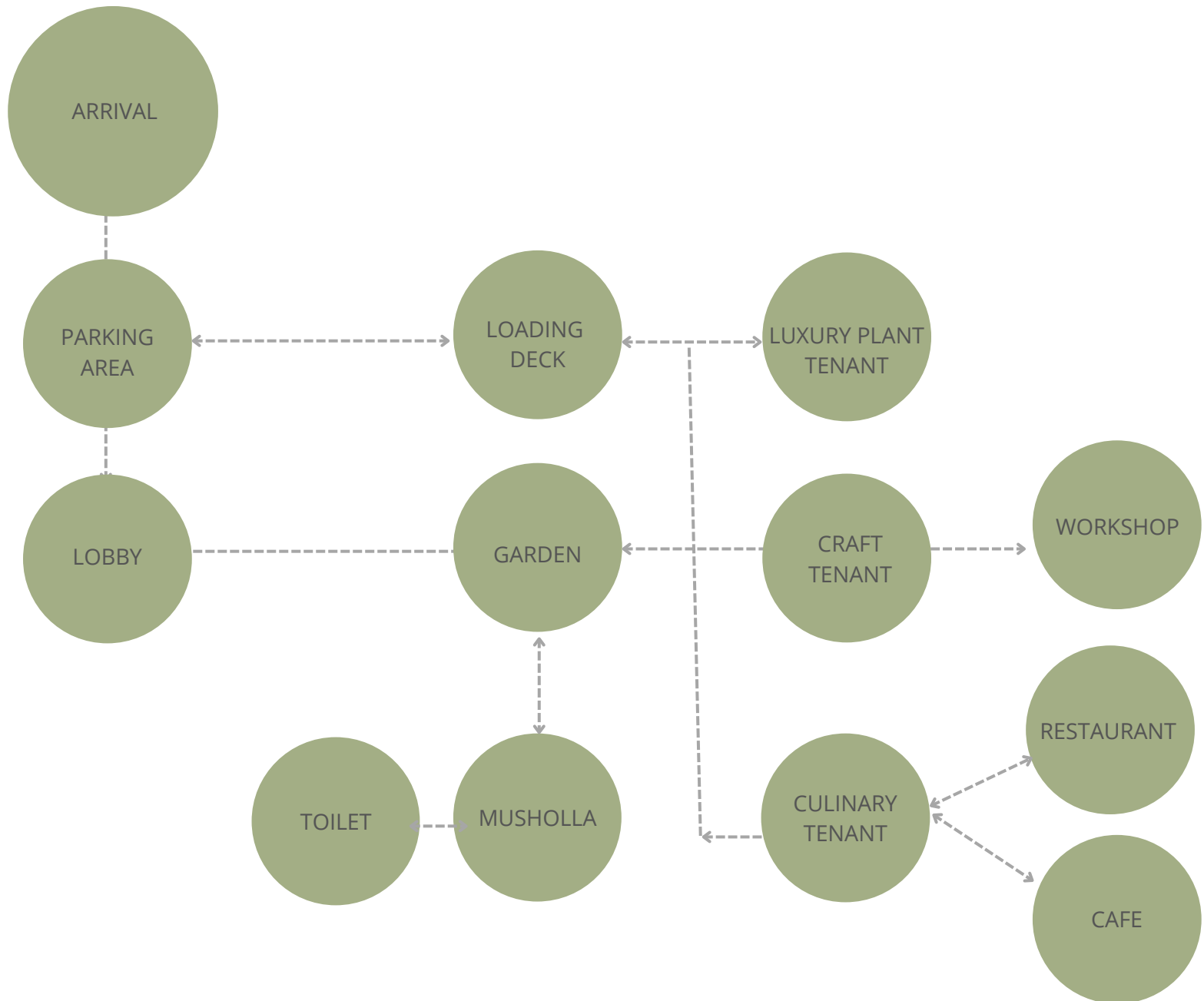
The main activities of visitors in shopping centers are 3:

- Consuming routine or repetitive shopping needs e.g. food shopping needs
- Compare goods based on quality, variety, design, price, service etc. before making a decision on the goods to be purchased, there's also place for workshop the craft
- Look at the luxury plants in the garden and also buy on tenant



Tenant

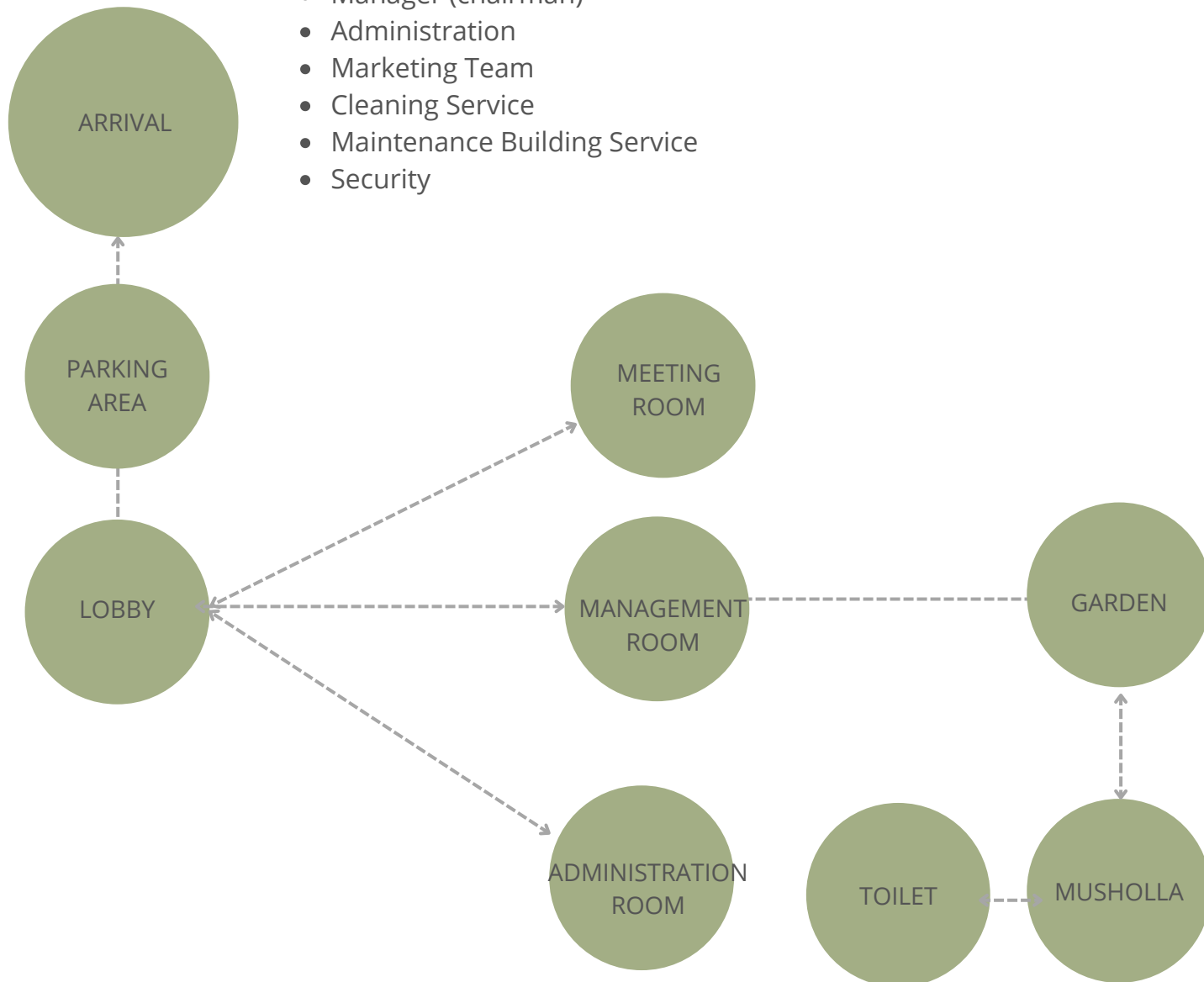
Tenants are people or groups of people who rent and use the space and facilities provided in conducting buying and selling activities



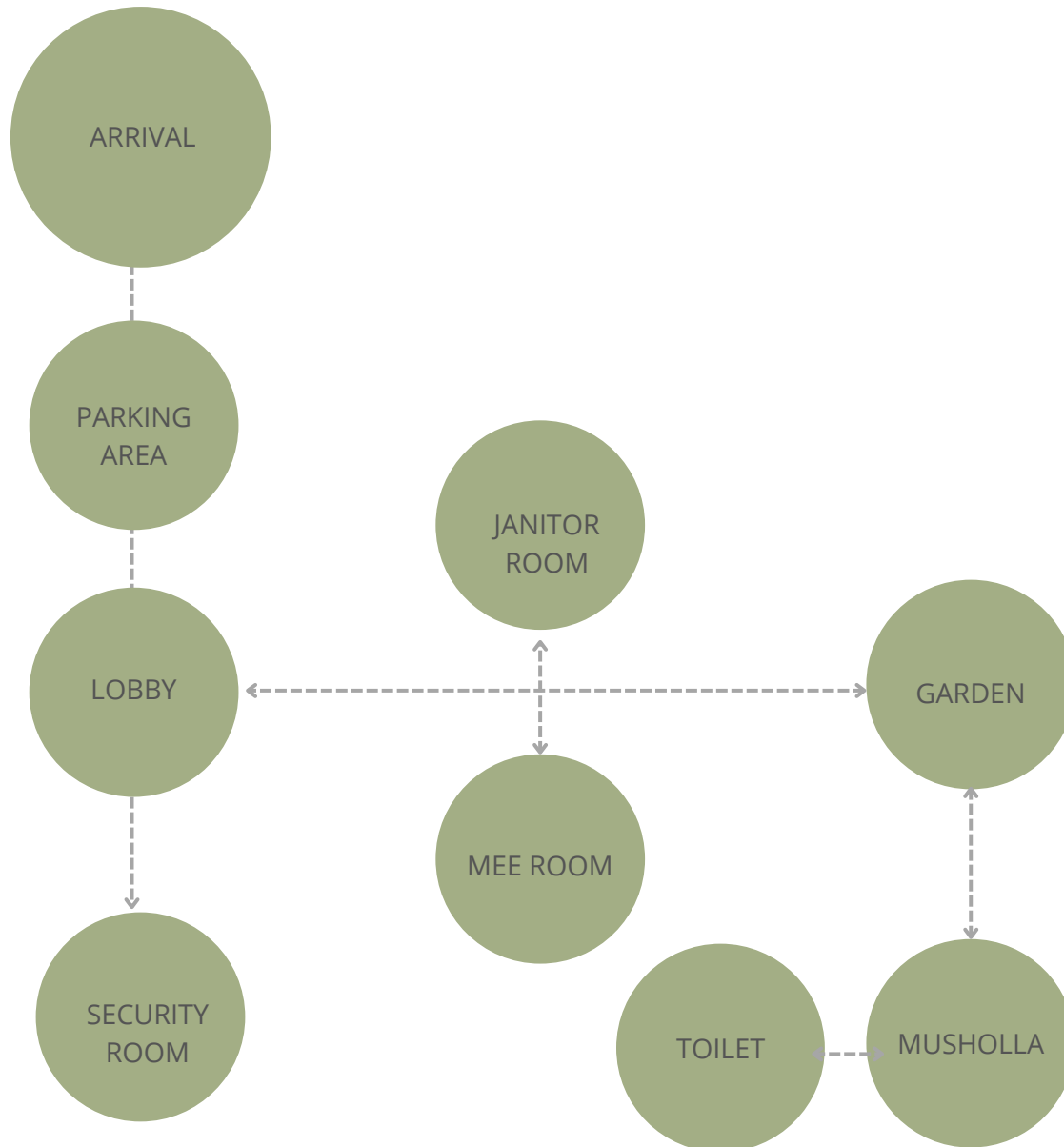
Management

The manager is an individual who is a business entity that is fully responsible for all management activities contained in the shopping center. Shopping center managers only cover and relate to managed buildings that do not include managers in the each outlet consists of:

- Manager (chairman)
- Administration
- Marketing Team
- Cleaning Service
- Maintenance Building Service
- Security



Service



2.5 STUDY AND ANALYSIS OF PRECEDENT

2.5.1 JEWEL CHANGI AIRPORT, SINGAPORE



Architects: Safdie Architect

Area : 135700 m²

Year : 2019

Reconnecting Marketplace with Paradise Garden

Jewel mixes two settings—a bustling market and a lush garden—to forge a brand-new community-centric typology that serves as Changi Airport's beating heart and soul.

By fusing a sense of being in nature with cultural and recreational offerings, Jewel significantly asserts the airport's image as a positive and energetic urban hub and echoes Singapore's moniker as "the City in the Garden."

The landside airport operating facilities, indoor gardens and leisure activities, retail products, dining establishments, and hotel facilities are all under one roof.

The Forest Valley, a tiered indoor garden with walking paths, flowing waterfalls, and tranquil seating places, is the focal point of Jewel. It offers several spatial and interactive experiences. A five-level multi-level shopping center surrounds the gardens and connects them with a network of vertical canyons.

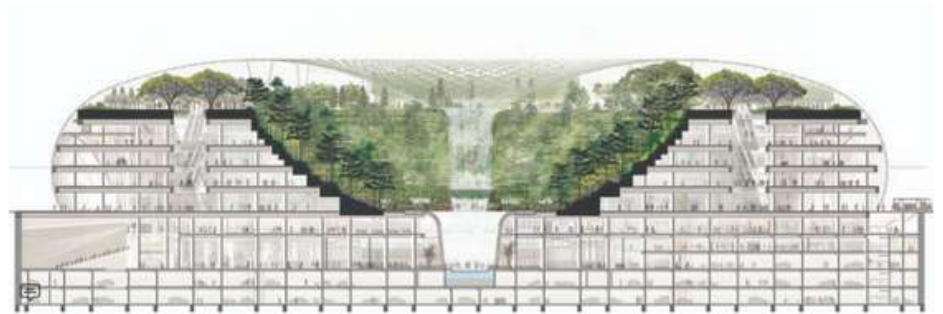
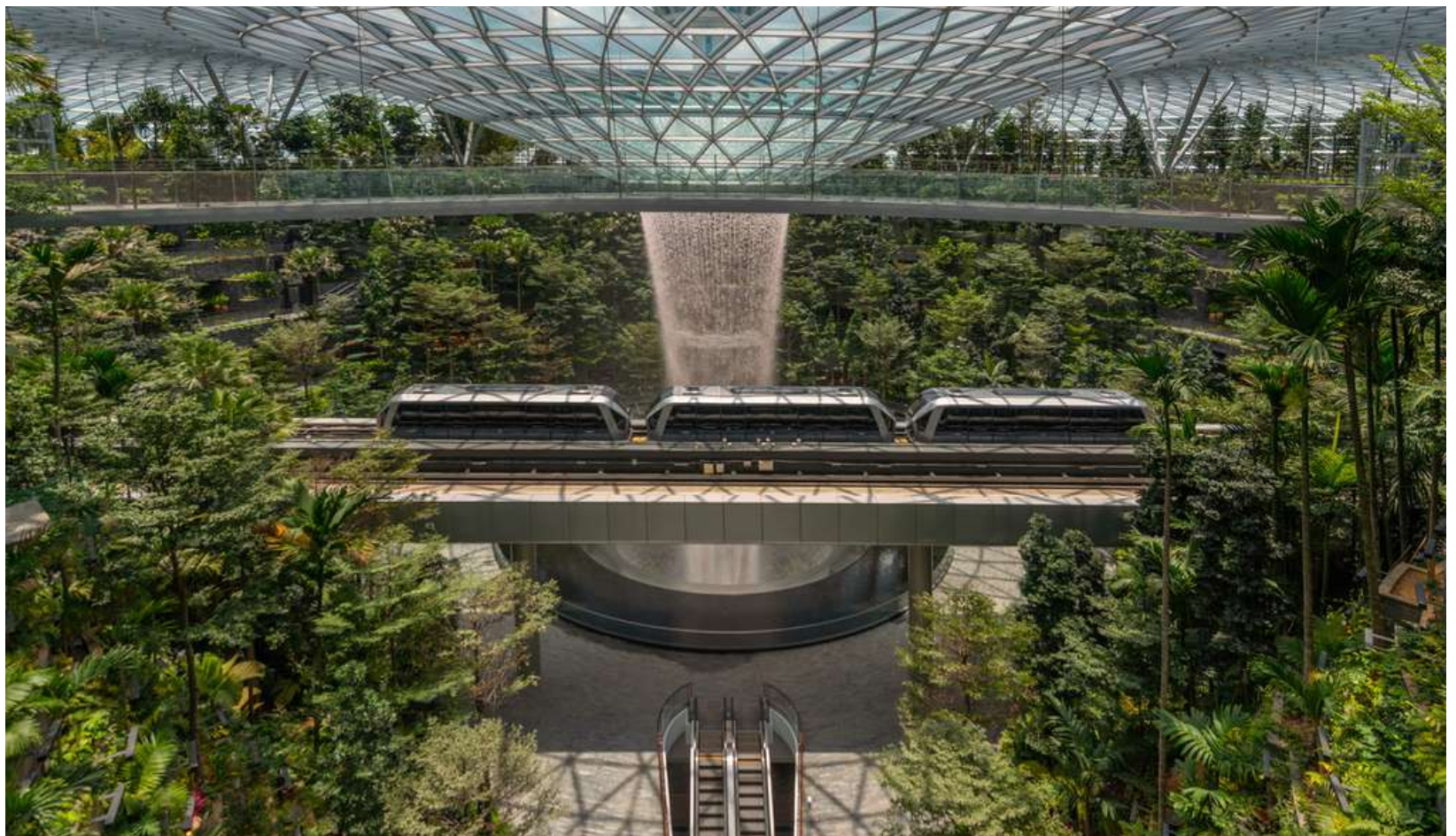


LESSON LEARNT :

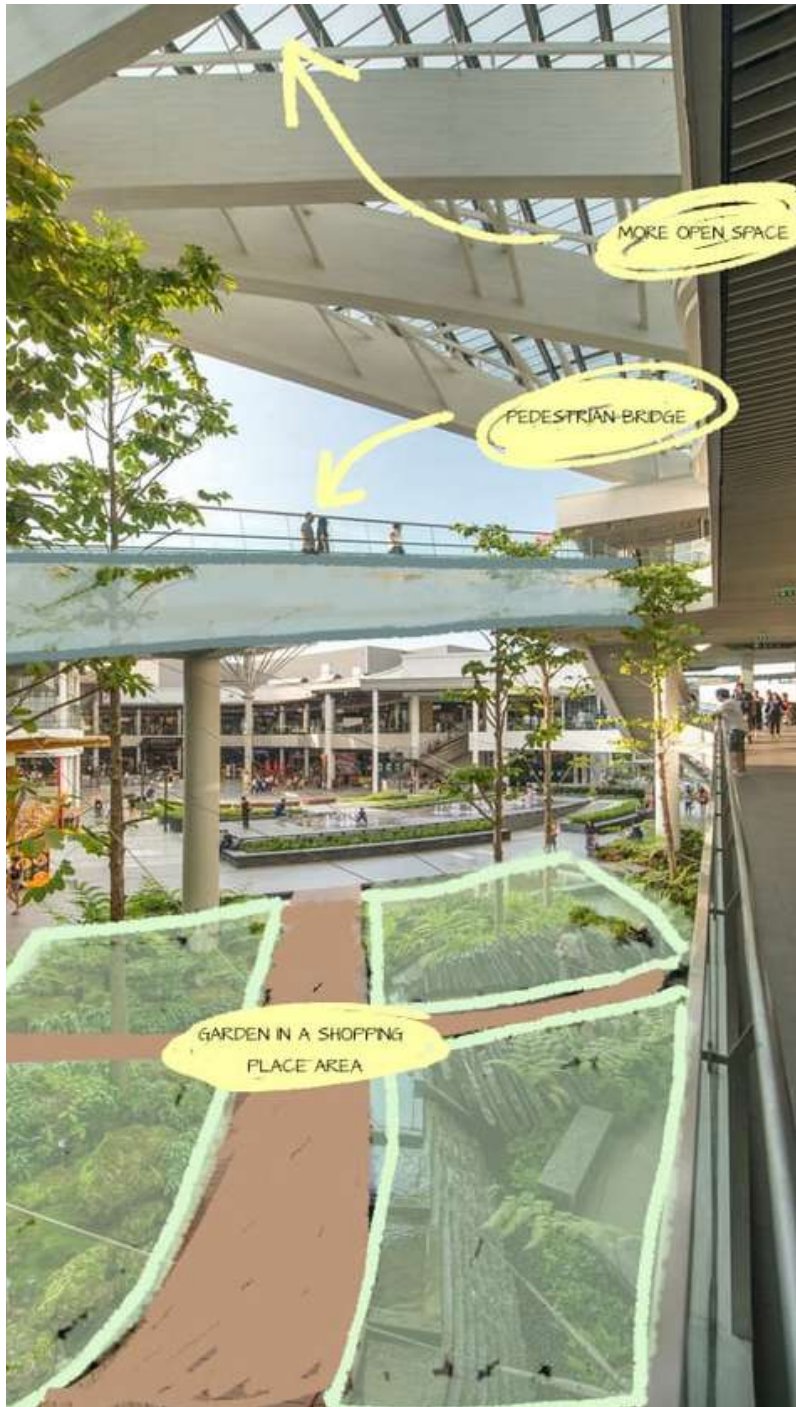
RECONNECTING NATURE WITH SHOPPING EXPERIENCE

It provides convenience for shopping and roaming around since the paradise garden has its own allure for tourists and achieves a level of comfort for a variety of activities because it combines a market and a garden under one roof.

By putting the garden area above and partially open, the spaces are better connected, and the central area gives more natural light access. which can then be used while making effective use of natural light



2.5.2 MEGA FOOD WALK, THAILAND



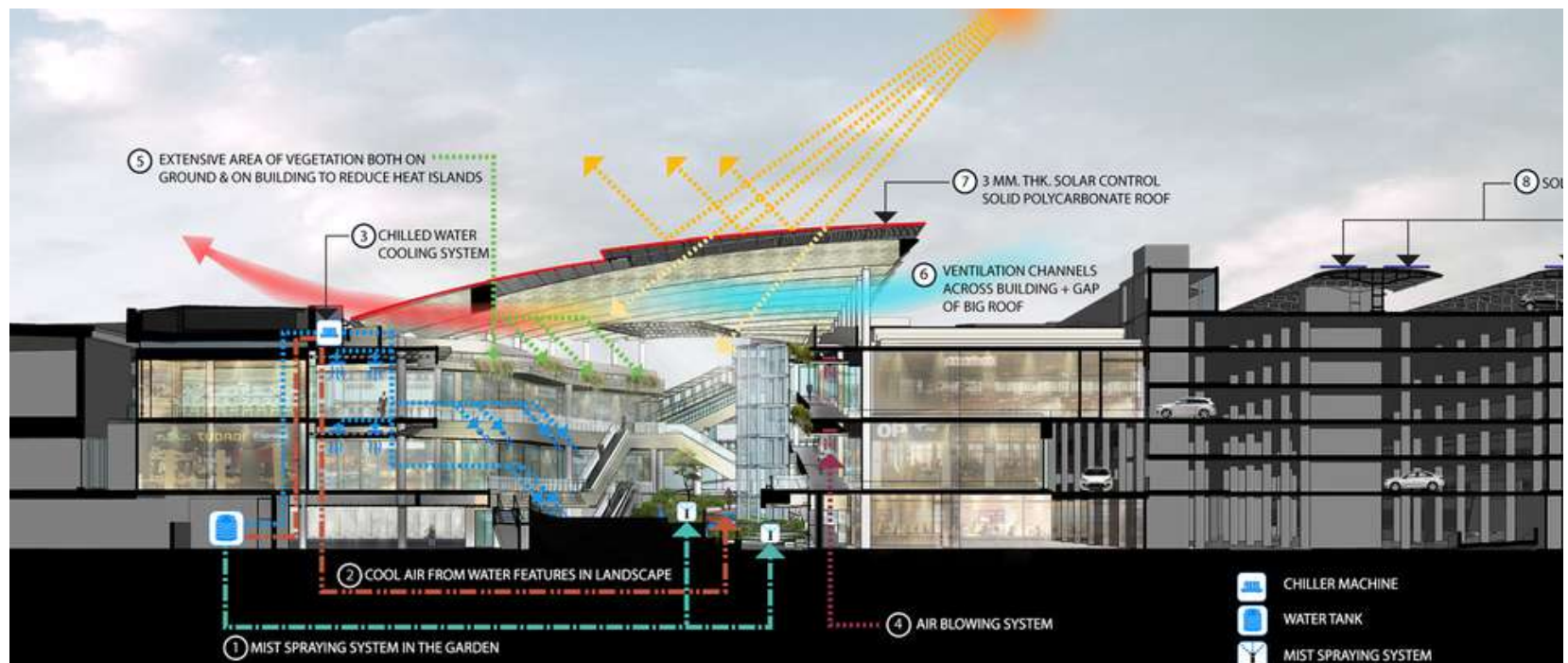
Architects: FOS
Area : 58000 m²
Year : 2018

Reconnecting Urban Life with Nature Through A Flowing Shopping Experience

The new retail zone extension could then be thought of as a "Valley," one of the most attractive natural topographies, with its tiny inner space ringed by a continuous façade of lush mountains, positioned on the eastern border beyond the present zone.

The Valley's name originates from the metaphor's geographic setting. The new open-air mall is designed around a central courtyard space. A sunken plaza with an amphitheater below serves as the main social place for customers to congregate and hold various events. This creates an environment like a natural valley.

To create a continuous circulation system between the two phases without dead ends, a network of walkways along shopfronts on every level is connected to the existing corridor and a new vehicle parking building via link bridges and a covered walkway.



LESSON LEARNT :

RECONNECTING NATURE WITH SHOPPING EXPERIENCE

The concept of translating a natural setting into a distinctive retail experience is synthesized through its spatial layout and different architectural components. It has direct lighting that enters the structure thanks to the utilization of an open space section in the center. In addition, the design of the pedestrian zone allows for the creation of a garden right in the middle of the commercial mall.



2.5.3 PARC CENTRAL, CHINA



Architects: Benoy

Area : 110000 m²

Year : 2016

Reconnecting Nature with Shopping Center

Stadium for retail integrates low-rise above and below-ground retail development in a multi-level parkland in a distinctive way. This construction, which is situated along with one of the main thoroughfares in the city, integrates public realm, transit-oriented, and retail design principles to create a striking addition to Guangzhou's urban landscape.

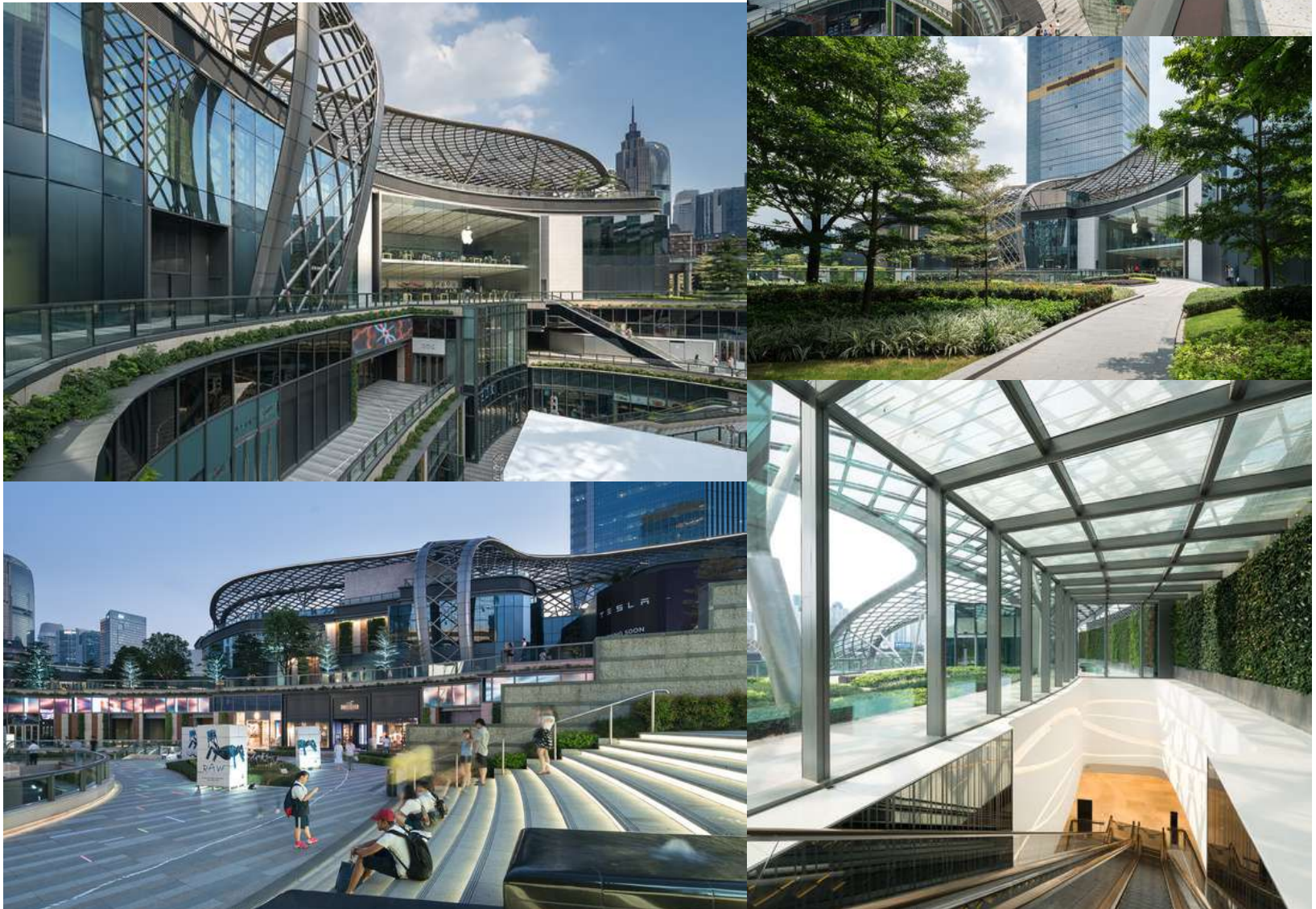
In addition to integrating with the development itself, the planted garden paths and living walls create an undulating green environment. The architecture provides a calming and balanced setting.

An open parkland atmosphere is the focus of this retail development. With its many levels and types of vegetation, the environment, which constitutes the development's center, has produced a location for gathering, resting, and relaxing—a "Place to breathe" in the middle of the city. To accomplish this and maintain the environment at ground level, a large portion of the development has been underground.

LESSON LEARNT :

RECONNECTING NATURE WITH SHOPPING EXPERIENCE

A large area on the outside allows for the creation of a green space that is connected to the urban area and the nearby TOD area, along with the development of retail that has open space on the inside and makes a good pedestrian area so that people can access each other between leaving and entering the shopping center.



2.5.4 OCT OH BAY RETAIL PARK, CHINA



Architects: Laguarda. Low Architect

Area : 430000 m²

Year : 2021

Use of water and landscape as a facility in the retail market

OCT OH BAY mixes business with top-notch cultural resources. East and West Seaside Retail Park, Urban Business Center, Seaside Cultural Park, and co-location with waterfront site. Set among the site's surrounding, naturally flowing terrain, with walking routes bridging the zones.

A substantial open plaza is the starting point for the West Waterfront Retail Park's entertainment establishments, recreational amenities, and performing arts center. A crucial component of the plan at this location is the water, which divides different aquatic pursuits while enabling locals to cruise the waterfront.

On the one hand, these organic shapes blend in with nature, while the double penetration along the north side speaks to the urban surroundings. The project's open retail atmosphere and seamless integration of shopping, dining, and entertainment venues with nature naturally draw visitors from the shoreline. From every project direction, the building offers easy and varied access.

LESSON LEARNT :

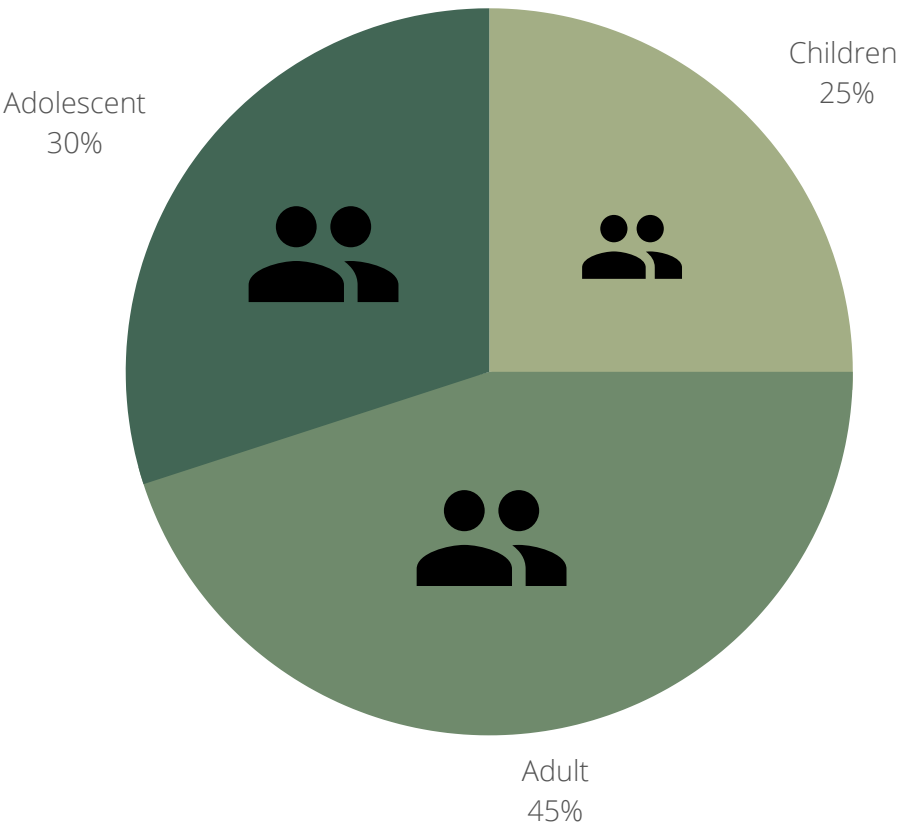
RECONNECTING WATER AND LANDSCAPE AS A FACILITY IN THE RETAIL MARKET

A large area on the outside allows for the creation of a green space that is connected to the urban area and the nearby TOD area, along with the development of retail that has open space on the inside and makes a good pedestrian area so that people can access each other between leaving and entering the shopping center.



2.6 STUDY AND ANALYSIS OF BUSSINESS

2.6.1 TYPE OF USER



USER ROLE

- Children**
 - As visitors
- Adolescents**
 - As visitors
- Adult**
 - As employee
 - As visitors
 - As Tenant

ACTIVITIES



Shopping



Eating



Recreation



Playing



Gathering



Praying



Garden

Help to increase the quality and atmosphere of shopping center by providing place that create garden atmosphere. By using a biophilic approach so that nature and human blend together



Retail

Help to ease the the distribution between seller and buyer to getting products. . This will be nice place that integrates between garden, and retail. Retail itself will consist of franchise, craft, culinary, and some outlet

- 1. **Luxury Plants**
- 2. **Culinary**
- 3. **Craft**

2.6.2 BUSSINESS CANVAS MODEL



2.6.3 STUDY AND ANALYSIS OF DEVELOPER



Developer used :

- PT Agung Podomoro Land Tbk. (APLN) is a real estate owner, developer and manager in the retail, commercial and residential real estate segment with diverse holdings. Has an integrated property development model, starting from land acquisition and/or procurement, design, development, management, sales, rental and commercial marketing, shopping centers, offices, hotels, and apartments and residential houses. We are known as a pioneer in superblock development.

VISION

- To continue to grow as an integrated property developer, to optimize value for clients, business partners, shareholders, and society.

MISSION

- To optimize return on investment from business partners and shareholders.
- To become a developer that can deliver more value to employees.
- To actively support Government programs in promoting urban development and improving the human development index.

2.7 SUMMARY OF DESIGN DEVELOPMENT

2.7.1 SUMMARY OF SITE DESIGN DEVELOPMENT



- BCR = 60%
- FAR = 3,0
- Building Height= max. 3 Floor
- GSB = 5 m
- BCR = 60%
 - = 60% x Land Area
 - = 60% x 20,000 sqm
 - = **12,000 sqm**
- FAR = 3,0
 - 3 x 12,000 sqm = **36,000 sqm**
- KDH min 30%
 - 6,000 sqm**

2.7.2 SUMMARY OF TYPE BUILDING FUNCTION DESIGN DEVELOPMENT

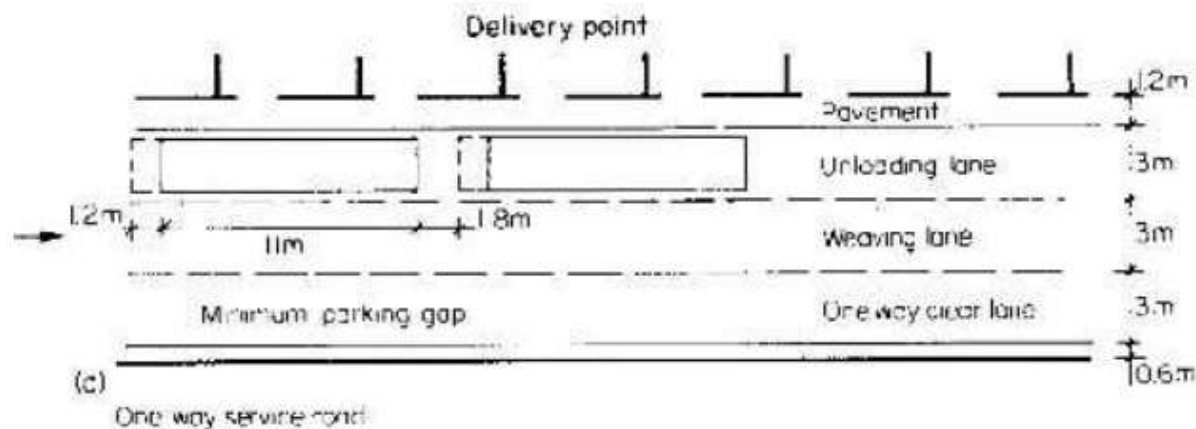
Based on the study literature, the design development of this project is to create a Shopping Center based on the **Type of Goods**, it will have the type like **thematic mall**. the type of shopping demand for those who sell goods for certain *culinary needs, crafts, and also luxury plants*. with a **One lane service system** for loading so that the area for loading goods is only in one direction. With an **integrated shopping center**, namely a combination of *open shopping malls and also closed shopping malls*, because based on the issue that will be resolved, using a garden and biophilic by having a Visual connection with nature, so that the shopping center area itself will have a connection with nature that has a view to natural elements.

a. Based on the Type

Shopping Mall includes the type of shopping Semi Demand (half demand), namely those who sell goods for certain needs in life daily. The goods include clothing, food and drink electronics, books, toys and entertainment facilities. (Marlina, 2008:210)

b. One lane service system

The one-lane service system utilizes one lane (left/right) to serve as loading and unloading goods

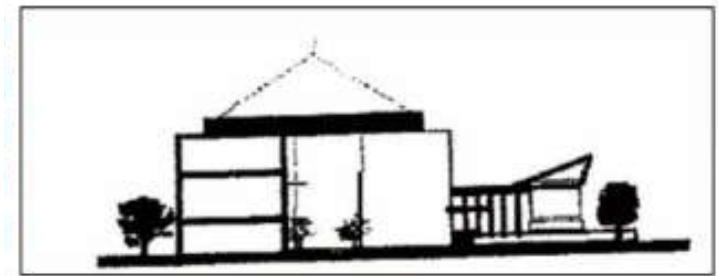


c. Thematic Mall

Thematic Mall is a shopping center that has particular theme or topic so it will have integration between one and another

d. Integrated Shopping Center

It is a combination of open mall shopping and closed shopping mall. The emergence of this form is an anticipation of wasted energy for control and high technical costs of manufacture and maintenance in closed shopping centers.



**Based on the items to be sold are
Goods :**

- 1. Horn Craft**
- 2. Alumunium Craft**
- 3. Temple Craft**
- 4. Batik Craft**
- 5. Clay Craft**
- 6. Pottery Craft, and local art craft**

Based on the study of biophilic design precedents, the following points can be drawn:
in the form of:

1. The facade of the building uses a form adapted from natural forms, which shows that the building has a natural theme.
2. Incorporating natural elements into buildings, such as plants and the pool, can produce a calm atmosphere.
3. The color of the interior of the building is adjusted so as not to collide with plant colors.
4. An open room gives a broad impression and facilitates air circulation so that ventilation can be maintained.
5. Large openings or windows can be beneficial for putting sunlight into the building and enjoying the view
6. Void in the building can reduce the massive of the building and helps air circulation.

2.7.3 SUMMARY OF APPROACH DESIGN DEVELOPMENT

1. Visual Connection with Nature

A view of natural materials, processes, and living systems visually link to nature. This connection to nature has had the most significant therapeutic effects compared to all other biophilic patterns. A visual connection to nature has been shown to boost mental health and alertness, lower blood pressure and heart rate, and our general attitude and happiness.



2. Thermal Variability & Airflow

Airflow and Thermal Small fluctuations in airflow, temperature, relative humidity, and different thermal materials are referred to as variability patterns because they resemble those seen in nature. Thermal comfort is a critical element that controls inhabitants' levels of productivity, tranquility, and health in the home

The application of a biophilic design in a shopping center room can be demonstrated by creating natural lighting and ventilation, coupled with the presence of water and plants in the space. The application of natural elements can be applied through the use of natural materials and replicas of natural forms through designs, ornament patterns, and interior finishing. The biophilic design emphasizes the existence of man's place in nature and uses the artificial environment to nurture, evoke and enhance human physiological and psychological interactions with nature. The essence of this biophilic design is to create a space in which there is interaction with nature which is a basic human need.

2.7.4 SUMMARY OF PRECEDENT DESIGN DEVELOPMENT

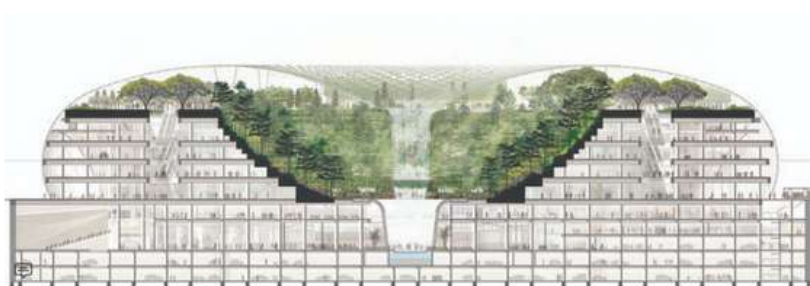
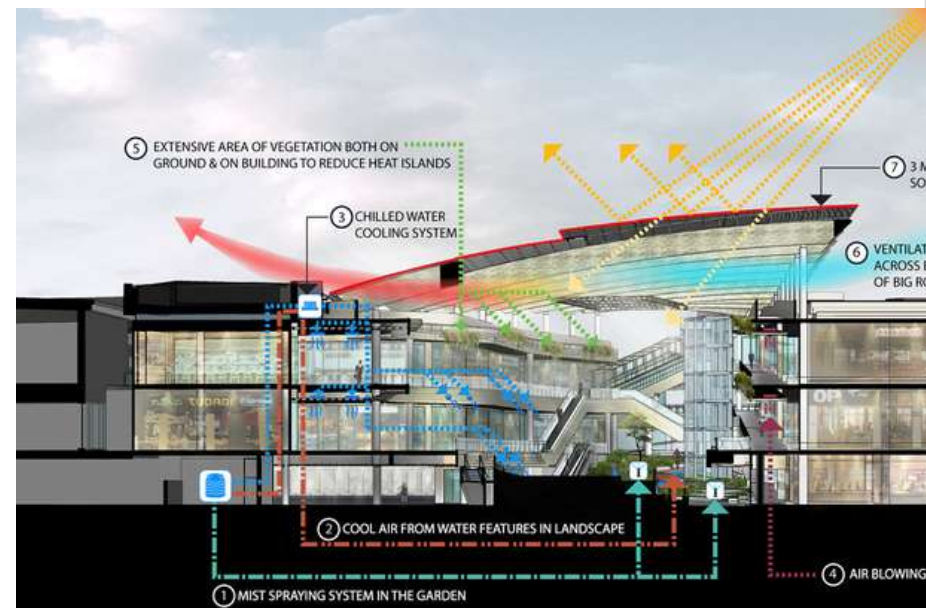
RECONNECTING NATURE WITH



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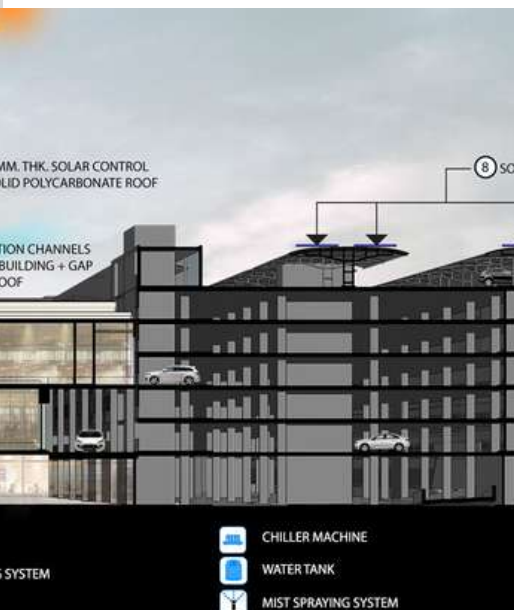
It provides convenience for shopping and roaming around since the paradise garden has its allure for tourists and achieves a level of comfort for various activities because it combines a market and a green under one roof.

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2.7.5 SUMMARY OF BUSSINESS DESIGN DEVELOPMENT



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BALABOEDOR G-WALK

Thematic Shopping Center

Developer Agung Podomoro Land Tbk PT

Named Balaboedor because the location is located on Balaboedor regi, and for G-Walk refers to Garden Walk that based on the approach itself. Since Magelang has a City of Million Flowers.

Of course the developer of this project is Developer Agung Podomoro Land Tbk PT Judging from the suitability of their vision and mission, they were very suitable to be chosen to be the developers of this project.

In Balaboedor G Walk there is a Vision, Mission, and Values

Vision

create a local shopping experience to meet the needs of tourists

Mission

Creating a craft and culinary space that transforms with the application of nature through shopping experience.

Value

Make local shopping experience isn't just a shopping experience, however Visitors can witness creation first hand while viewing working craftsmen do what they do best.

offers a new kind of experience by providing a culinary craft into a garden walk. A blend of local and modern design and a welcoming atmosphere, excellent accommodation and outstanding facilities as architectural biophilic value is delivered, Balaboedor brings a mix of local shopping experience to business

Feasibility Analysis of Commercial Space Rental Business Investment

Prep & Unloading Works

- Land acquisition 20,000 m2 -> 2,500,000/m
2,500,000 x 20,000 m2 = 50,000,000,000

- Extraction work 10,000,000/hectares
20,000 m2 ->2 hectare -> 20,000,000

-Landscape work -> 800,000/m
800,000 x 20,000 m2 = 16,000,000,000

Total Preparatory & Unloading Work = 66,020,000,000

Building Construction Cost

-Architectural Works -> 10,000,000/m

10.000.000 x 6,500 m2 = 6,500,000,000
Total Building Construction Cost = 6,500,000,000

Infrastructure and Utilities Cost

-MEP jobs -> 2,130m2 x 3,500,000 = 7,455,000,000
- Utilities -> 50 units x 3,500,000 = 175,000,000

Total Infrastructure and Utilities Cost = **7,630,000,000**

Licensing Fee

-Land & Environment Permits -> 50.000
50,000 x 20,000m2 = 100,000,000

-Building Permit -> 100,000
100,000 x 20,000 m2 = 100,000,000

Total Licensing Fee = **200,000,000**

Total Overall

74.500.000.000

Marketing Fee

-Marketing Management 1.5 % 74.500.000.000 of = 2.422.557.540

Total Marketing Cost =**1,117,500,000**

Total Overall	75.617.500.000
----------------------	-----------------------

Then it is known that the total number of calculations for the overall construction cost is 75.617.500.000, in which the percentage distribution is as follows:

Cost Component	Percentage
• PPh (Income Tax)	• 2%
• BAU (Administration and General Fees)	• 3%
• Profit (Contractor Profit)	• 5%
• PP (Preparatory Work)	• 39%
• Physical Construction Cost	• 51%
Total Overall	100%

Which of the five components will even be 100% as a total percentage of the total cost of the component.

Feasibility Analysis of Commercial Space Rental Business Investment

Space Rental Income

per sqm (6.000.000)

- Retail Type A

34 sqm x 6,000,000 = 204,000,000/month

204,000,000x16 retail = 3,264,000,000/month

-Retail Type B

46 units x 6,000,000= 276,000,000/month

276,000,000x40 retail = 11,040,000,000

-Retail Type C

70 units x6,000,0000 = 420,000,000/month

420,000,000 x 7 retail = 2,940,000,000

-**Cafe**> 40.000/cup

300 people x 40,000 = 12,000,000 x 30 -> 360,000,000/month

360,000,000 x 2 = 720,000,000/month

-**Restaurant** -> 100,000/person

300 person x 100,000 = 30,000,000/day

30,000,000 x 30 = 900,000,000/month

-Parking Area

Car Parking 2 cycle

110 x 5,000 = 33,000,000/month

Motorcycle Parking 2 cycle

57 x 3,000 = 10,260,000/month

Bus Parking

5x 10,000 = 50,000,000/month

Retail

per sqm (6,000,000)

Stall 13 sqm x 6,000,000 = 78,000,000

78,000,000 x 75 retail = 4,940,000,000

Hall

50,000,000 x 6 rent = 340,000,000/month

Workshop

1 package 250,000

250,000 x 20 people = 5,000,000

5,000,000 x 30 = 150,000,000/month

87,100,000,000,000

Total Annual Income

-Property Management Fee -> 50.000/unit

50 Units x 50,000 = 2,500,000/day -> 125,000,000/month -> 1,500,000,000/year

-Energy and Water Cost -> 5% of 45,492,000,000 = 2,274,600,000

So, Gross rental profit -> 45,492,000,000 - (1,500,000,000 + 2,274,600,000) = 41,717,400,000

-Insurance -> 0.10% of 41,717,400,000 = 41,717,400

-Tax -> 0.50% of 41,717,400,000 = 208,587,000

-Manager -> 0.50% of 41,717,400,000 = 208,587,000

So, Profit after tax -> 41,717,400,000 - (41,717,400+208,587,000+208,587,000) = **41,258,508,600**

-
- **Total Investment = 75.617.500.000**
 - **Time of Return on Investment (years) = 1 years**

BUSSINESS CANVAS MODEL

KEY PARTNER

- Magelang Regency
Regional Development
Planning Agency
-

KEY ACTIVITIES

collaborating with borobudur to
create advertisements to come to
the shopping center to buy local
art, luxury plants or food

KEY RESOURCES

- Craft (Local and Art)
- Culinary (Regional Food, Food and
Beverage,
- Luxury Plants
- Restaurant
- Cafe

VALUE PROPOSITIONS

PEOPLE

- Improving the welfare of
the economy because it
opportunities for them
- Educate visitors about na
- Optimizing the recre
residential and gardenin
- Produce high-quality pla

PLANET

- Repairing damaged land
- Use of sustainable
friendly materials

PROFIT

- Local area tourism optim
- Increase productivity an
well as local culture

COST STRUCTURE

- Construction Cost
- Production and Maintenance
- Marketing
- Distribution Cost Product

f local communities in
provides employment

ature and local culture
ational function of
g in the local area
nts

and environmentally

nization
d quality of nature as

CUSTOMER RELATIONSHIP

- There is a customer card member also voucher so it will get a discount on every purchase

CUSTOMER SEGMENTS

- Middle to Upper
- Family / Group
- Community
- Borobudur Visitors
- Local Visitor
- Tourist

CHANNEL

- Website
- Media social
- E-Commerce

REVENUE STREAMS

- Craft (Local and Art)
- Culinary (Regional Food, Food and Beverage,
- Luxury Plants

03 DESIGN DEVELOPMENT

DESIGN DEVELOPMENT

3.1 Exploration of Biophilic Design

3.2 Exploration of the Concept of Building Function

3.3 Exploration of the Concept of Zoning Analysis

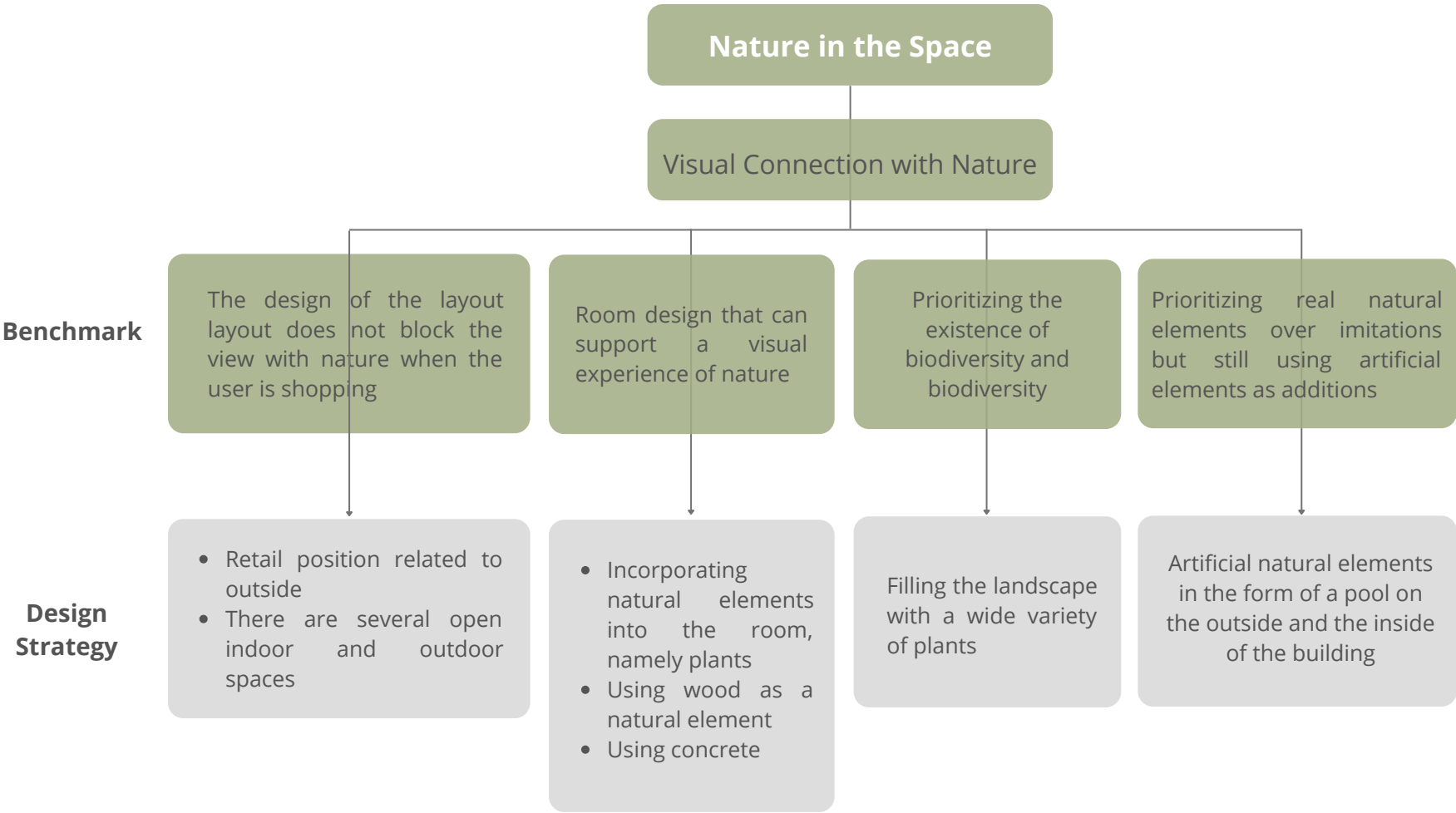
3.4 The Concept of Building Layout

3.5 The Concept of Infrastructure

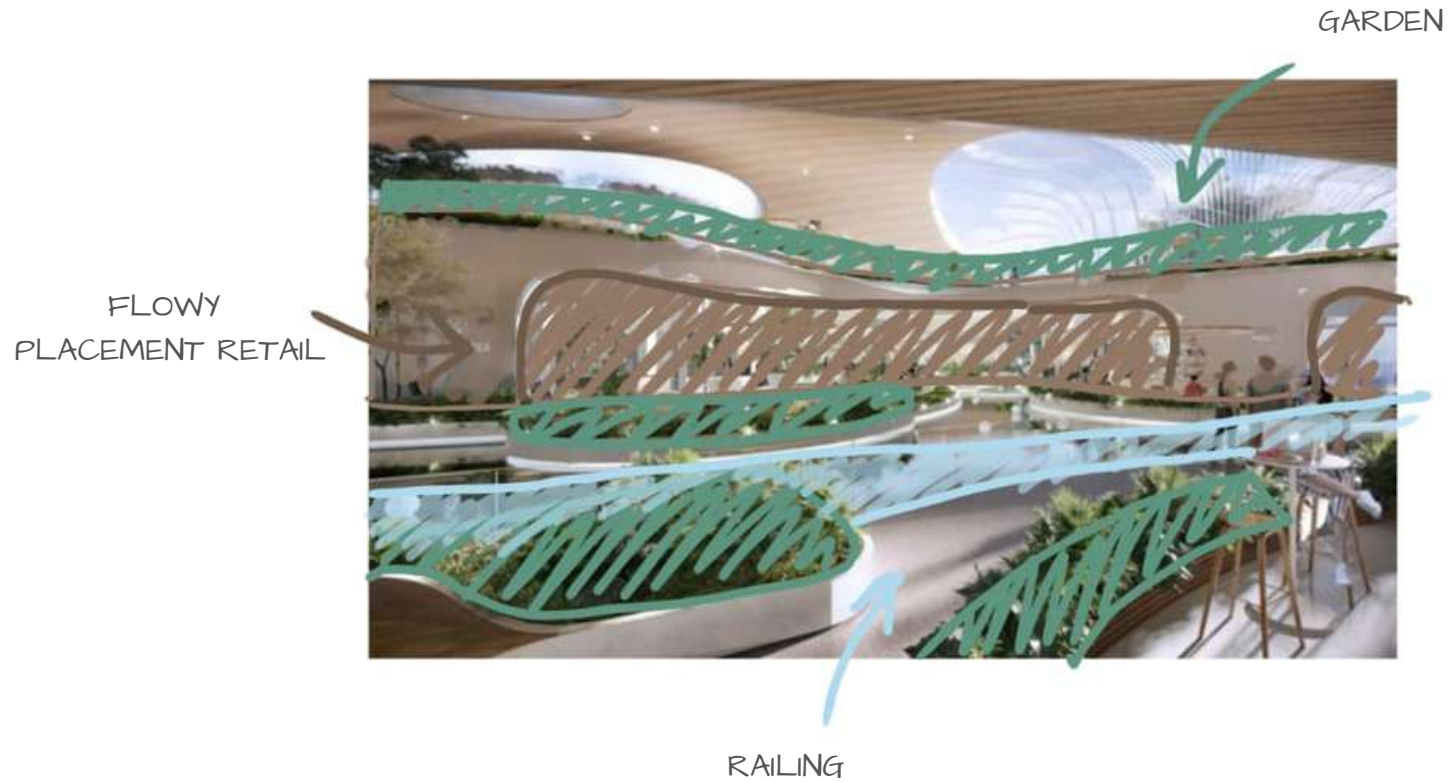
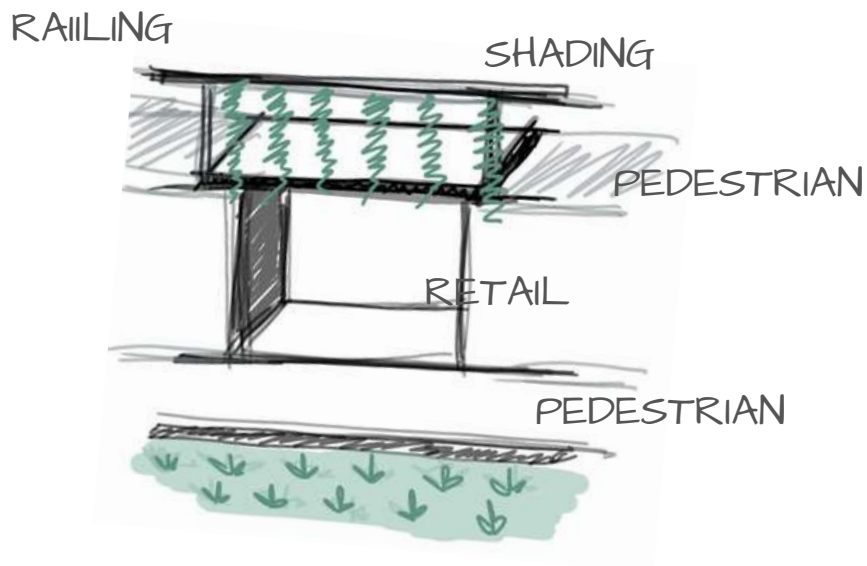
3.1 EXPLORATION OF THE BIOPHILIC DESIGN

3.1.1 Traits in Spatial Patterns Analysis

Visual Connection With Nature

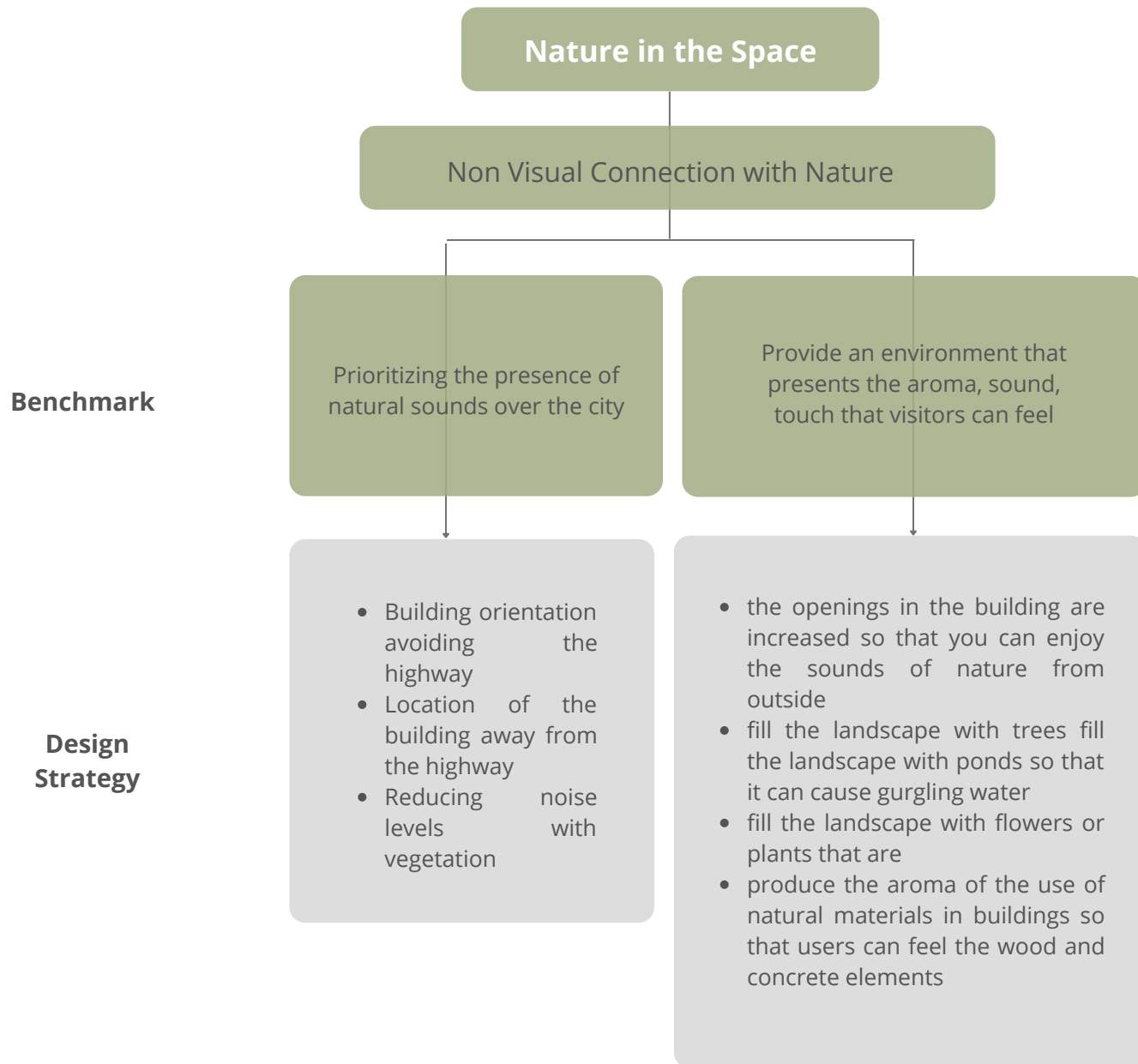


THE CONCEPT OF ROOM



Implementing a landscape design with an open pedestrian and also integrated with the shopping center itself so that there are many open spaces in the site area that are used for the implementation of the Garden Walk

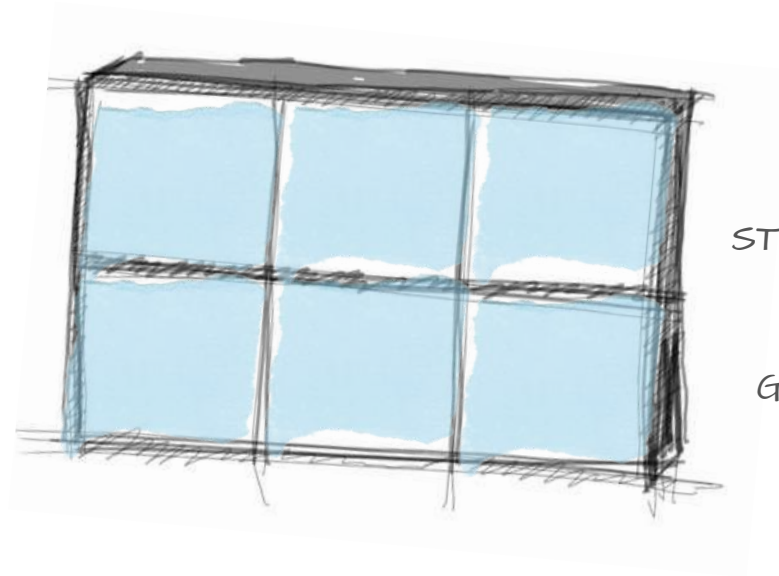
Non-Visual Connection with Nature



THE CONCEPT OF BUILDING ENVELOPE

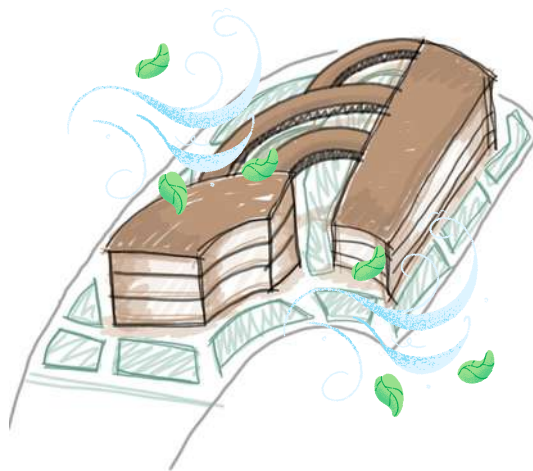
The building envelope in this architectural garden is more ornamental plant ornaments on the building, this is made like modern architecture that emphasizes aspects of functionality and the absence of ornaments in the form of plants that are placed only on the building but become another function. Therefore, the envelope of this building uses wood material and also uses several curtain walls as a facade design, while for some parts it uses shading which is used as a pedestrian so that the shading is not only as shading but also uses pedestrians on the upper floor and also uses plants so that it remains shady.

CURTAIN WALL



STAINLESS STEEL

GLASS



THE CONCEPT OF LANDSCAPE

Based on the conclusion from the landscape taken, this form was built because the garden area is more evenly distributed throughout the site with pedestrian access so that a garden walk is implemented. Trees The trees to be planted are shade trees, ornamental trees, and trees that are beneficial for pollution. At this site, many shady trees will be made for shading and also placed in the motorbike and car parking section, this is useful for shade during the day and can also make it cooler



The Garden Walk here refers to pedestrians by having a large garden area so that visitors can freely walk around while shopping, The canopy of the leaves is wide and shady, making it an exciting place for people to take shelter and gather under it

Designing green open space on the roof of the building as the use of open space on the roof. It is used as a means of sitting room, a place to shop. Added several large openings for sunlight to enter the building.



Bungur Raya



Pine



Plinsum



Lee Kwan Yew



Tabebuia



Gandaria



Tanjung



Pakis



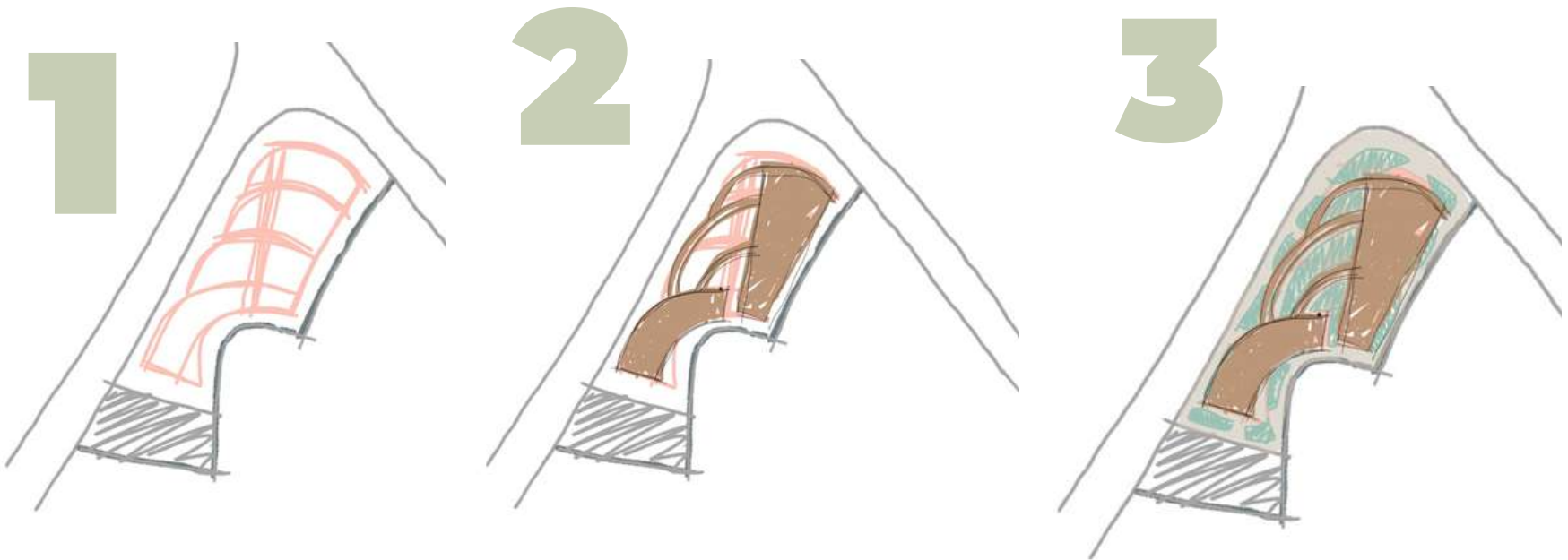
Palm Tree



Kersen

THE CONCEPT OF SHAPE

The shape follows the site by considering and maximizing the KDB as well as its placement based on the climate, the sun's direction and also the wind direction, so that it maximizes the wind direction so that it has good circulation in this shopping center, then it is made centered in a circle by taking the shape of the lower site which is then developed. After that, pedestrian access is made so that visitors can see around not only inside the building but also outside the building



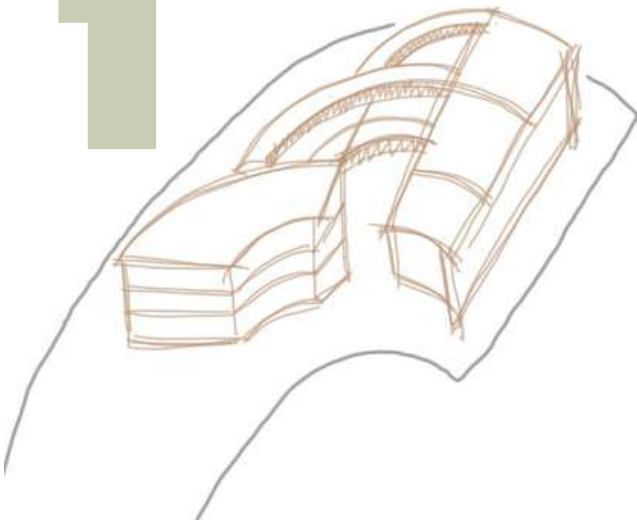
TRANSFORMATION

Make the basic shape following the shape of the site, which from the right with a circular shape so that from the bottom to the top it forms a semicircle,

Divided into two because wanted to create circulation for the garden along with the building

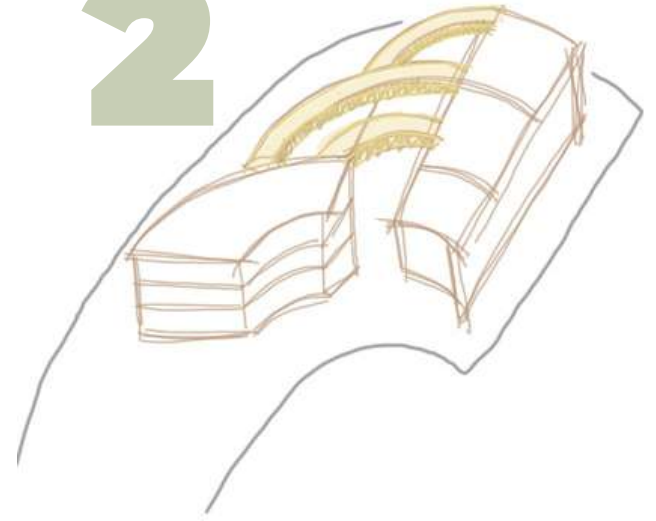
Made with pedestrian access for the garden so that the shape of the garden walk is clearly visible

1



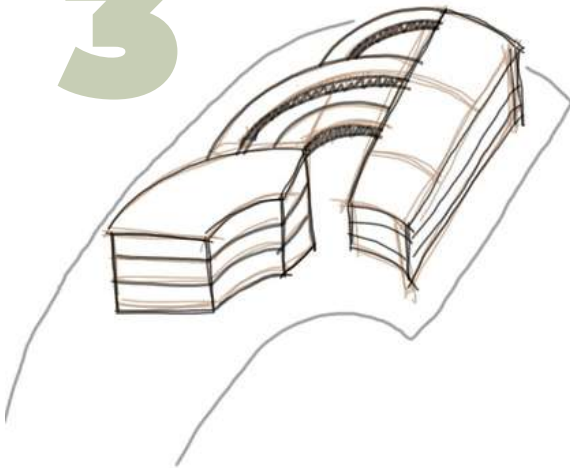
Formed by separating the building to get wind circulation in the middle area and also the use of gardens throughout the building

2



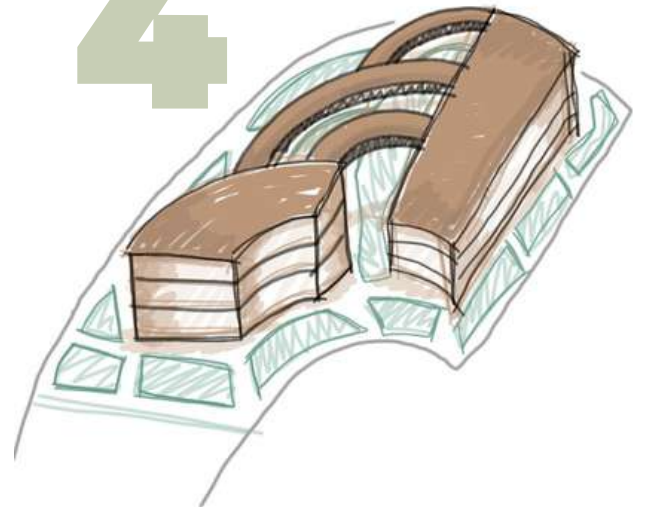
The use of a pedestrian bridge between building 1 and the building to connect the two which can be used as a garden area

3



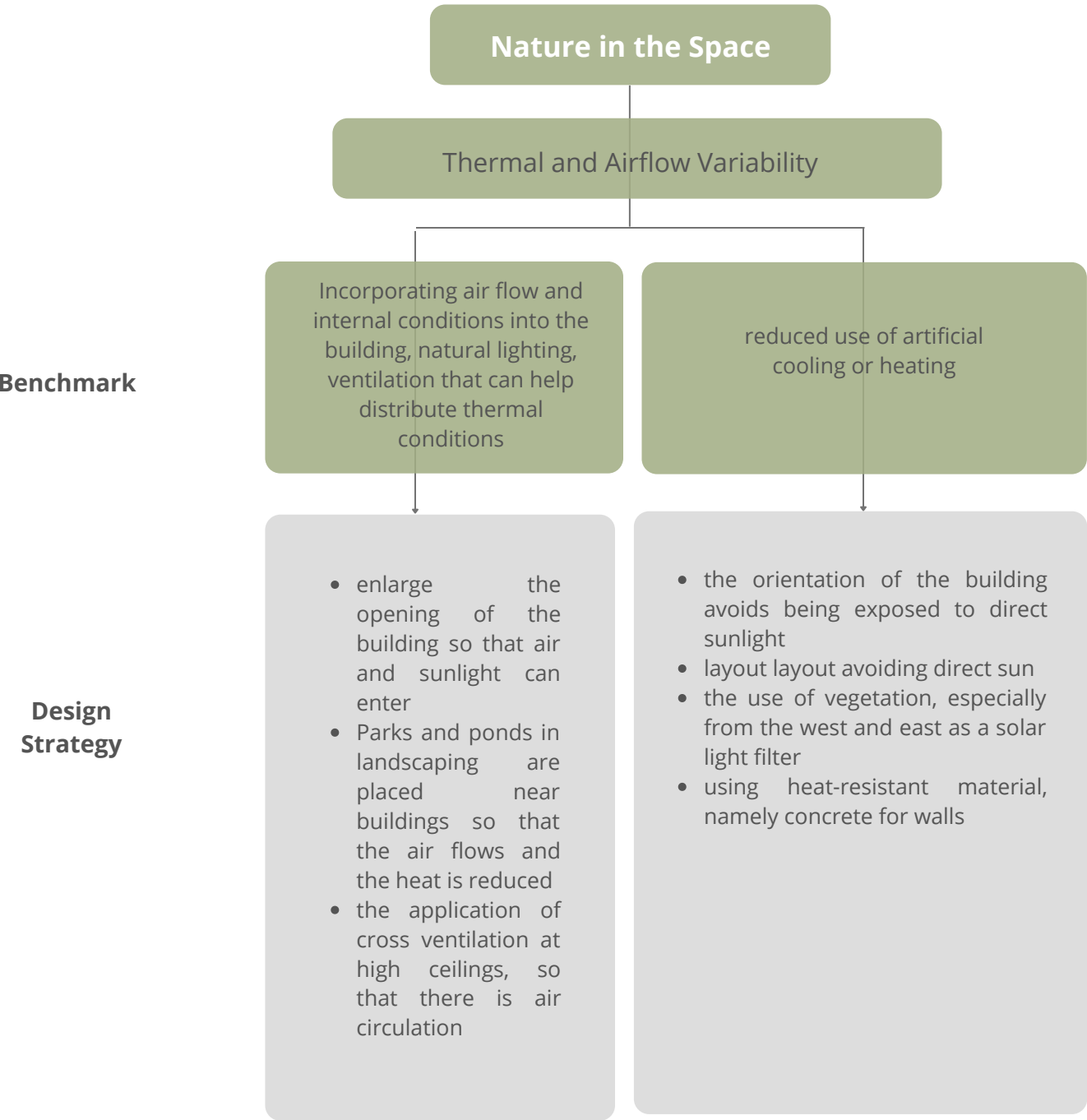
By utilizing the pedestrian bridge not only as a bridge but also as access to the surrounding gardens

4

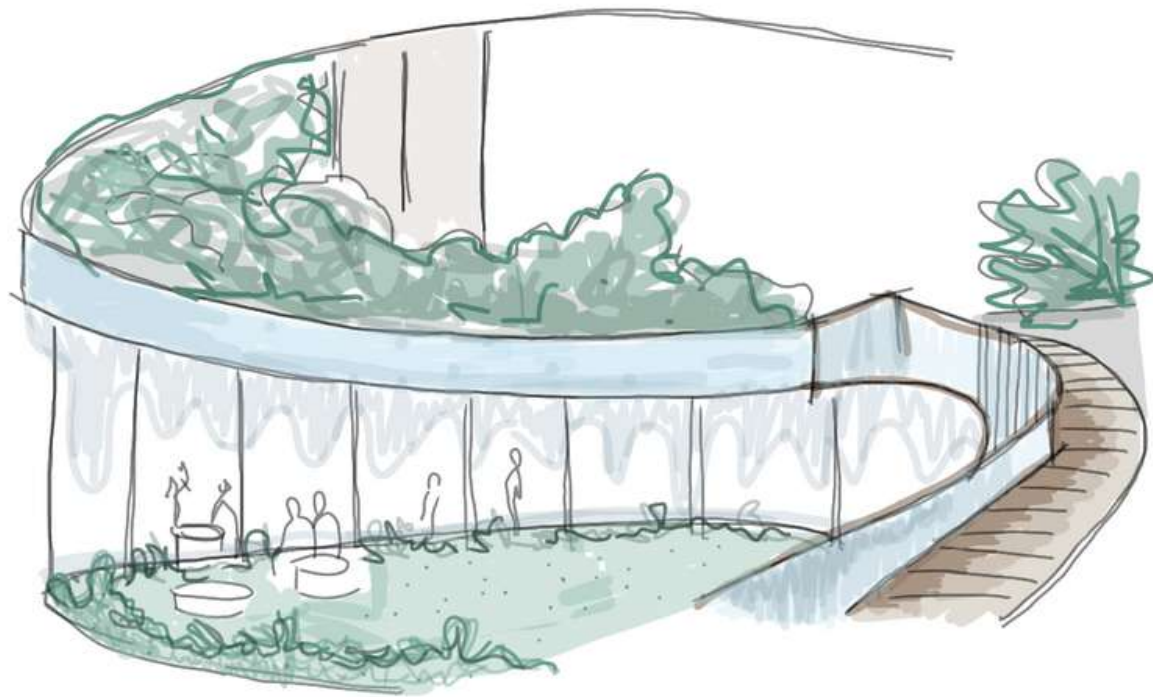


Placement a pedestrian garden on the 1st floor area that maximizes green areas with shopping so that all places can be used

Thermal and Airflow Variability



Room

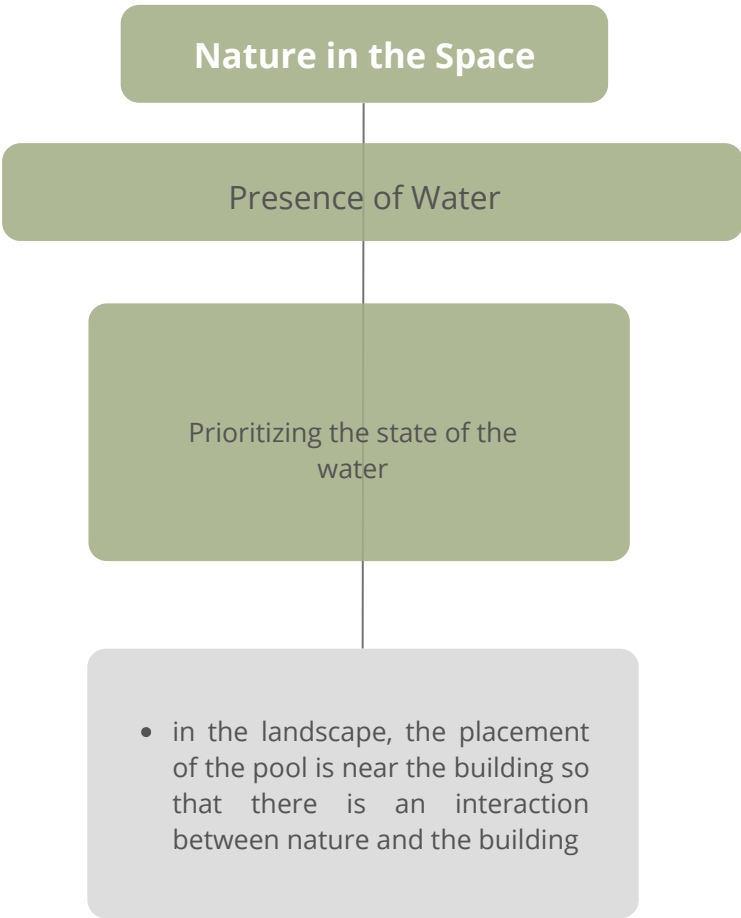


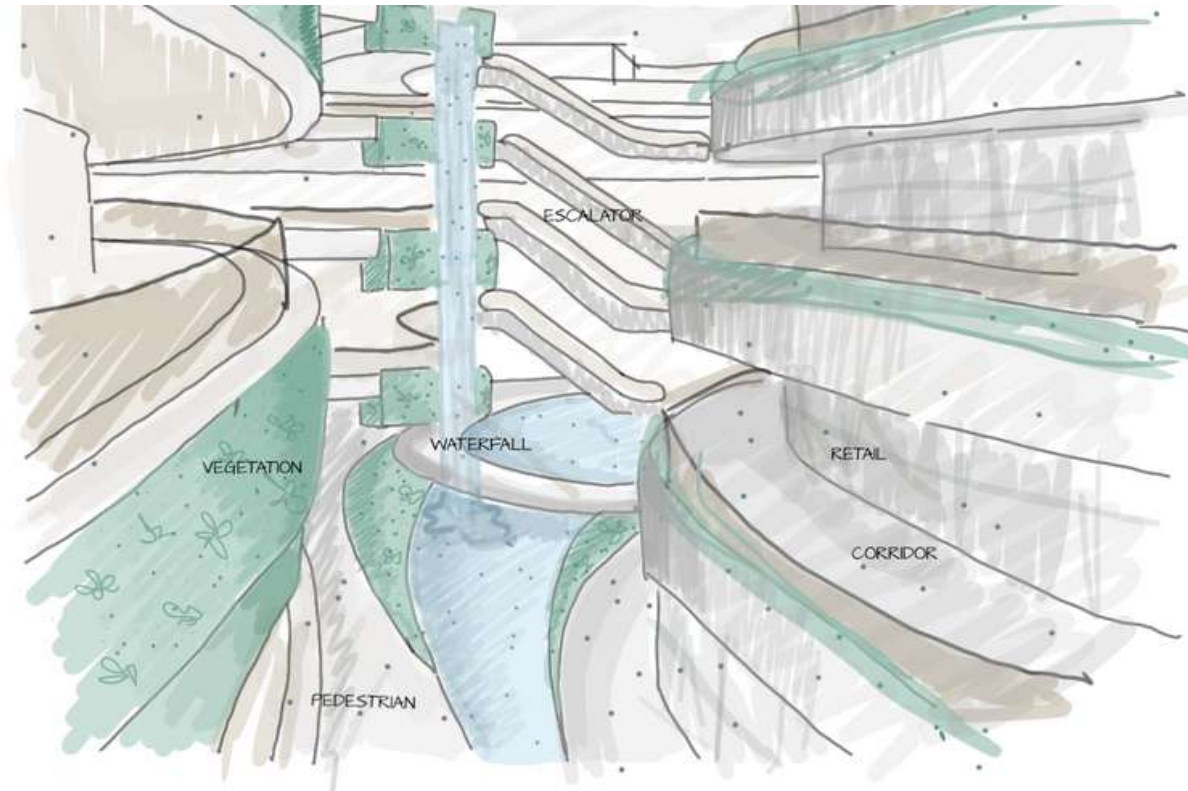
Incorporate natural elements such as plants and ponds in the building is also a strategic design to support the visual experience with nature

Presence of Water

Benchmark

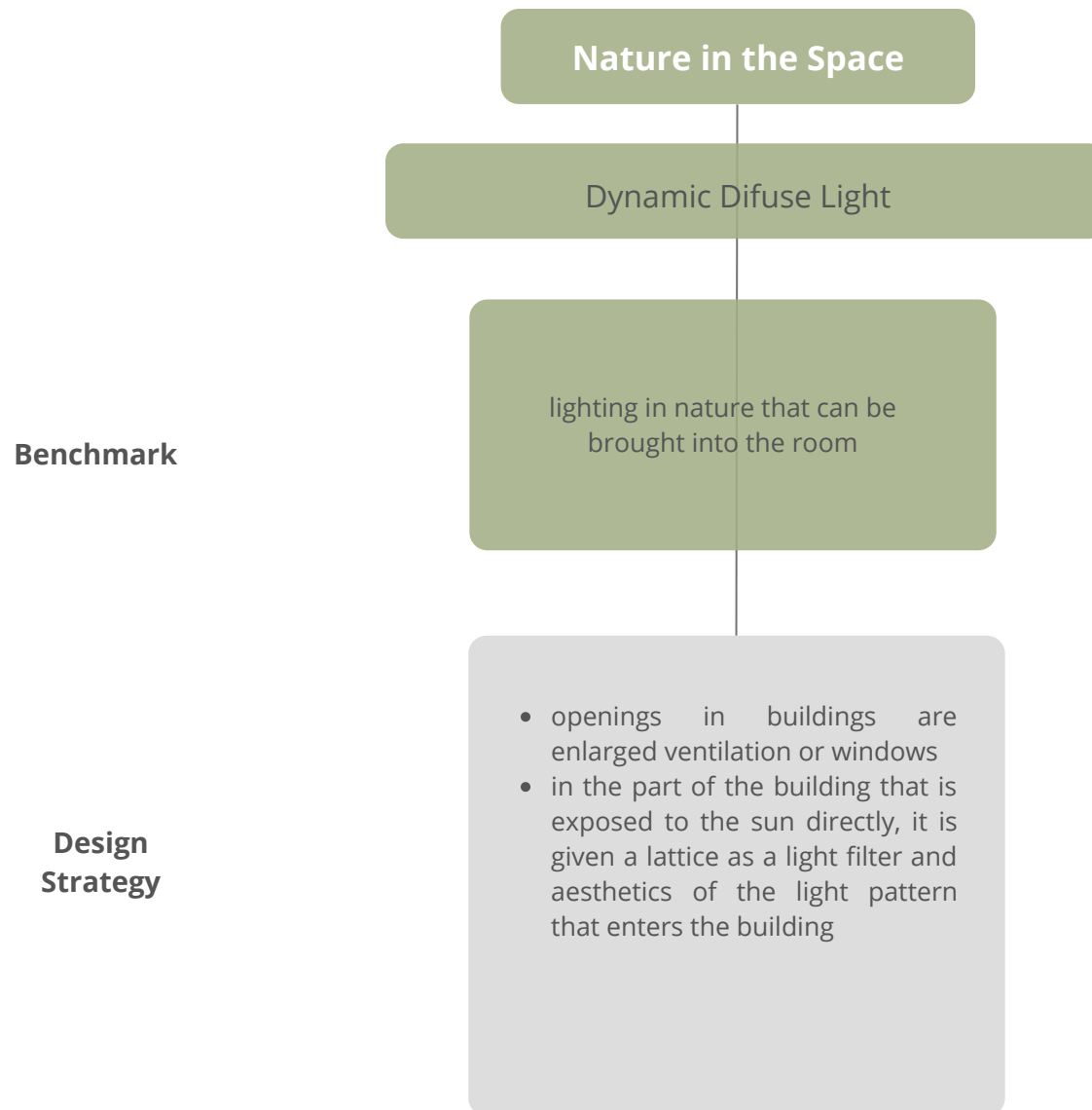
Design
Strategy





The application of the presence of water by presenting the element of water in the landscape in the form of a pond to produce a spatial experience through seeing and hearing.

Dynamic Difuse Light

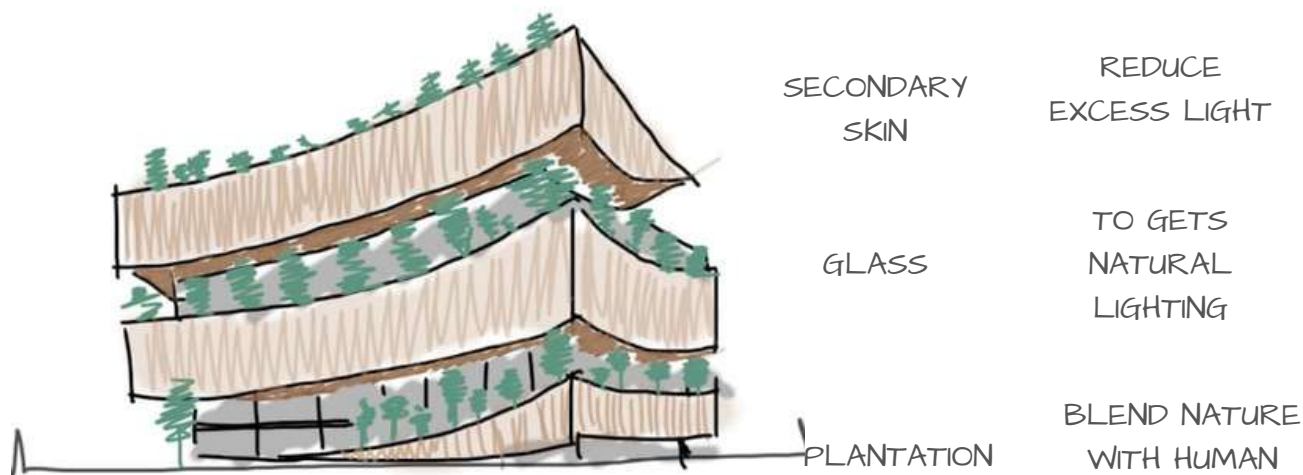




to get around between human and nature, because this uses greater access to the edges of the plant, so that later between humans and plants placed on the side will cover the natural lighting that comes to humans, and also because this part is the western part of the building so it meets the sun there are many, then this part will be dealt with fins, this also enhance the aesthetics of a building by adding depth and perspective to one-dimensional rainscreen faade systems.

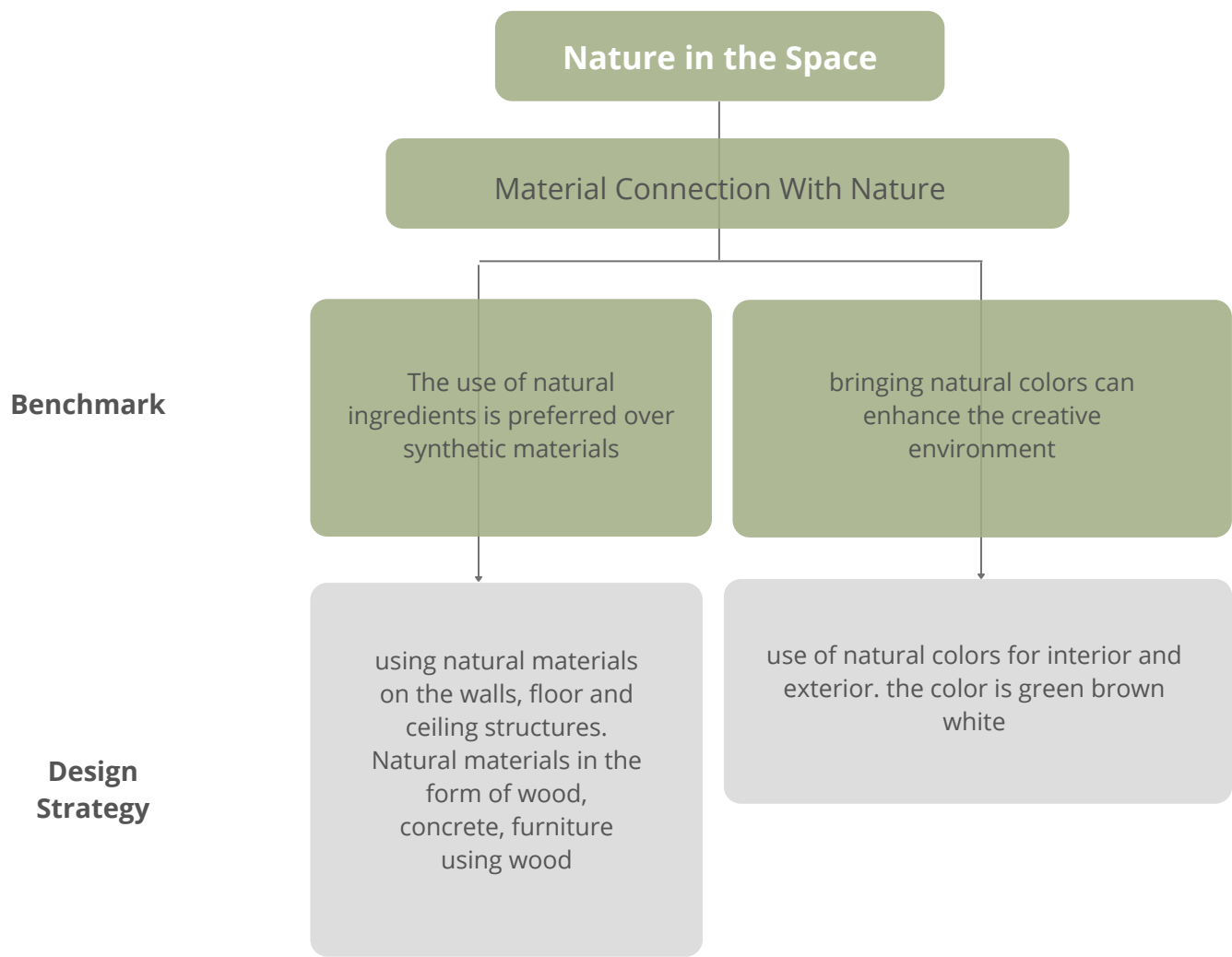
secondary skins, because visitors will be more active inside

and also inside of building there's a corridor so it can be shading also.



3.1.2 Natural Analog Pattern Analysis

Material Connection With Nature



THE CONCEPT OF MATERIAL

EXTERIOR



CONCRETE



CURTAIN WALL



TEMPERED
GLASS RAILING



DECK WOOD

INTERIOR



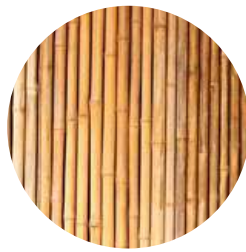
TEMPLE STONE



TEMPERED
GLASS RAILING



WOOD



BAMBOO

LANDSCAPE



PAVING BLOCK



DECK WOOD

Biomorphic Form & Patterns

Nature in the Space

Biomorphic Form & Patterns

Benchmark

Presenting natural elements through imitation of natural forms or motifs to form the contents of space

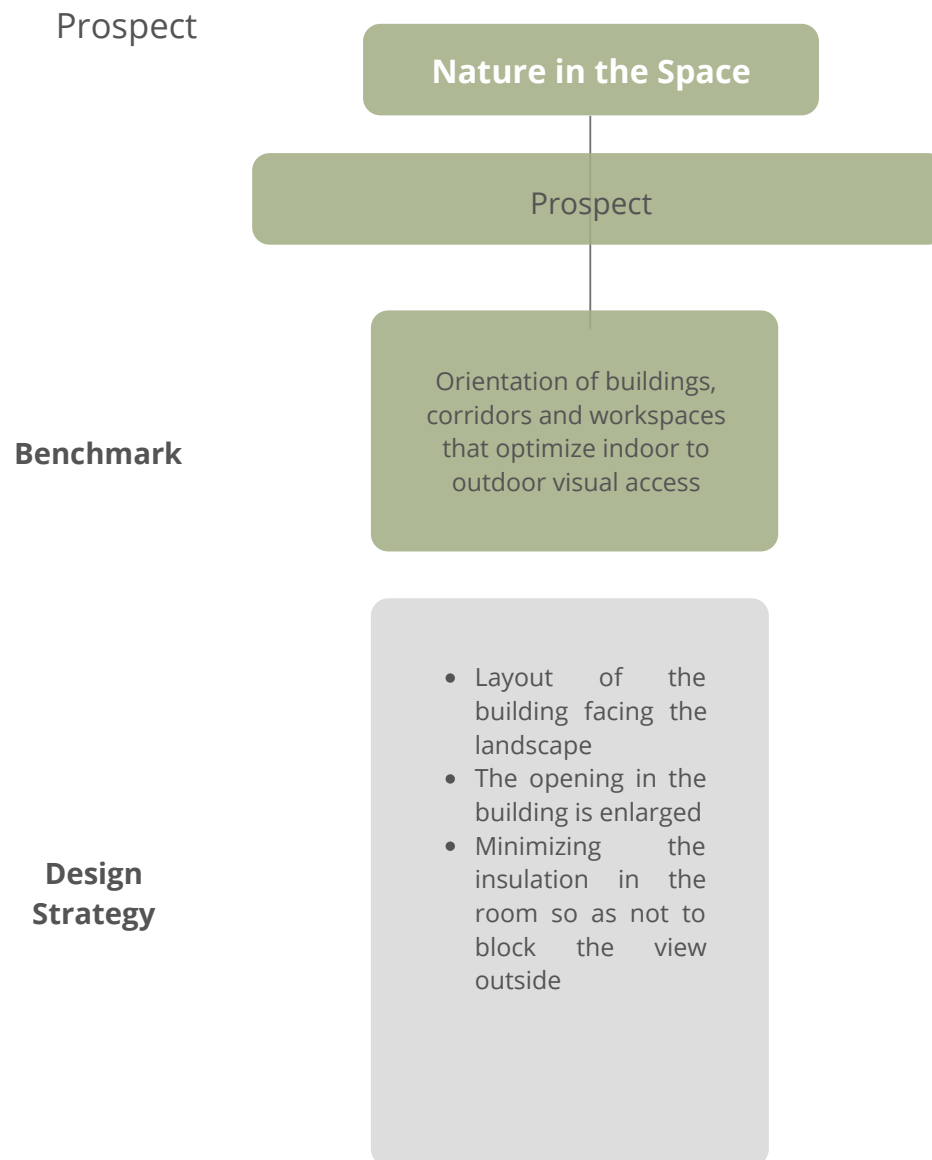
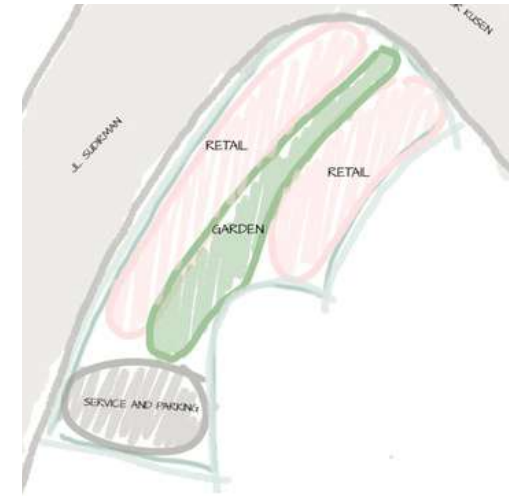
Design Strategy

- Several openings or windows and patterns on the floor by adopting natural shapes



The application of interior using wood with a presenting natural elements through limitation of natural forms

3.1.3 Nature of Spatial Pattern Analysis



In the distribution of the selected zone is determined from:

- Retail zone, which contains Craft, Culinary, Plantation.
- Garden zone, containing garden area and pedestrian
- Parking and service, contains parking area and service

Of the three zones, they are designed to be interconnected and follow the flow of activities.

The application of prospect in the landscape is to provide a connection between the outer space and the inner space. So that the view from the outside can be enjoyed by users from inside the building. Connections can be in the form of walkways running around the building with plants on each side.

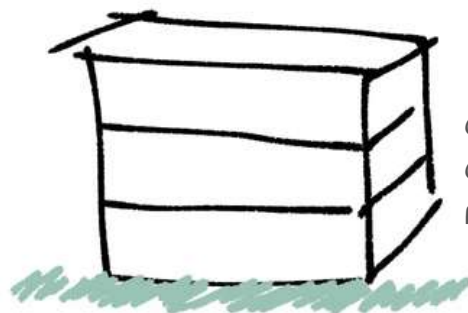
3.2 EXPLORATION OF THE CONCEPT OF BUILDING FUNCTIONS

3.2.1 BUILDING FUNCTION

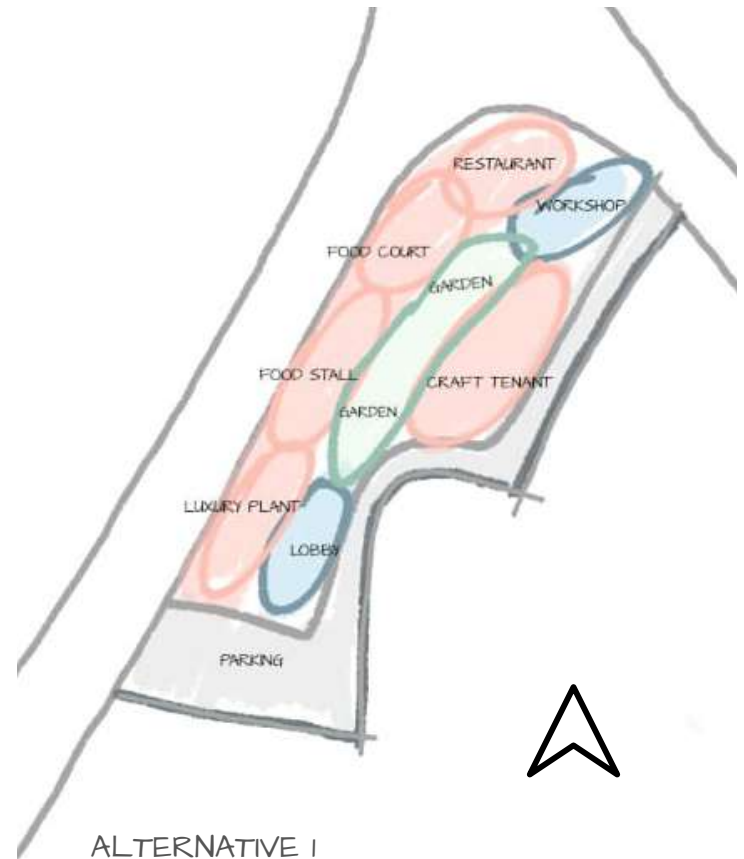
Based on its location in a tourist area, making the location has a relationship between local and tourists. This was found because of the site adjacent to the borobudur area. The culture of the Magelang people who use services as mobility. So that local craft culinary products and luxury plants can be seen from the activities of the tourism sector that occur every day, where there are many street vendors along the area which is crowded with both local people and tourists. This shows that the cultural sector is the main potential that can be developed through the combination of the functions of commercial buildings with recreation.

Referring to the program, there are several functions in the area which are divided into several useful zoning to facilitate access and activities of each user. Aspects that become the basis for consideration in designing mass planning according to this analysis include:

- a. Clear separation of each culinary, craft, plantation retail zone so that all activities in the area can run smoothly and under control.



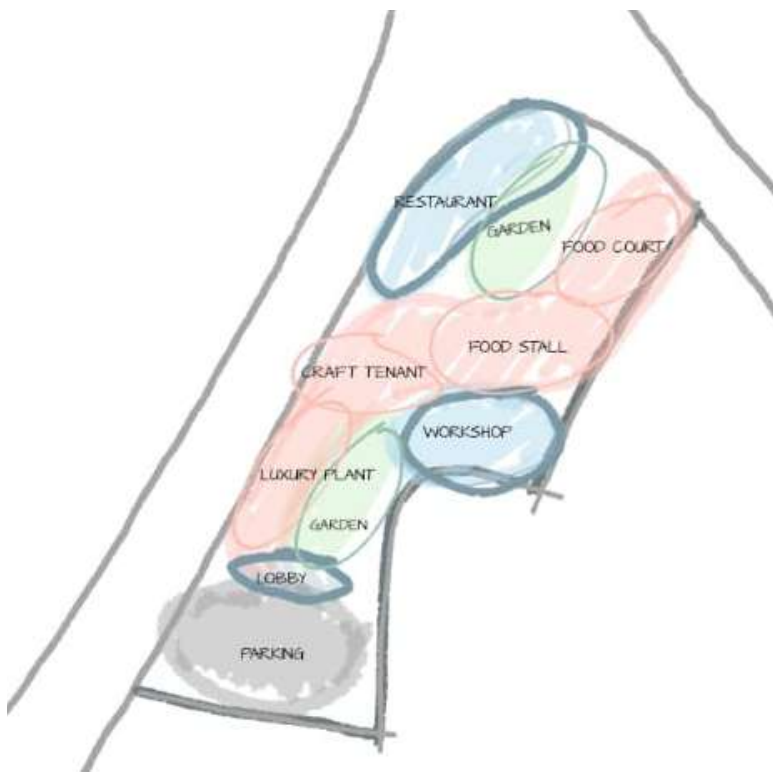
CRAFT ZONE
CULINARY ZONE
PLANT ZONE



ALTERNATIVE 1

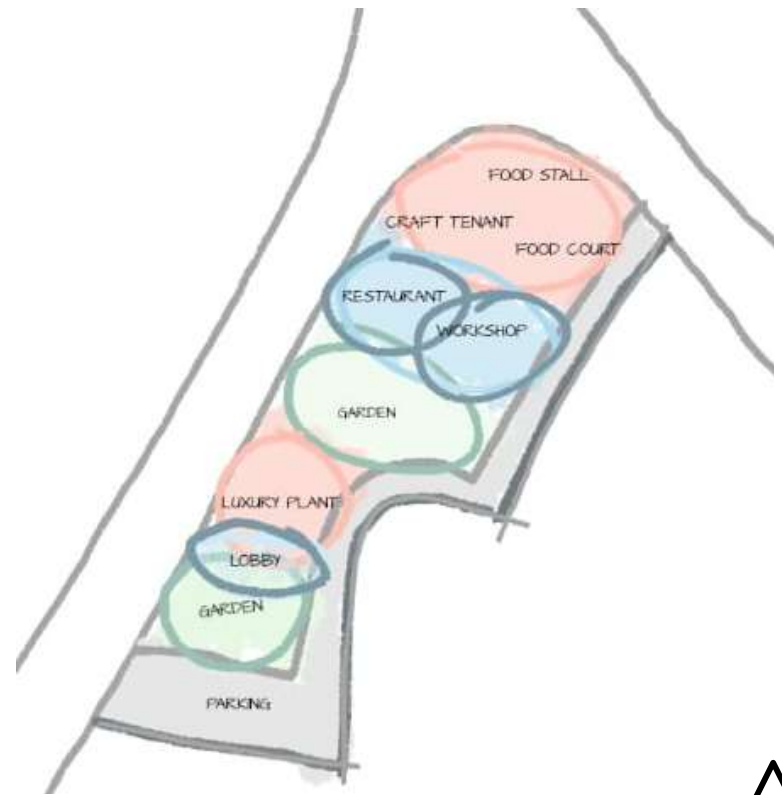
In alternative one, the division of function follows the placement of the garden that stretches out following the retail

create a plant zone area in the lower area close to the garden, making it easier for blending between tenants and gardens that doesn't waste rentable space



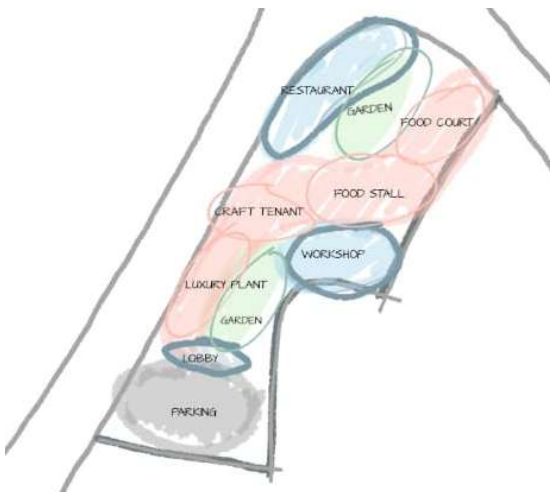
ALTERNATIVE 2

In alternative two, the zoning is divided into two zone with the same retail but it will have the parking zone on a t junction



ALTERNATIVE 3

In the third alternative, retail is made into one on the edge of the building with a garden right outside the building



In the distribution of the selected function is determined from garden area stretches out following the retail and connected with each other so it doesn't waste rentable space

CONCLUSION

3.2.2 PROGRAMMING ANALYSIS

No	Space Type	Space Need	Area (m2)	Capacity	Area
1.	Major Unit	Receptionist	5	3	5
		Lobby Garden	25	50	25
		Retail Type A	496	40	496
		Food Stall	12	2	12
		Cafe Garden	300	30	300
		Garden Pool	300	300	300
		Workshop Area	124	10	124
		Hall Garden	550	55	550
2.	Small Unit	Retail Type B	266	20	266
		Retail Type C	124	10	124

No	Space Type	Space Need	Area (m2)	Capacity	Total Room
	Supporting Room	Smoking Room	15	2	2
		Nursery Room	10	2	10
		Musholla	42,5	2	42,5
		ATM Center	32,84	1	32,84

Parking Space Needs Analysis

No	Space Type	Space Need	Area (m2)	Capacity	Total Area
	Parking	Motorcycle	1,4	1	1,4
		Car	12,5	1	12,5
		Bus	36	1	36

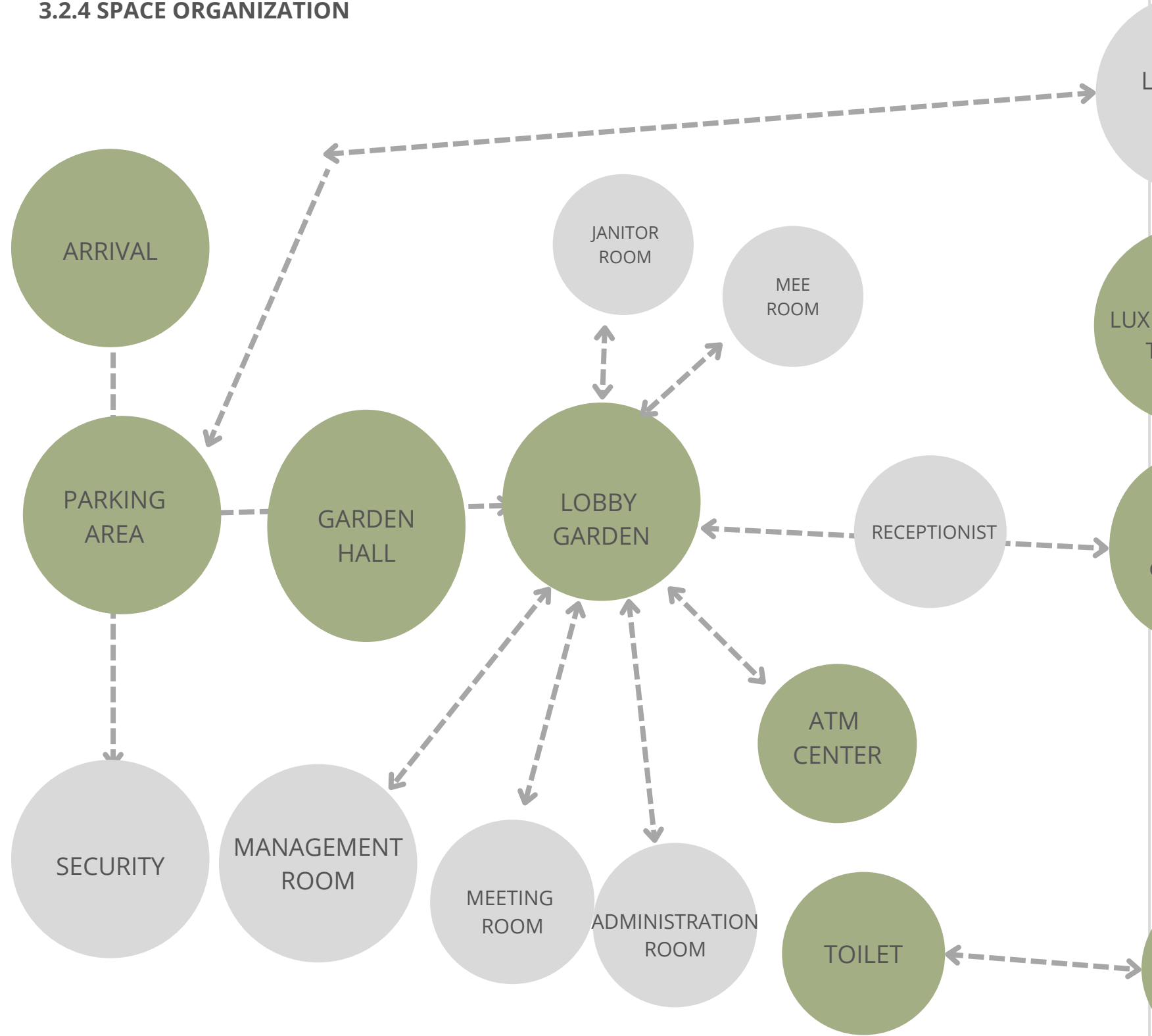
No.	Space Type	Space Need	Area (m2)	Capacity	Total Area
	Management Room	Main Director	9	3	9
		Direct. General OP	6	3	6
		Direct. Financial OP	6	3	6
		Production	39	12	39
		Marketing	39	12	39
		HRD	27	10	27
		Living Room	10	5	10
		Pantry	6	2	6
		Lavatory	8	4	8
	Service	Technician	5,5	4	5,5
		Security	36	12	36
		Janitor Room	20	10	20
		Pantry	6	6	6
		Storage	20	20	20
		Loading Dock	300	100	300
		Control Room	10	2	10
		Generator Room	5	2	5
		Water Pump Room	12	2	12
		AHU Room	5	2	5
		Server Room	10	2	10
		Emergency Stair	24	6	24

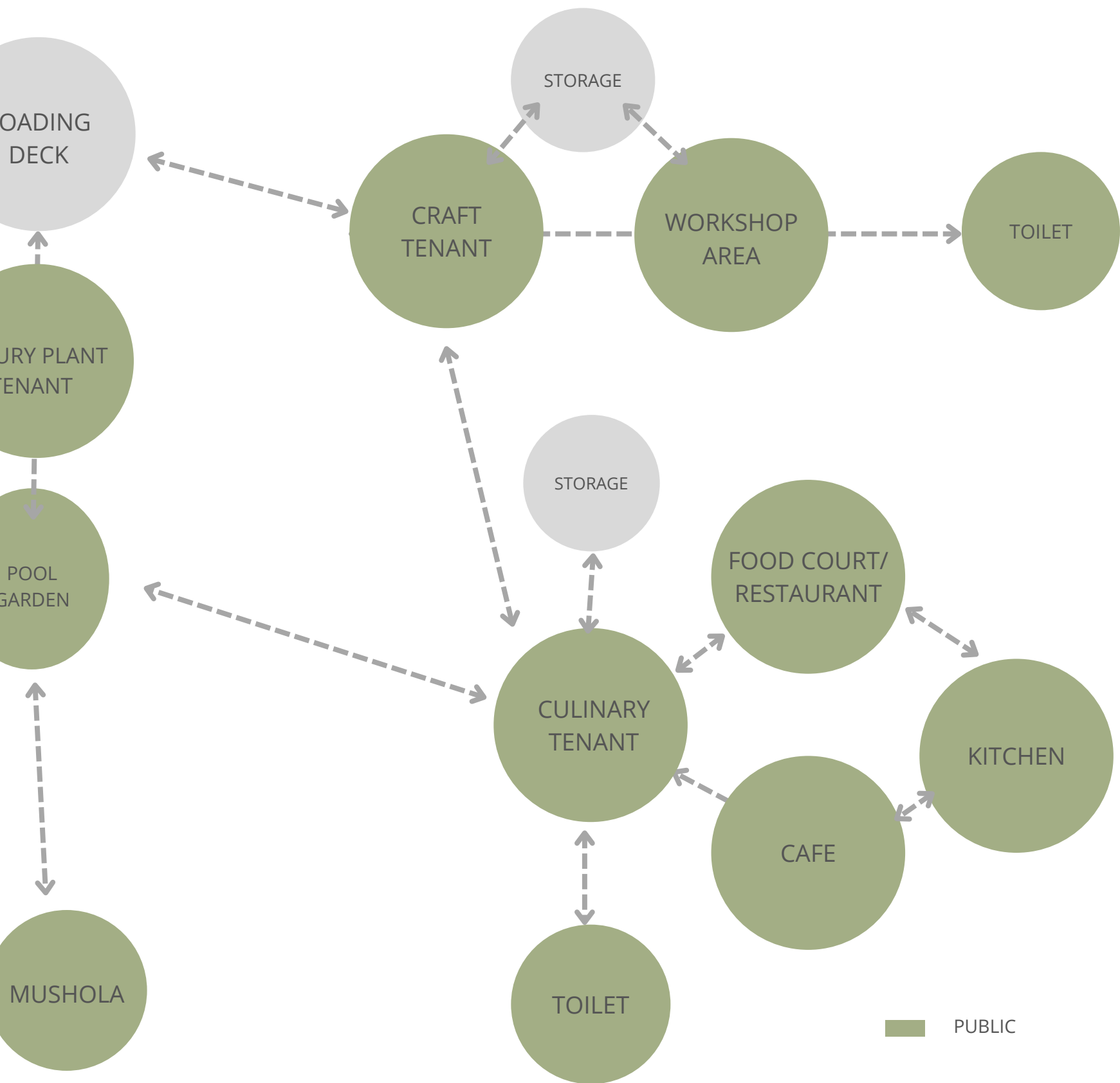
3.2.3 ROOM PROGRAMMING

No.	Space Type	Space Need	Number of Space	Total Area
	Major Unit	Receptionist	1	5
		Lobby	1	25
		Retail Type A	2	496
		Food Stall	122	12
		Cafe	1	300
		Garden	1	300
		Workshop Area	1	124
		Hall	1	376
	Small Unit	Retail Type B	6	266
		Retail Type C	32	124
No.	Space Type	Space Need	Number of Space	Total Area
	Management Room	Main Director	1	9
		Direct. General OP	1	6
		Direct. Financial OP	1	6
		Production	1	39
		Marketing	1	39
		HRD	1	39
		Living Room	1	10
		Pantry	2	6
		Lavatory	4	8

No	Space Type	Space Need	Number of Space	Total Area
	Service	Technician	1	5,5
		Security	1	36
		Cleaning Service	1	20
		Pantry	1	6
		Storage	1	20
		Loading Dock	1	300
		Control Room	1	10
		Generator Room	1	5
		Water Pump Room	1	12
		AHU Room	1	5
		Server Room	1	10
	Supporting Room	Emergency Stair	1	24
		Smoking Room	1	15
		Nursery Room	2	10
		Musholla	2	42,5
		ATM Center	1	32,84

3.2.4 SPACE ORGANIZATION



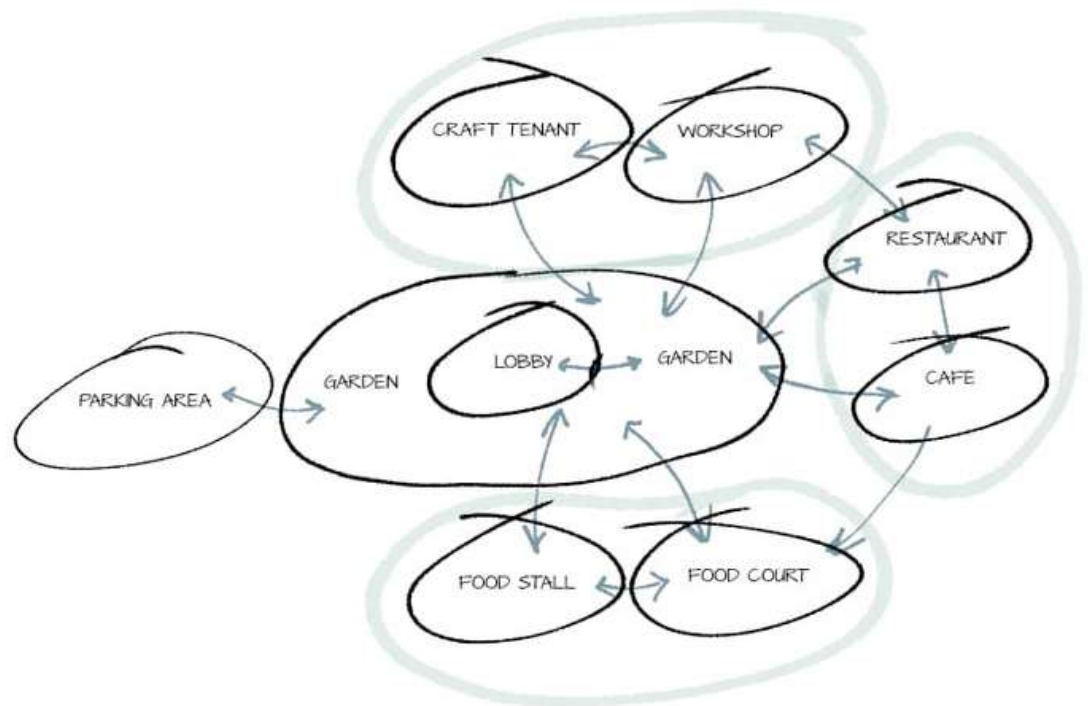


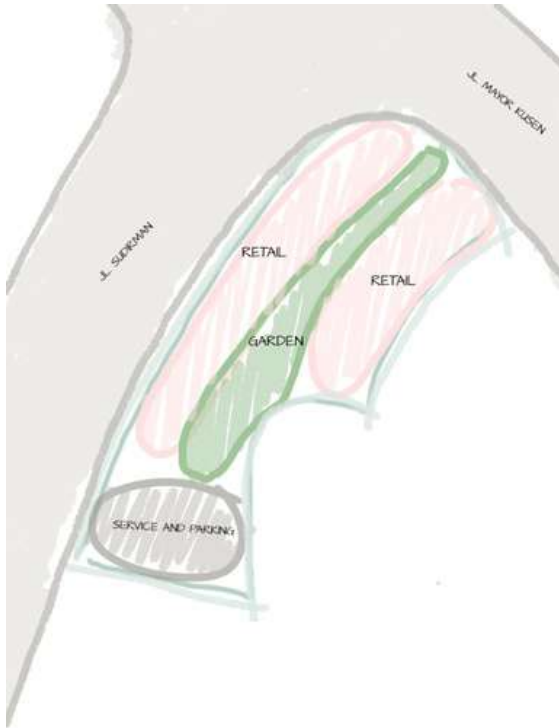
3.3 EXPLORATION OF THE ZONING ANALYSIS

In the flow of shopping activities in an area, it can be divided into several zones for garden activities, workshops, restaurants, tenants

The author divides these activities into three zones, which: Culinary Zone, Craft Zone, Garden Zone

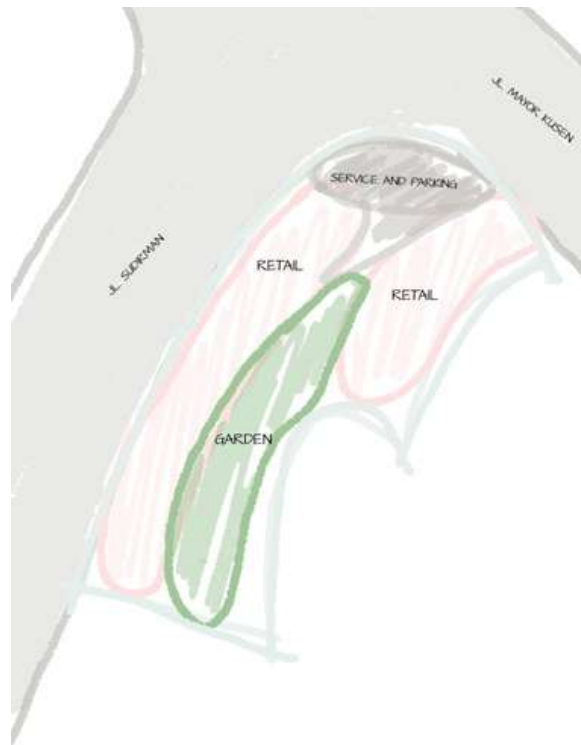
all three want to be united so that the biophilic concept can be integrated with all tenants.





ALTERNATIVE 1

In alternative one, the division of zones follows the placement of the park that stretches out following the retail



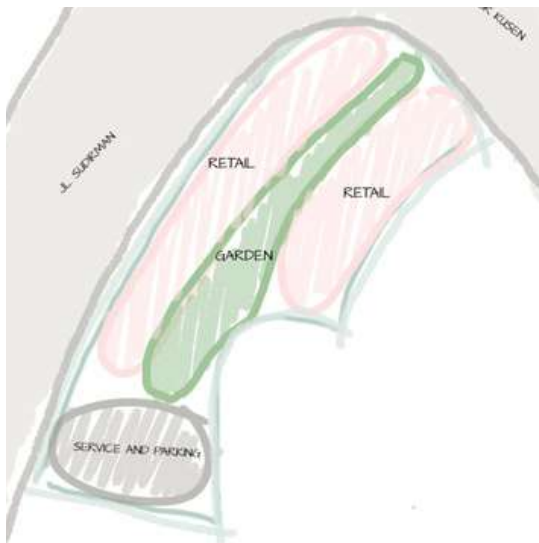
ALTERNATIVE 2

In alternative two, the zoning is divided into two zone with the same retail but it will have the parking zone on a t junction



ALTERNATIVE 3

In the third alternative, retail is made into one on the edge of the building with a garden right outside the building



CONCLUSION

In the distribution of the selected zone is determined from:

- Retail zone, which contains Craft, Culinary, Plantation.
- Garden zone, containing garden area and pedestrian
- Parking and service, contains parking area and service

Of the three zones, they are designed to be interconnected and follow the flow of activities.

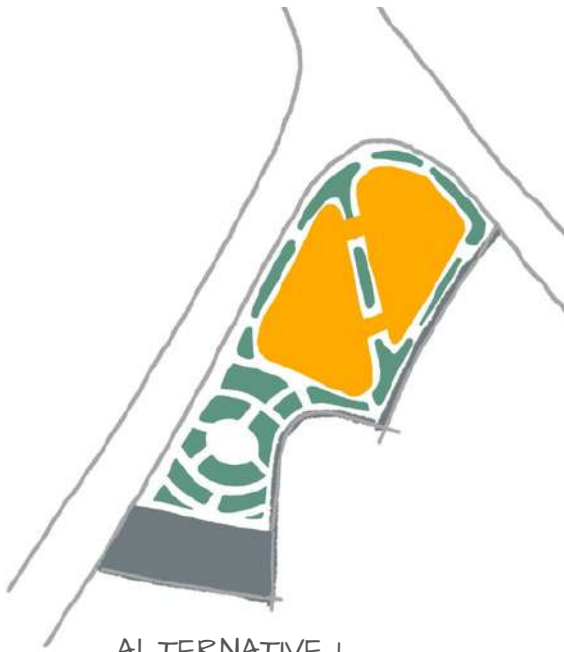
3.4 THE CONCEPT OF BUILDING LAYOUT

The landscape area in the form of vegetation is free from buildings that are above the ground level by at least 30%, according to the Magelang RTRW Regulation on Appropriate Land Use Landscaping. The green space on the property has a total land size of 3233 m².

Designing green open space for usage as the garden walk area's open space. This serves as a shopping area in a garden style that guests can stroll through.

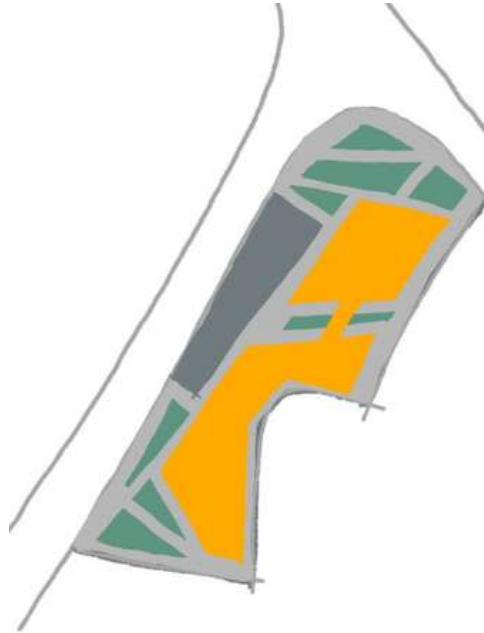
Putting in place a landscape plan that includes a pedestrian-friendly open space and is connected with the shopping center itself to create a large number of available spaces on the property that are utilized to implement the Garden Walk.





ALTERNATIVE 1

Alternative 1 constructs the park with a center space next to the parking lot.



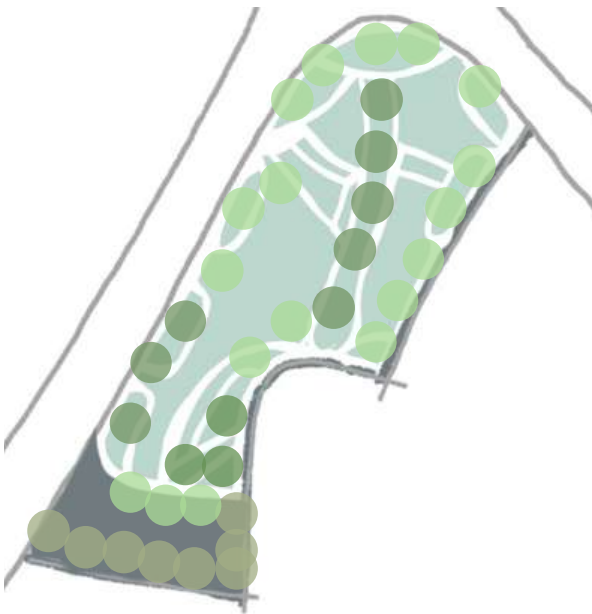
ALTERNATIVE 2

Alternative 2 makes it simpler to get to the shopping center by distributing the use of the garden equally and adding a parking lot on the west side of the building.



ALTERNATIVE 3

In an alternative design, three garden areas are created evenly, and the building is positioned in the center to optimize the kdb area.



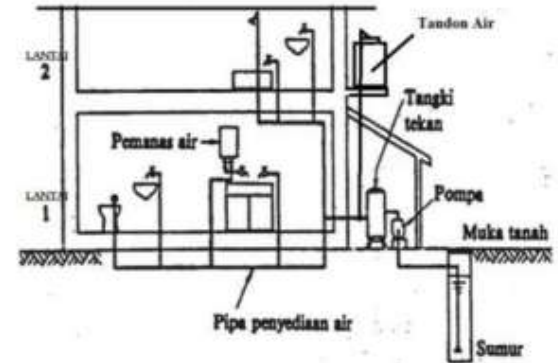
CONCLUSION

Alternative use 3 is preferred because it provides abundant pedestrian access to the park and strategically places its building mass to maximize KDB and prevent wasting land for non-rentable space.

3. 5 THE CONCEPT OF INFRASTRUCTURE

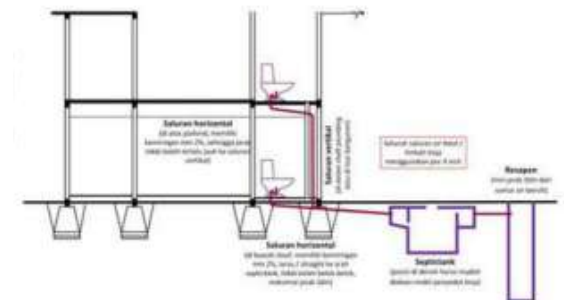
CLEAN WATER SYSTEMS

In the Rooftop Tank system, water is first gathered in a lower tank supplied by a well (placed on the building's lowest level or below the ground) and then pumped into an upper tank often installed on the roof or above the building's highest floor.



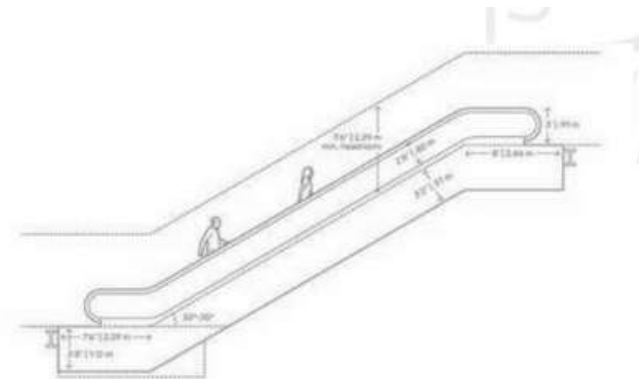
GREY WATER SYSTEMS

Because the general channel is higher than the plumbing device, the system uses a tool (pump) to collect the wastewater in a holding tank before pumping it to the available coil. Although pricey, this technique is frequently employed in high-rise structures with plumbing equipment in the basement.



ESCALATOR

The use of the escalator is placed on the edge of the building between the two so that it can be easily seen and can also be used to see the surrounding buildings



04

SCHEMATIC
DESIGN

SCHEMATIC DESIGN

4.1 Concept & Schematic Design of the Site Area

4.2 Concept & Schematic Design of the Building

4.3 Concept & Structural System Design

4.4 Concept & Schematic Landscape Plan

4.5 Concept & Schematic Design of Building Interior and Exterior

4.6 Concept & Building Envelope Design

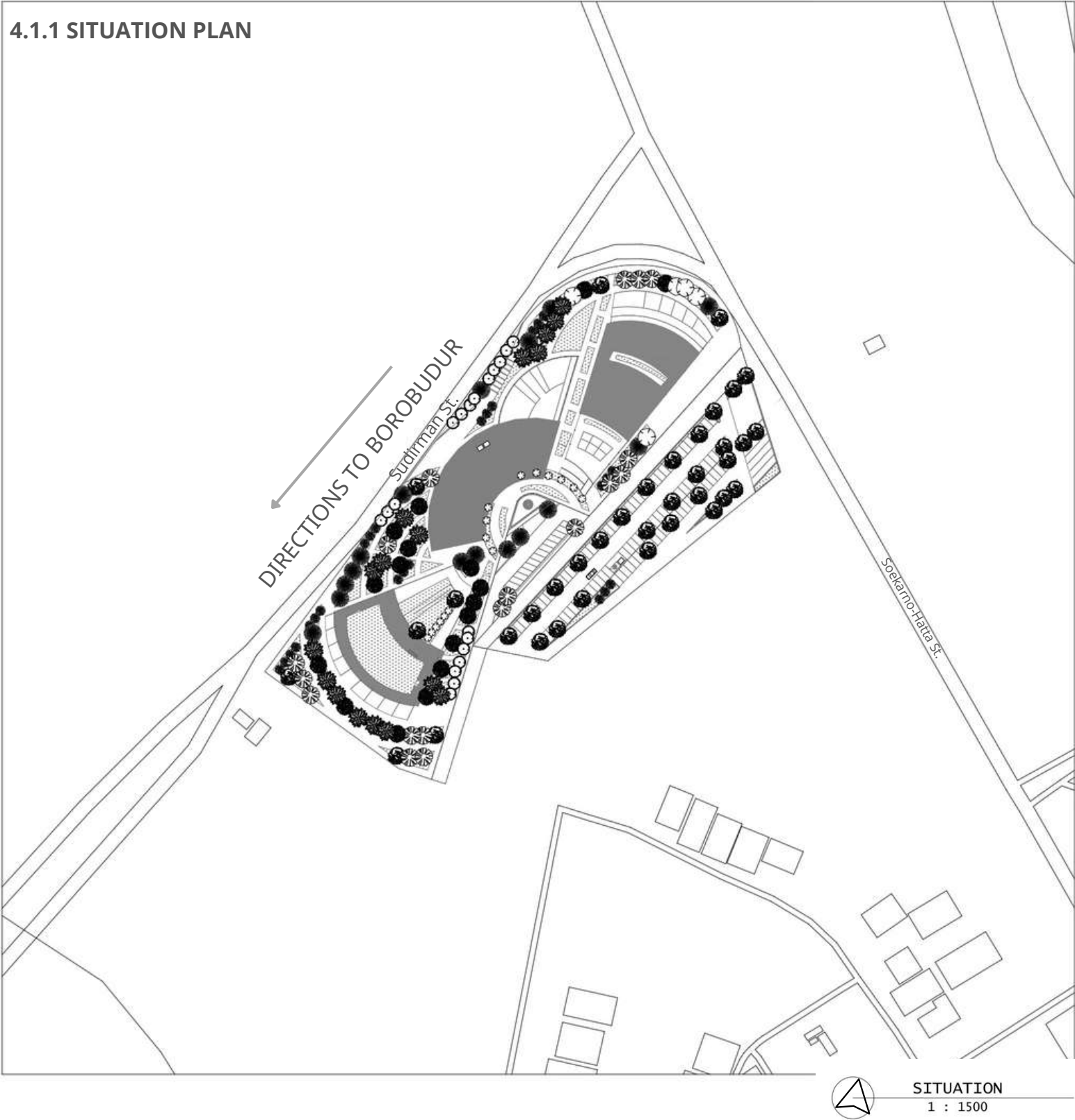
4.7 Concept & Schematic Architectural Detail

4.8 Concept & Schematic Biophilic

4.9 Concept & Building Safety and Barrier Free Utility System Design

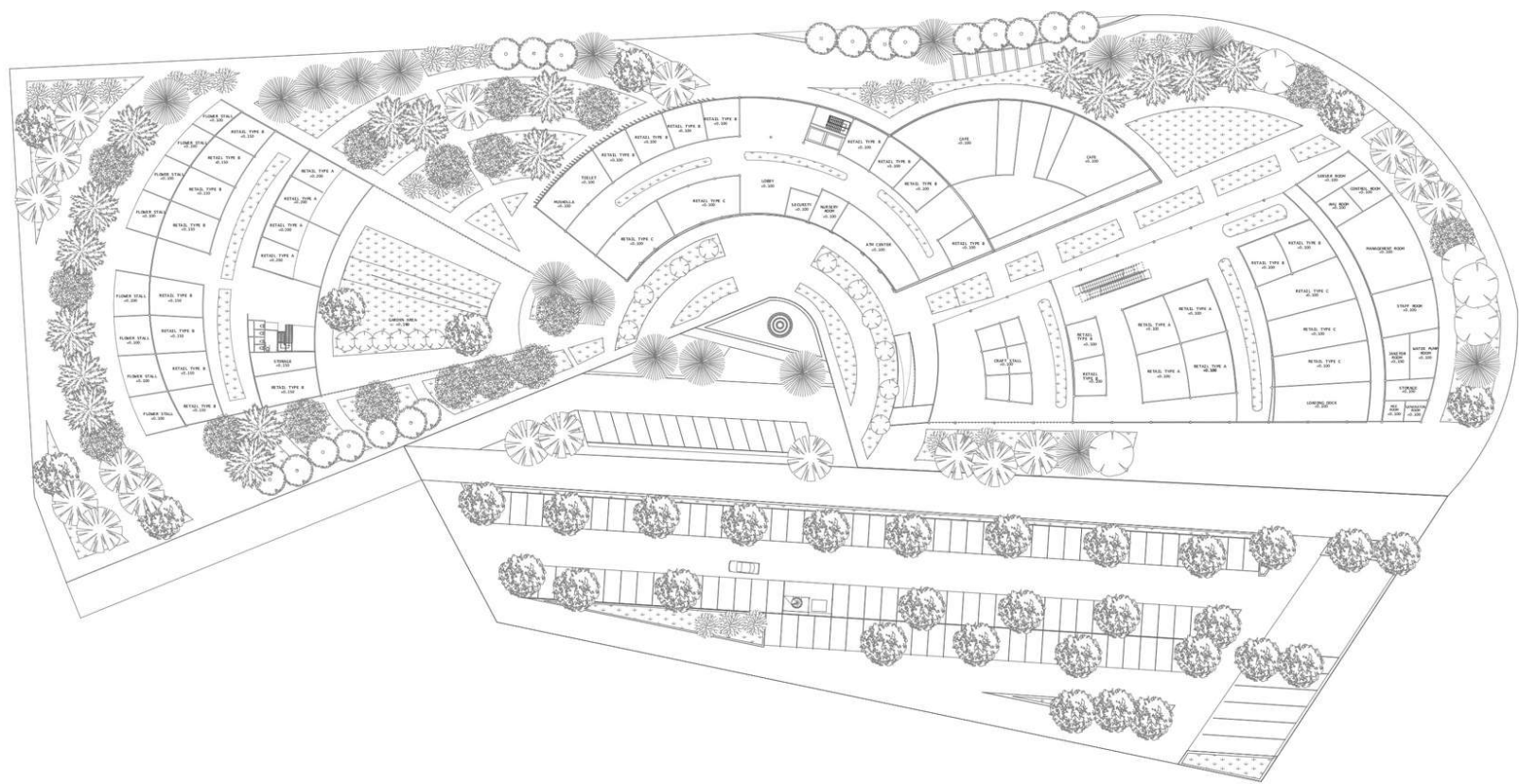
4.1 CONCEPT & SCHEMATIC DESIGN OF THE SITE AREA

4.1.1 SITUATION PLAN



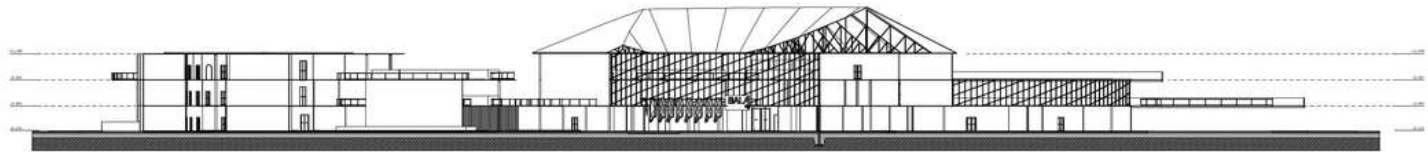
SITUATION
1 : 1500

4.1.2 SITE PLAN



SITEPLAN
1 : 500

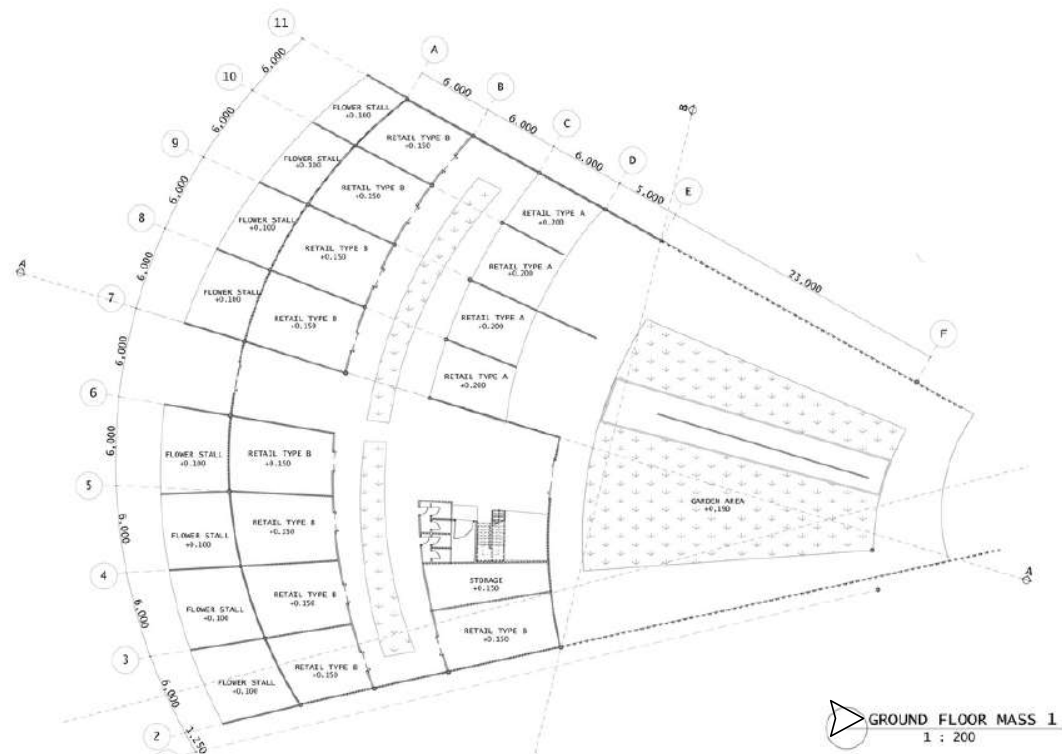
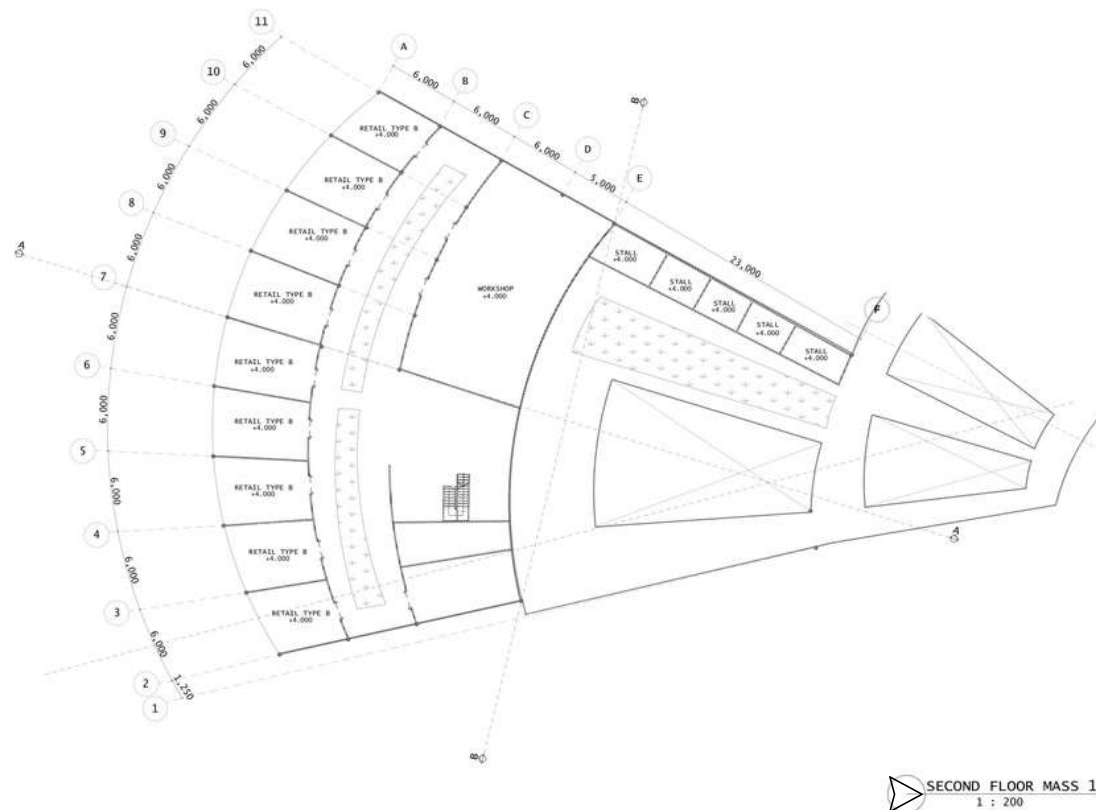
4.1.3 SITE SECTION

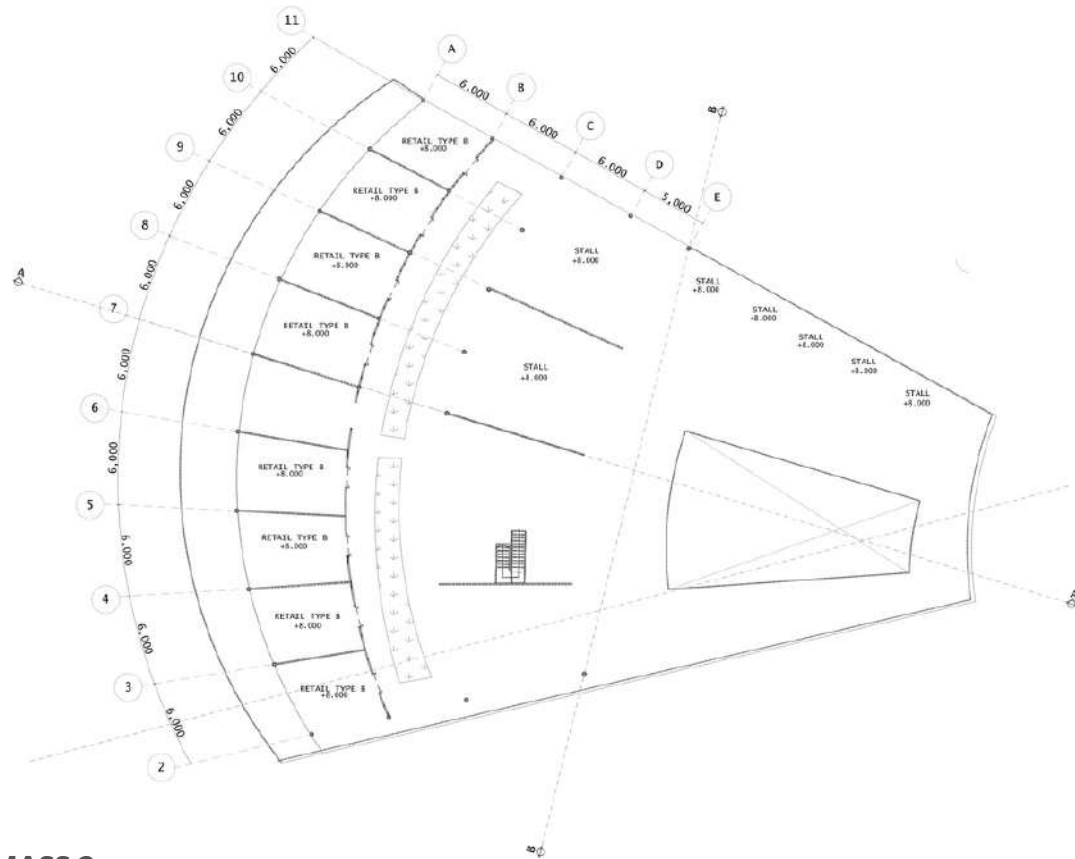


 SITE SECTION
1 : 500

4.2 CONCEPT & SCHEMATIC DESIGN OF THE BUILDING

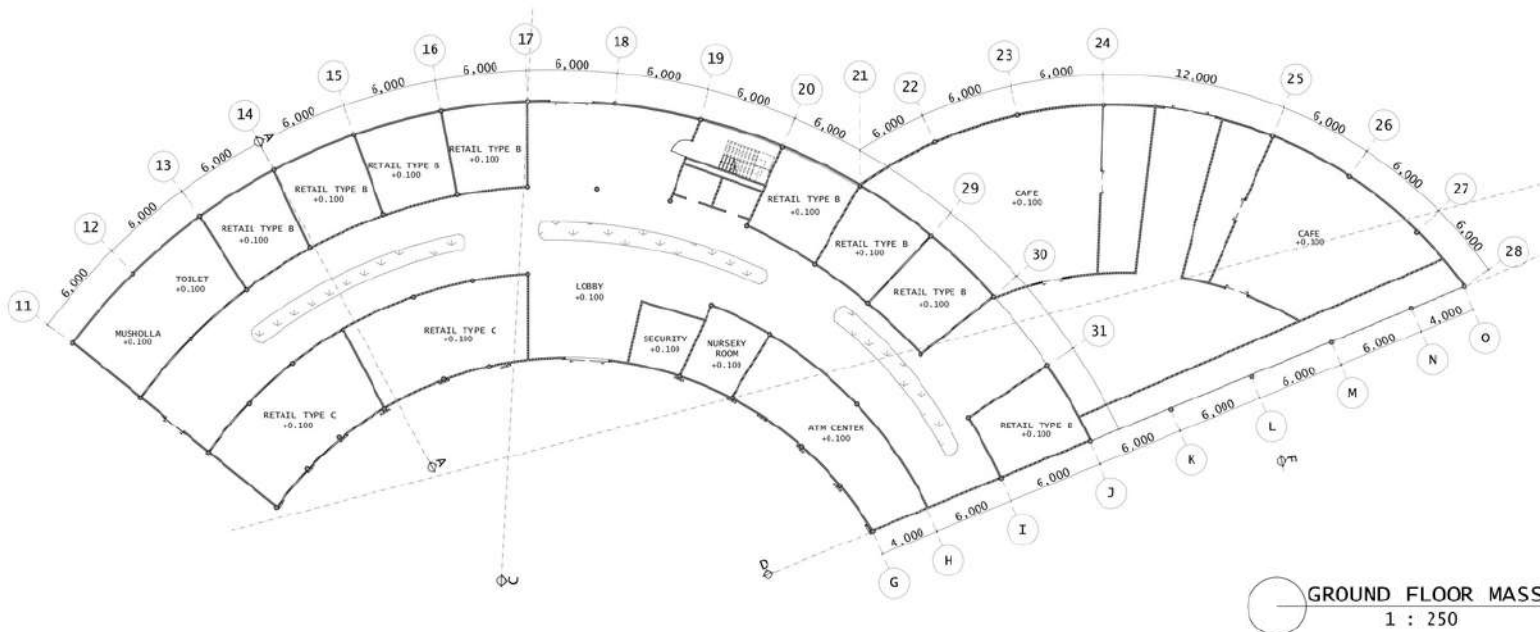
4.2.1 FLOOR PLAN MASS 1



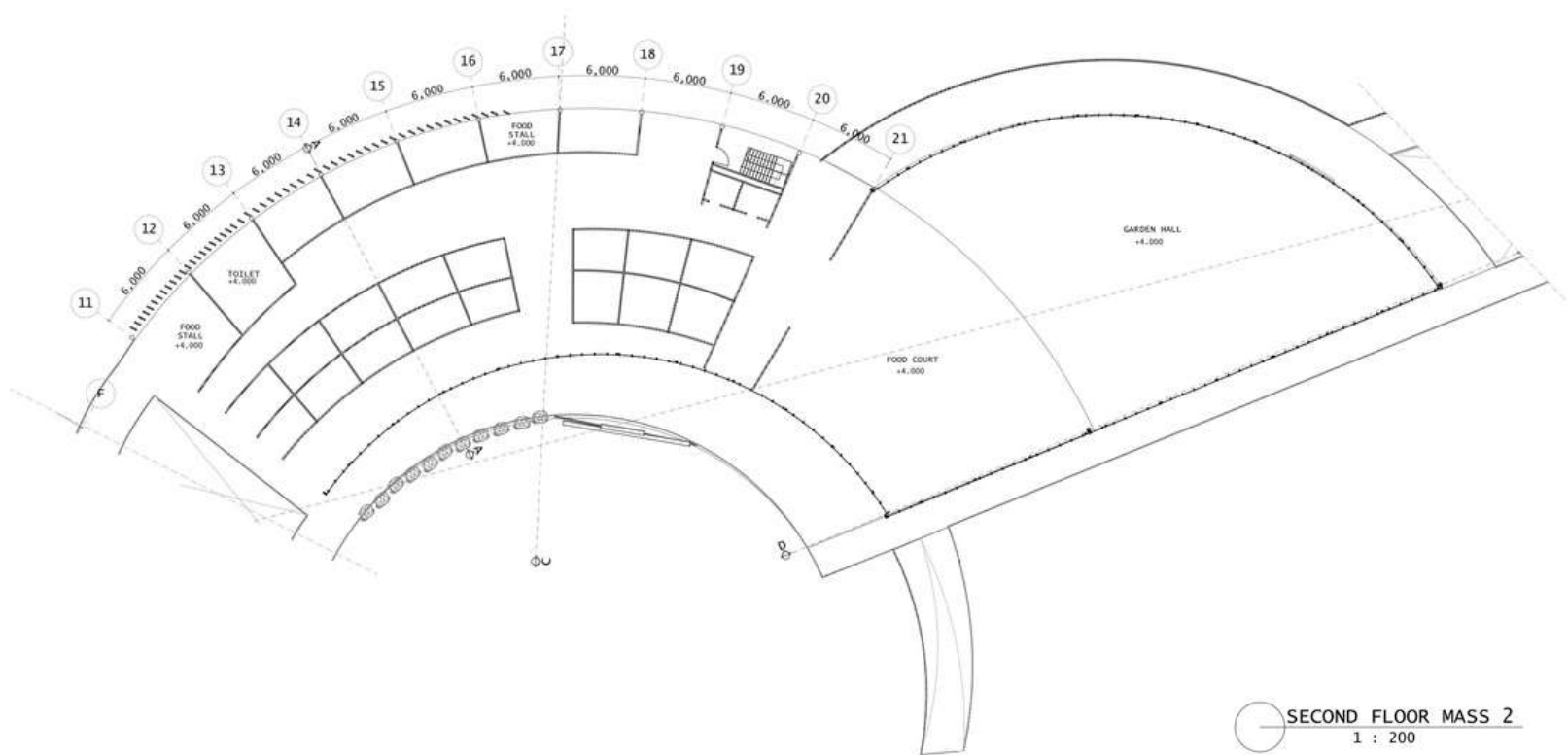
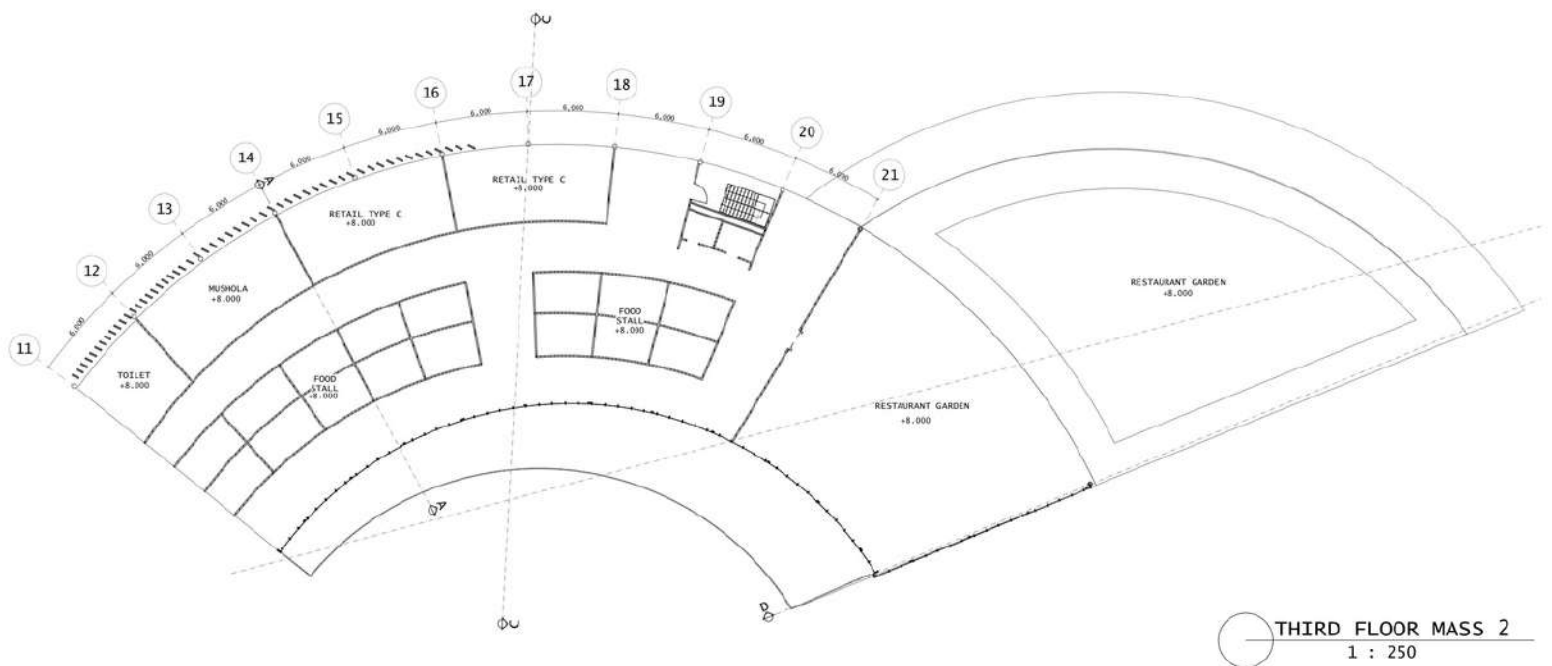


4.2.2 FLOOR PLAN MASS 2

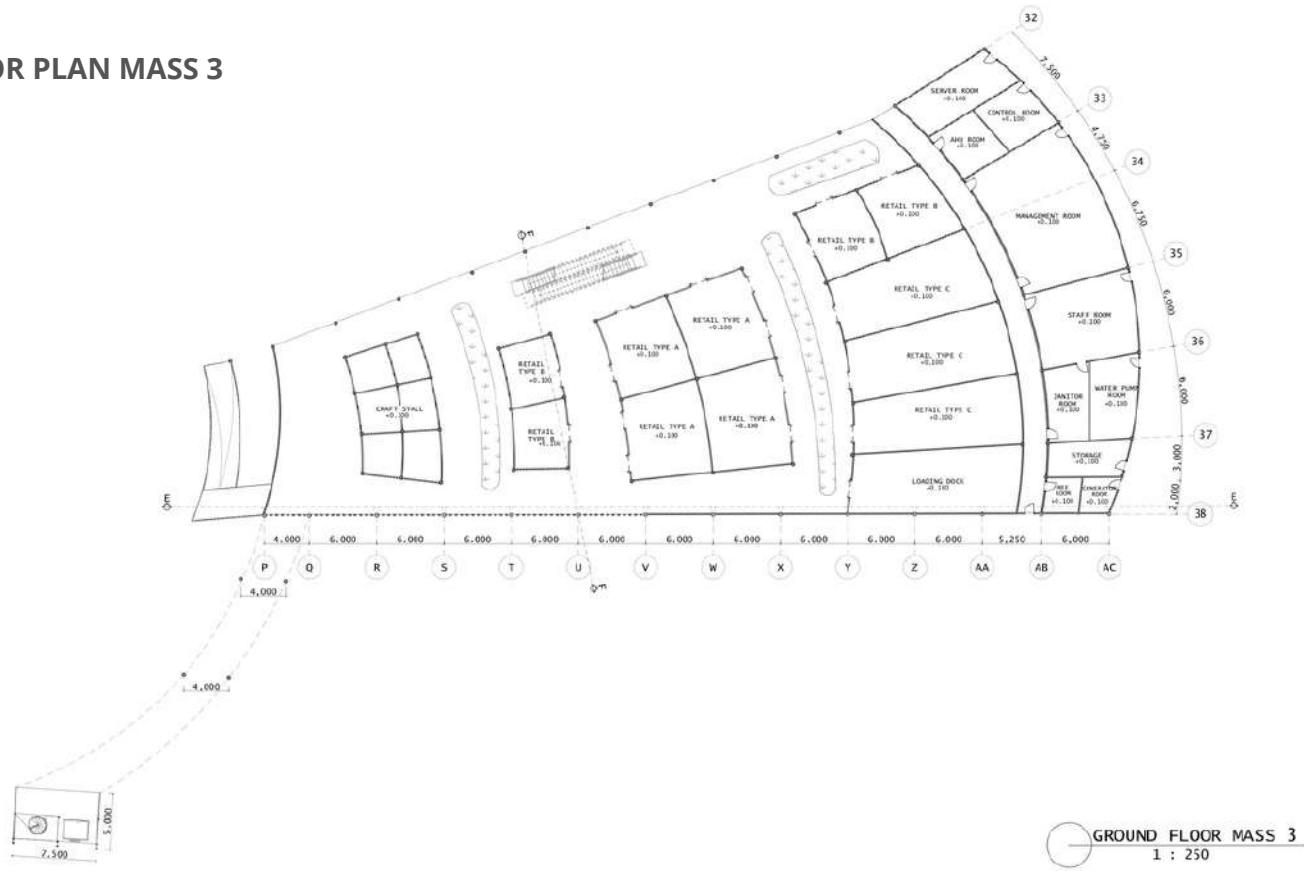
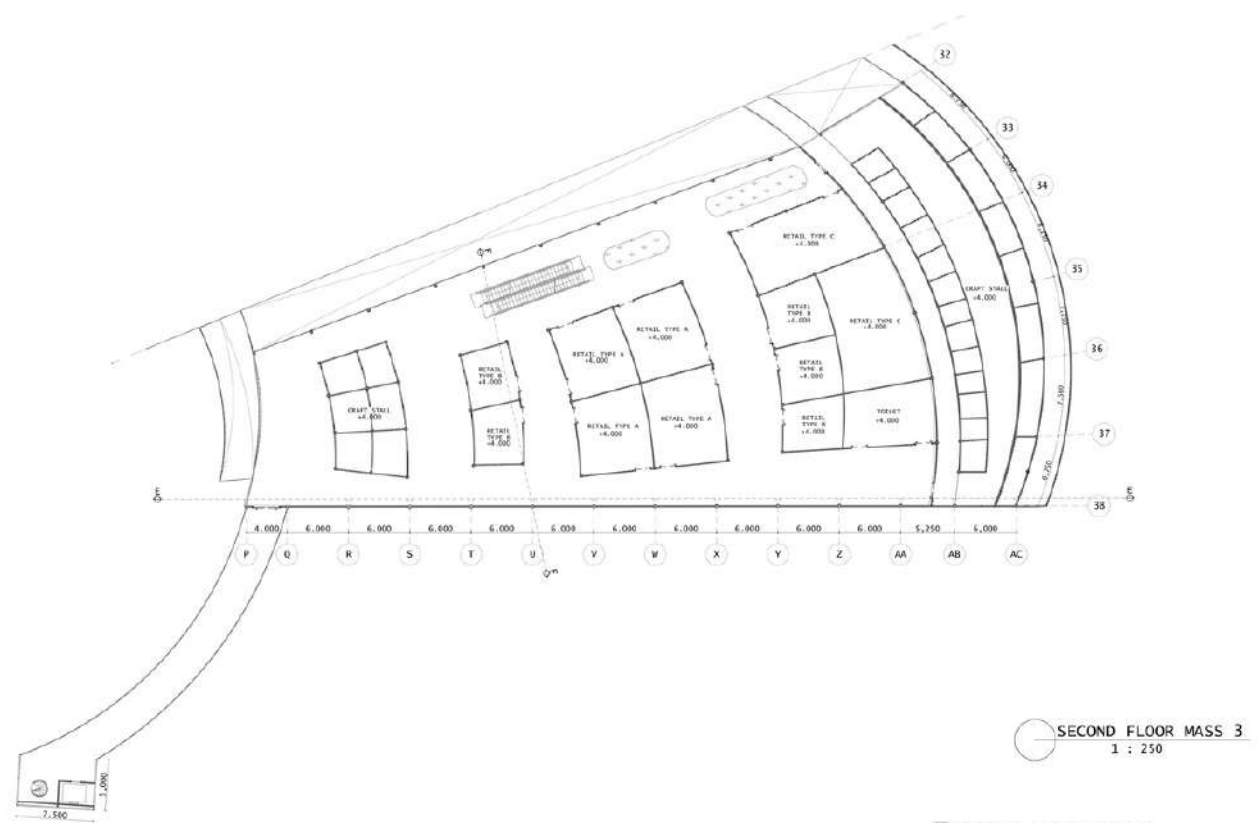
THIRD FLOOR MASS 1
1 : 200

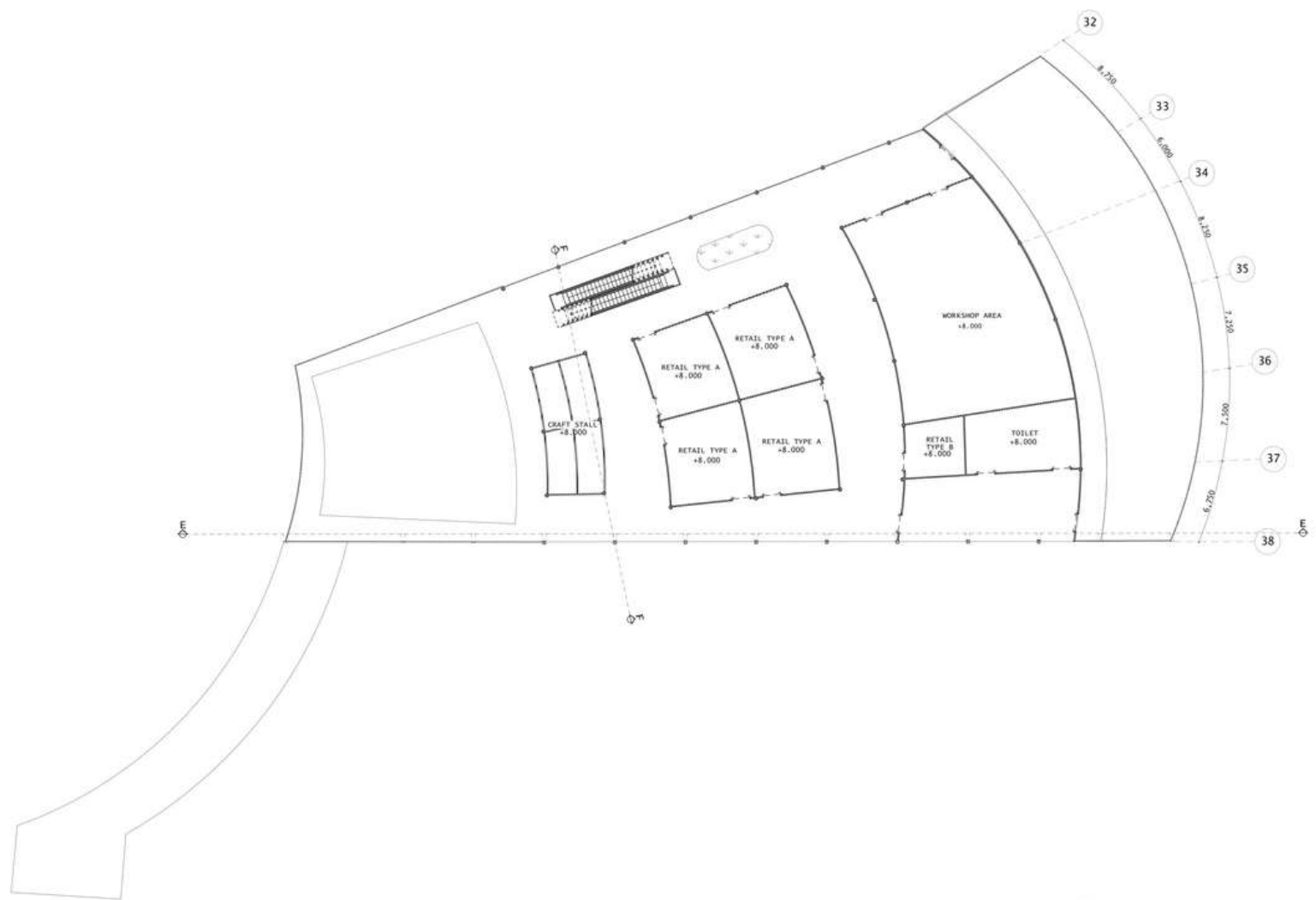


GROUND FLOOR MASS 1
1 : 250



4.2.3 FLOOR PLAN MASS 3





THIRD FLOOR MASS 3
1 : 250

4.2.4 ELEVATIONS

The design of a shopping center using a garden walk with a biophilic approach will produce a visual perception of a building with lots of vegetation and also a garden around the building. The goal is to provide a visual experience like being in a park as a presentation of Magelang, the city of a million flowers. So this building is surrounded by all the plants that have been previously attached to the literature review. In addition, there is also the element of water, more details are located on the detail page.



West Elevation



East Elevation

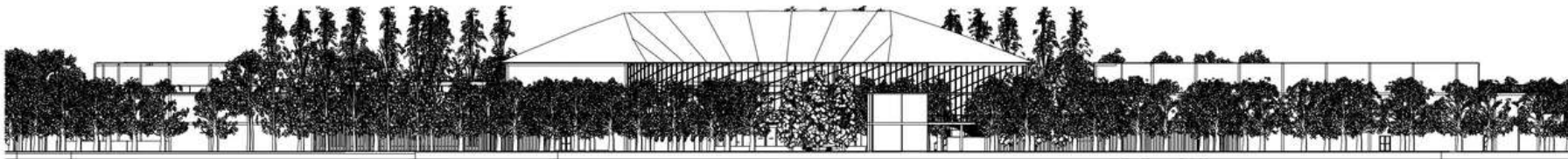


South Elevation



North Elevation

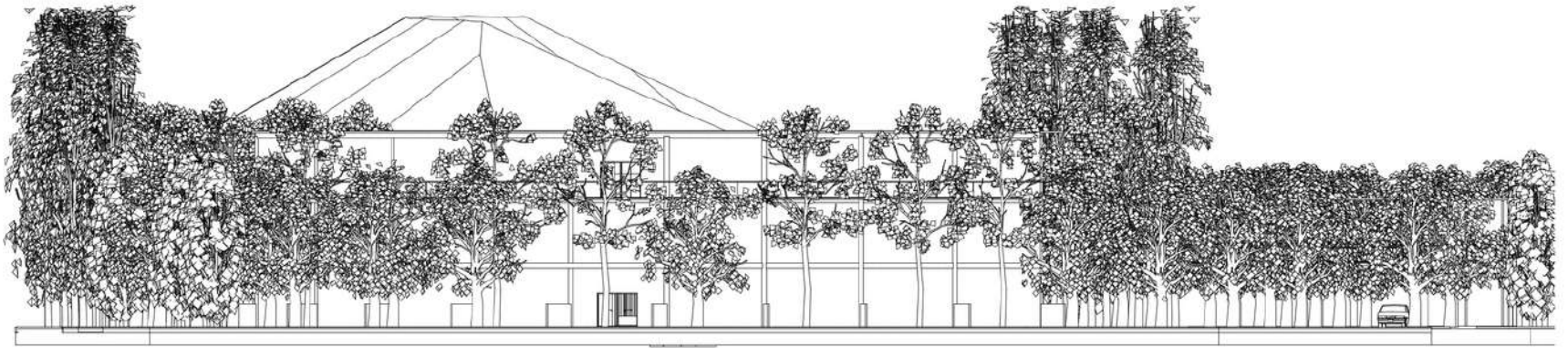
ELEVATIONS



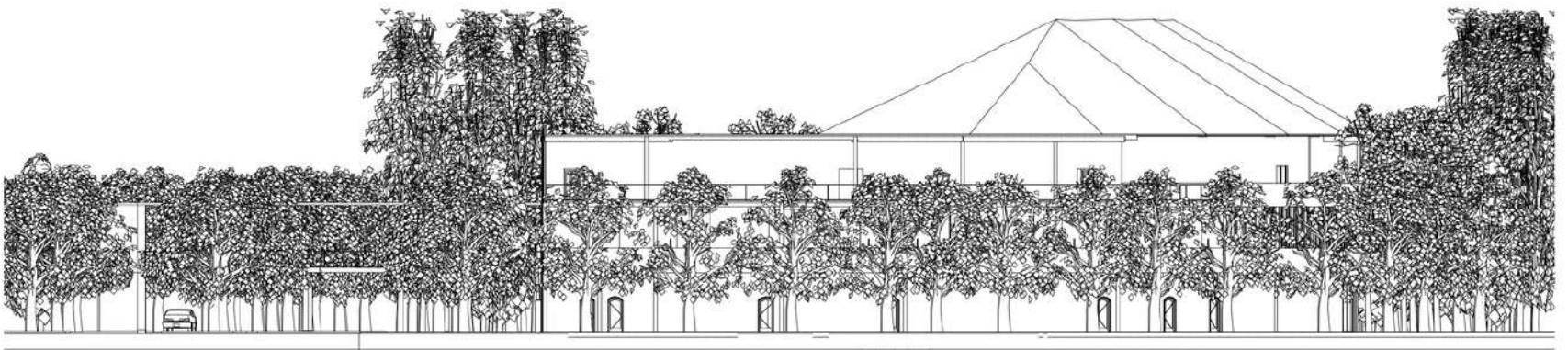
West Elevation



East Elevation



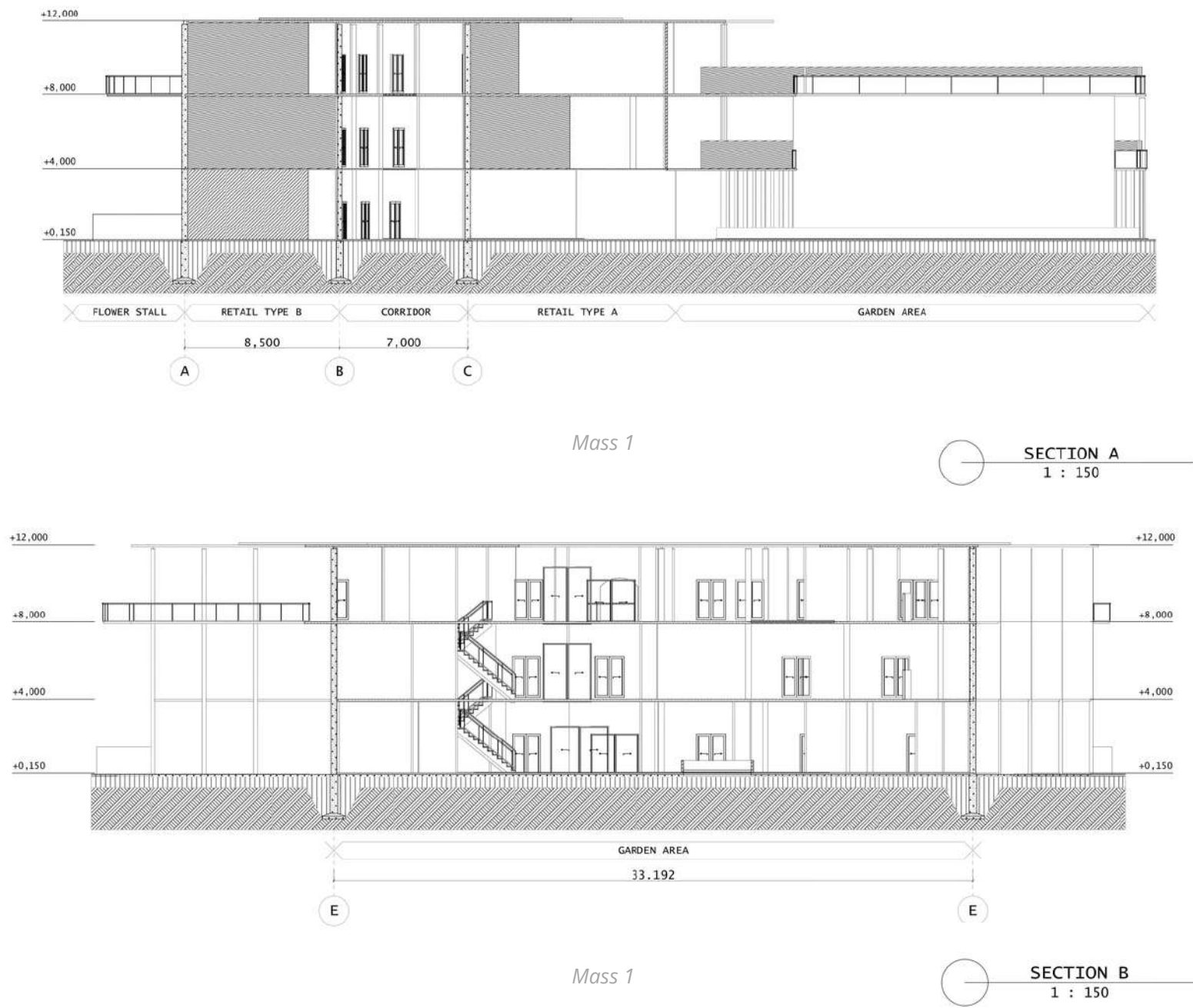
South Elevation

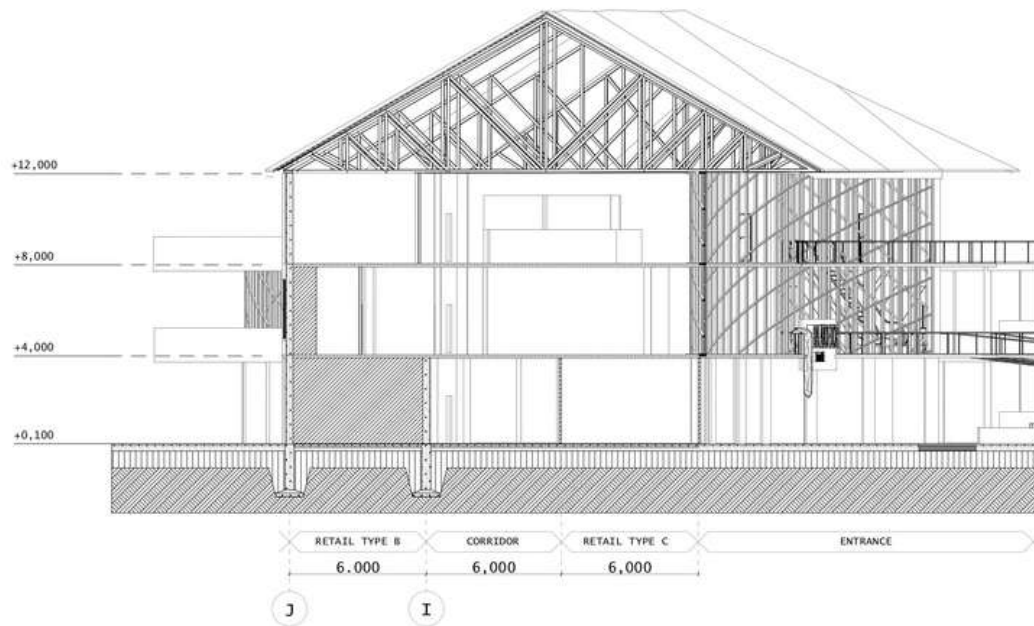


North Elevation

4.2.5 SECTIONS

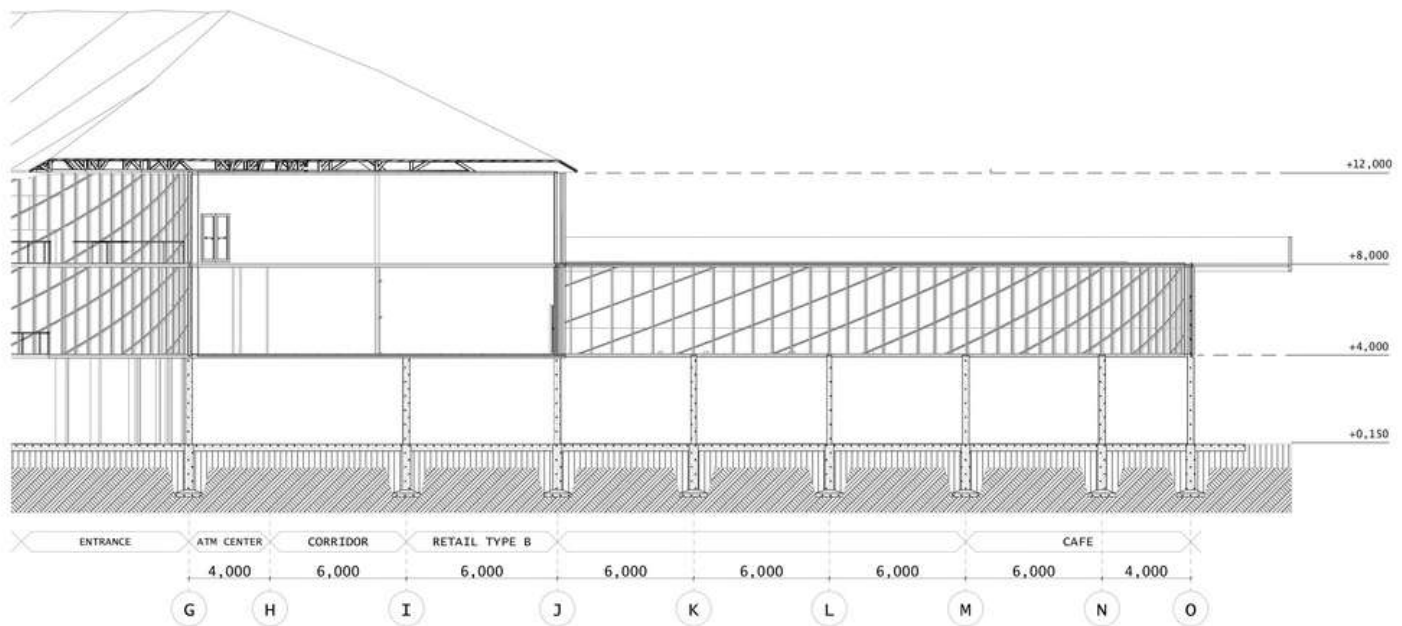
In this section, there is an image of the building cut based on the plan above. Combined with space connectivity, scale and proportion in the building so that the details of this building can be seen more clearly, further information can be found in the technical drawings. Because it has 3 building mass, so each mass is divided into 2 sections for each building





SECTION C
1 : 150

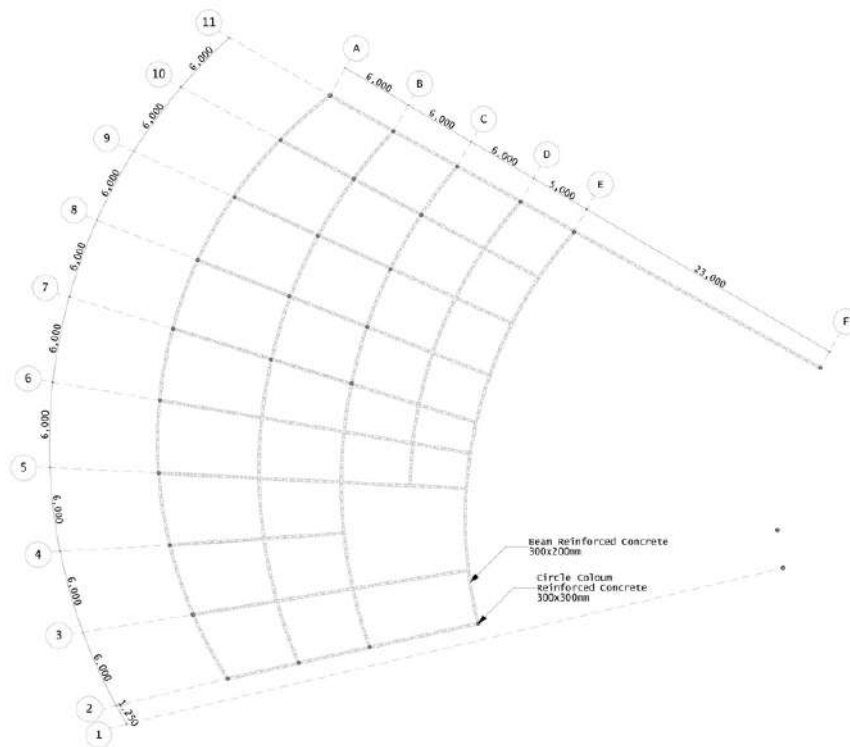
Mass 2



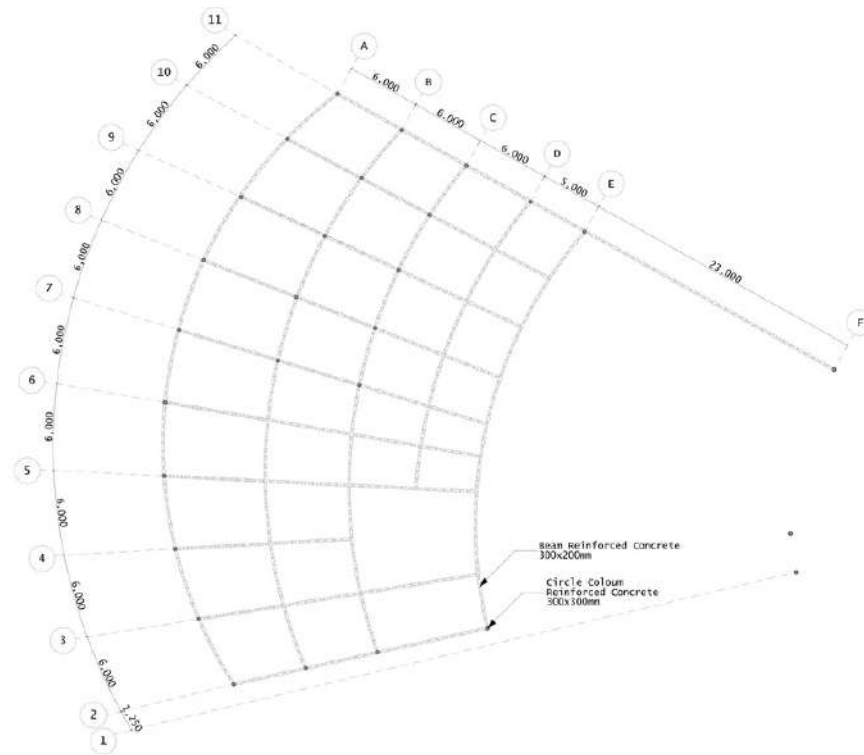
SECTION D
1 : 150

Mass 2

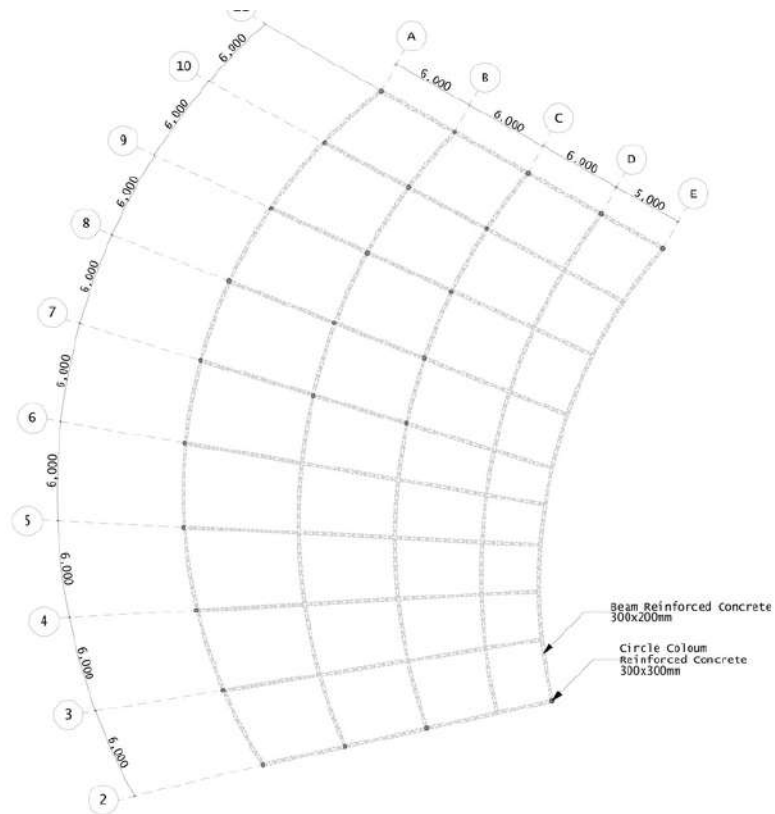
4.3.1 COLUMN AND BEAM STRUCTURE

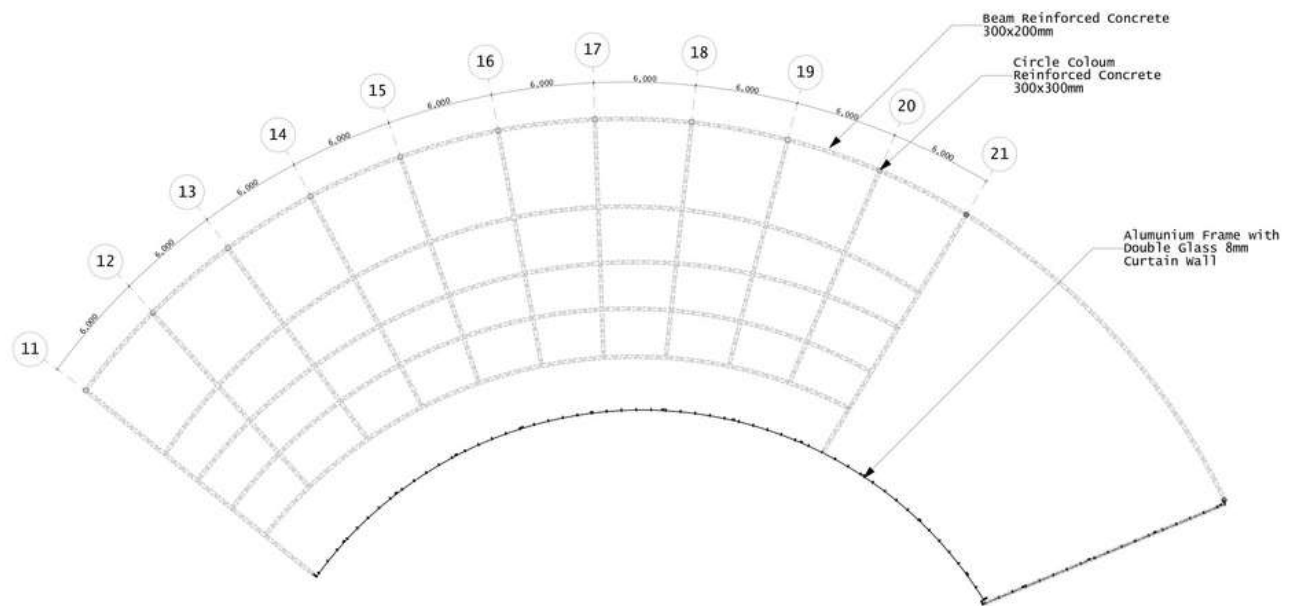


Final Architectural Design Studio

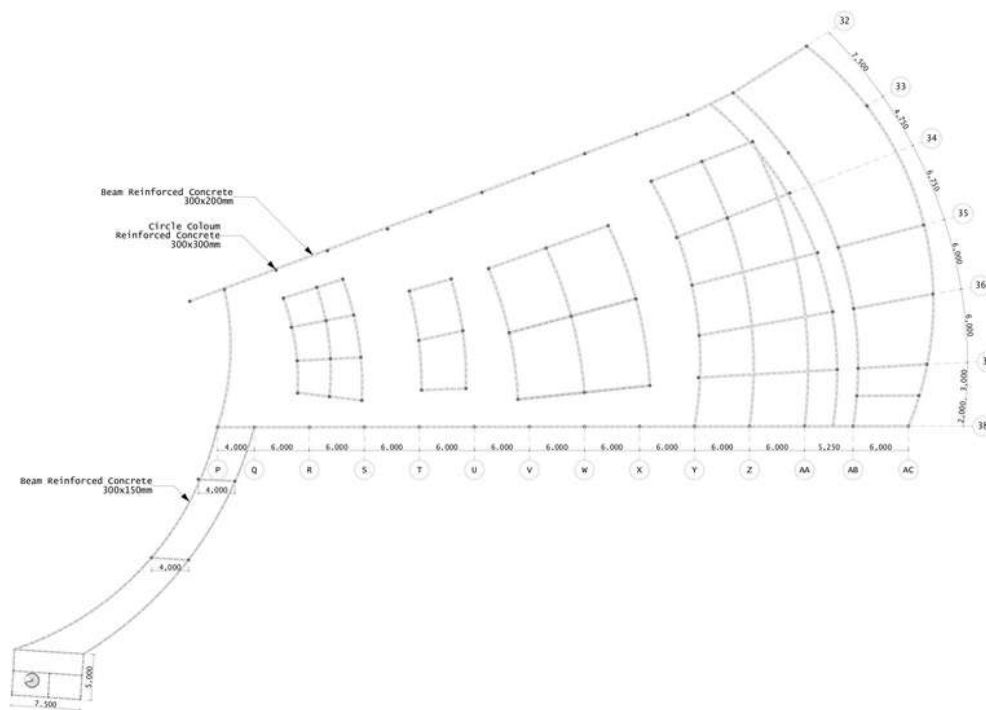


STR PLAN 1FL MASS 1
1 : 200

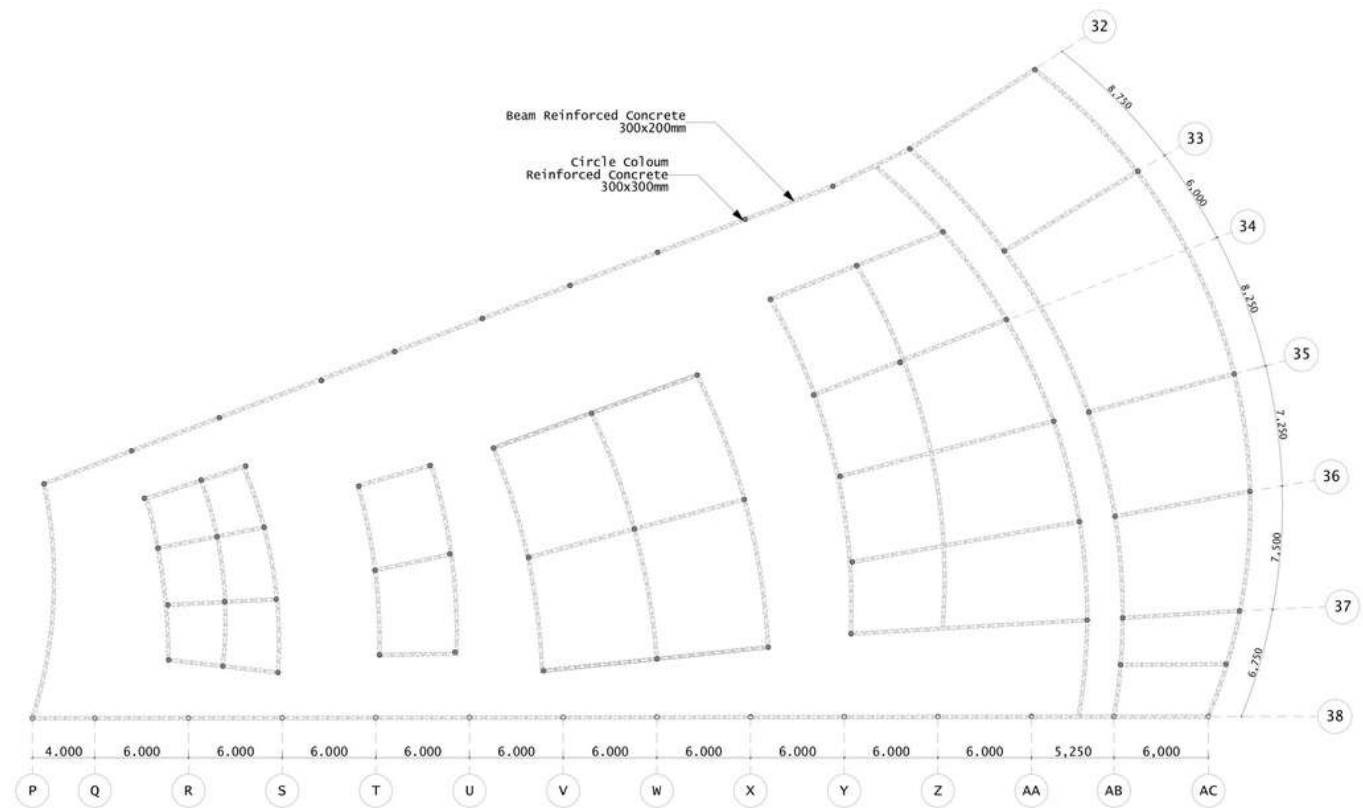




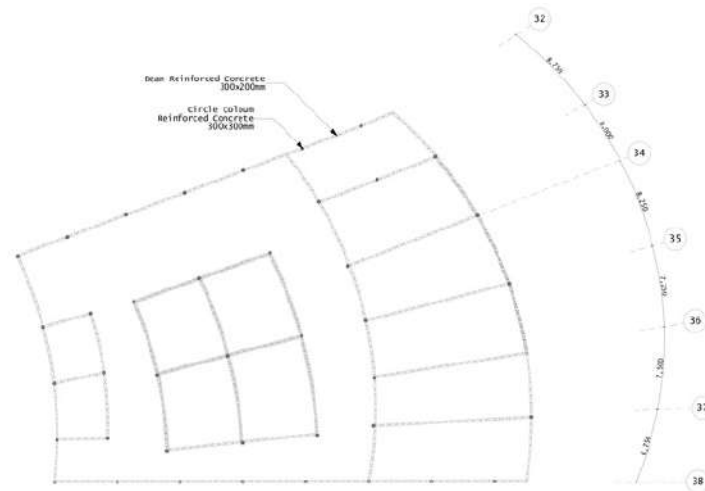
STR PLAN 3FL MASS 2
1 : 250



STR PLAN 1FL MASS 3
1 : 250



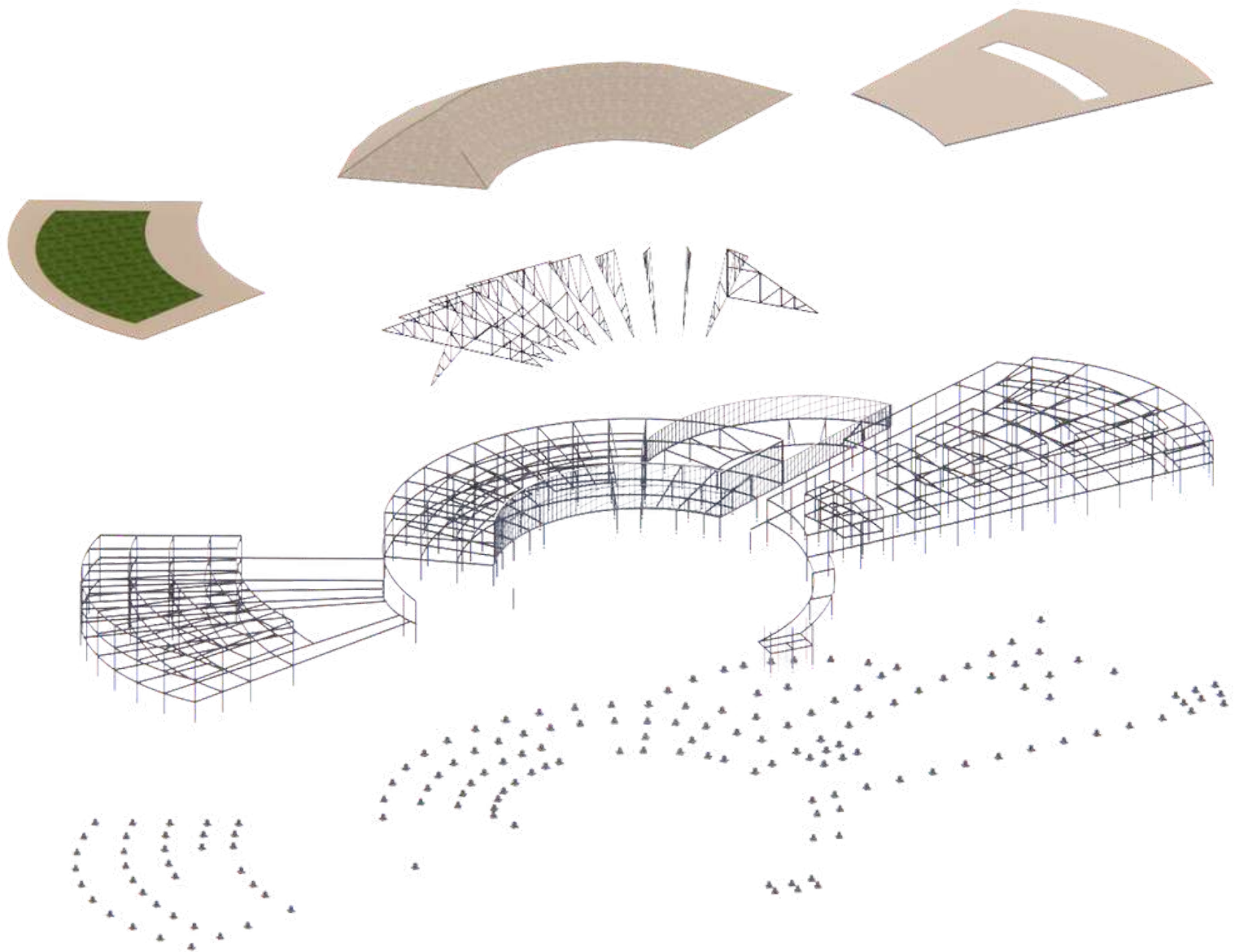
STR PLAN 2FL MASS 3
1 : 250



STR PLAN 3FL MASS 3
1 : 250

4.3.2 Structure

The structure of this central building uses a rigid reinforced concrete frame. The structural module has dimensions of 6000 mm x 6000 mm. However, at some points, such as the vertical circulation area, the distance can reach more than 6000mm. The structure is enough to withstand the weight of a 3-story building. The dimensions of the main column are 350 mm x 350 mm. Beam dimensions 250mm x 500mm. Using foundation footplate to hold 3 floors with a curve shape



4.3.3 Exploded Axonometry



4.4 CONCEPT & SCHEMATIC LANDSCAPE PLAN

Landscape Plan



4.5 CONCEPT & SCHEMATIC DESIGN OF BUILDING INTERIOR AND EXTERIOR



Exterior



Interior

Providing a garden restaurant as a form of biophilic concept that was placed during the second building mass in the roof top area so that visitors can carry out activities on the upper floor by seeking natural lighting and natural ventilation. Tree planting at the garden restaurant is made using light plants with various colorful plants. to adjust the restaurant area



Interior

In food and craft retail, it is more closed but still gets light from the outside because on the inside it uses some plant and garden accents



Interior

Access to the atrium entrance lobby which has a wide area to make it easier for visitors to enter the shopping center area with natural light coming in so that it makes the area feel wider, besides this area can be used for exhibitions



Atrium, Lobby, Entrance

Interior

Retail during the first building had many openings because they would sell ornamental plants so that the number of gardens in this area still made it a rentable space

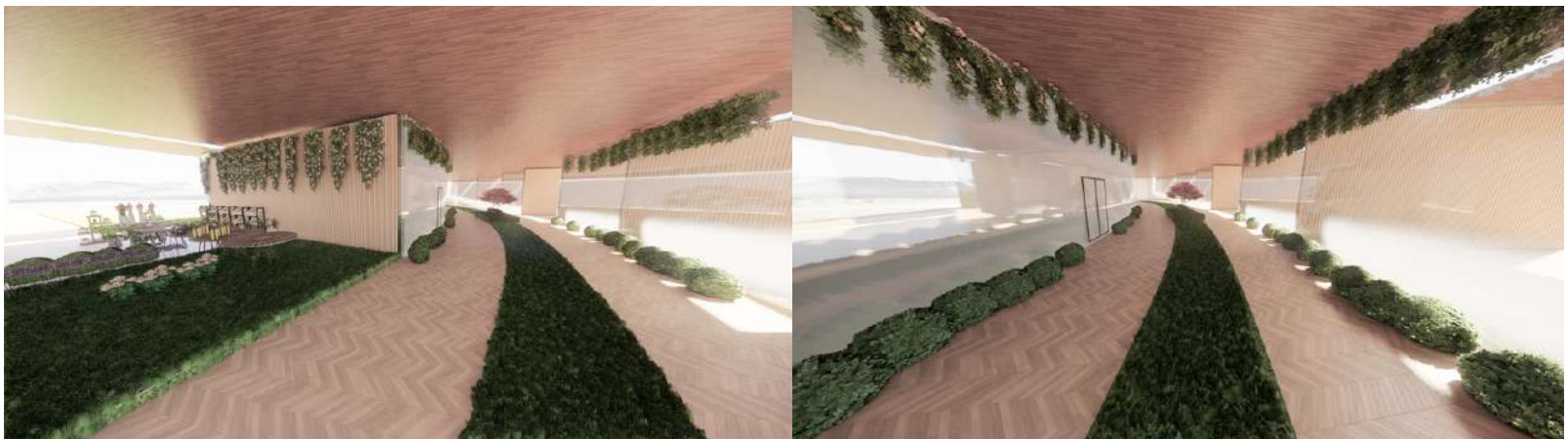


Retail for Luxury Plants

access to a shopping center which has wide corridors and also the use of a garden in each building to incorporate biophilic concepts into the building so that humans and plants can blend together



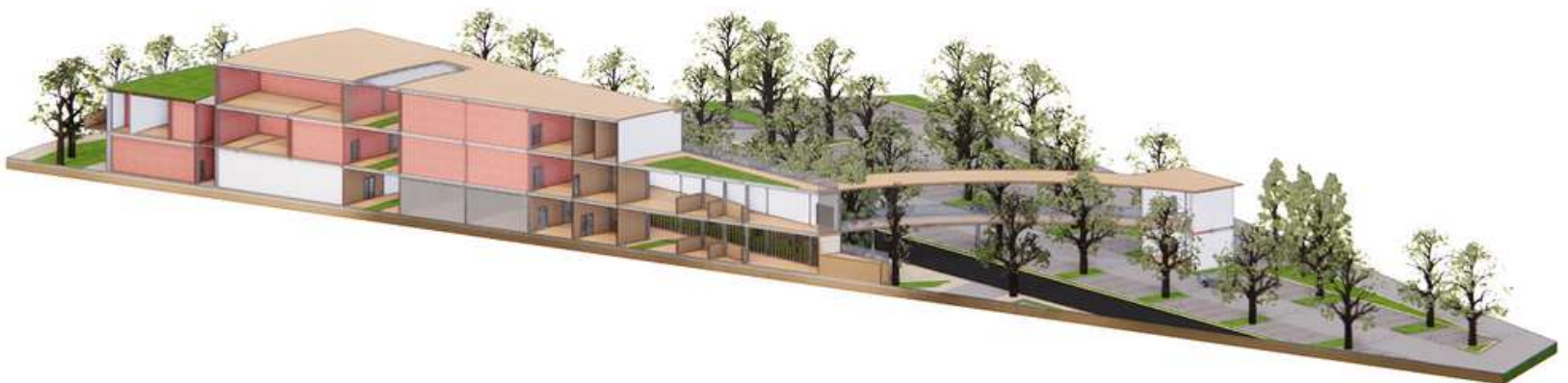
Corridor Building Mass 2 (Main Lobby, Atrium)



Corridor Building Mass 1 (Luxury Plants)

4.6 CONCEPT & BUILDING ENVELOPE DESIGN

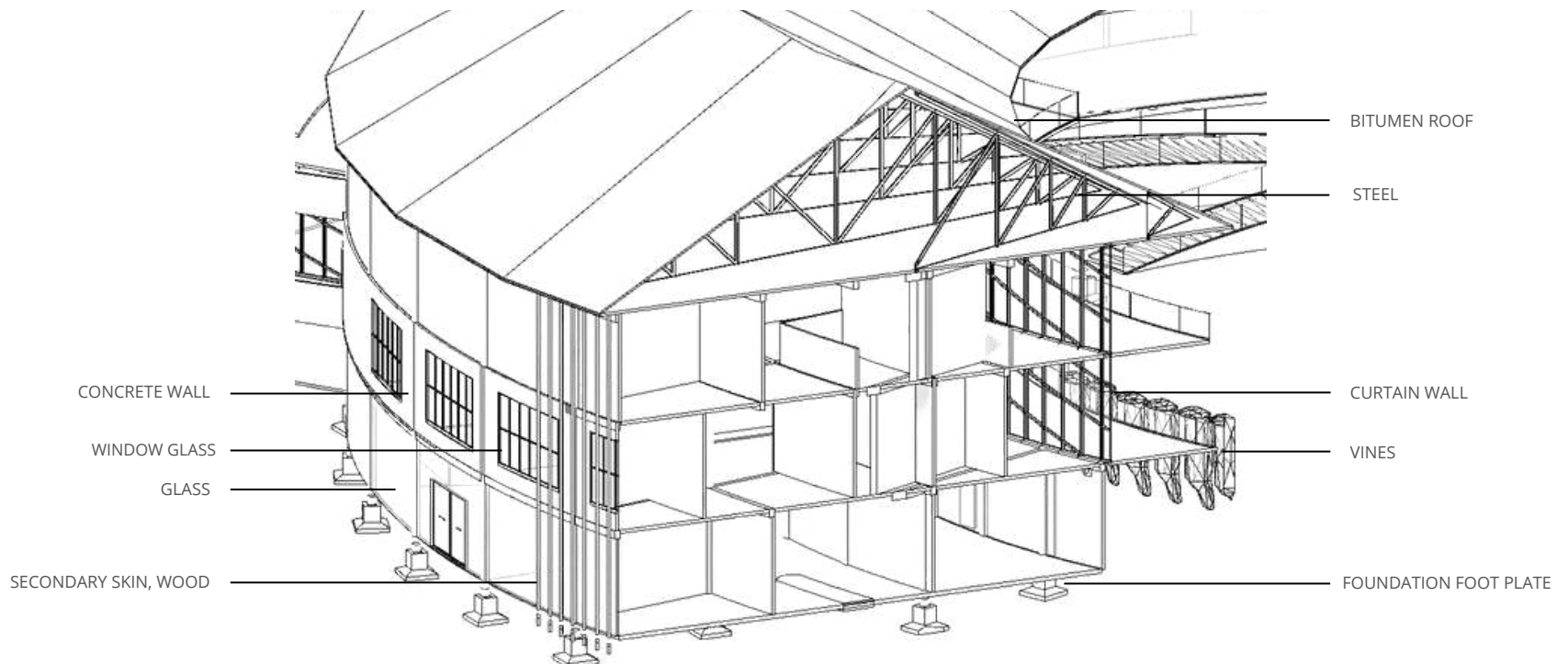
The shopping center envelope designed using concrete as the main material of walls covered with wood, using curtain wall on the main building, and there's also skylight. Not only using the rigid material but the building also using secondary skin on every building to make a building have a circulation to enter the building



4.7 CONCEPT & SCHEMATIC ARCHITECTURAL DETAIL

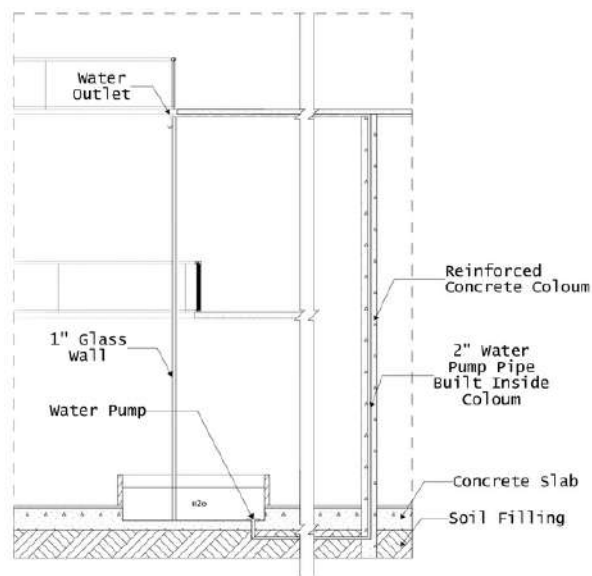
4.7.1 Building Envelope Detail

the building envelope shows the use of curtain walls in buildings with a size of 3 mm glass which then uses a roof with bitumen material. on the west side it uses glass which is then coated with secondary skin so that it doesn't get too hot when inside, besides that, vines are also used to make it more shady. The use of many and wide windows is also found in this building

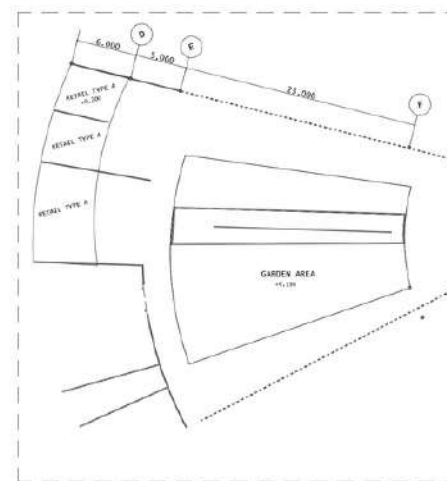


4.7.2 Water Wall Detail

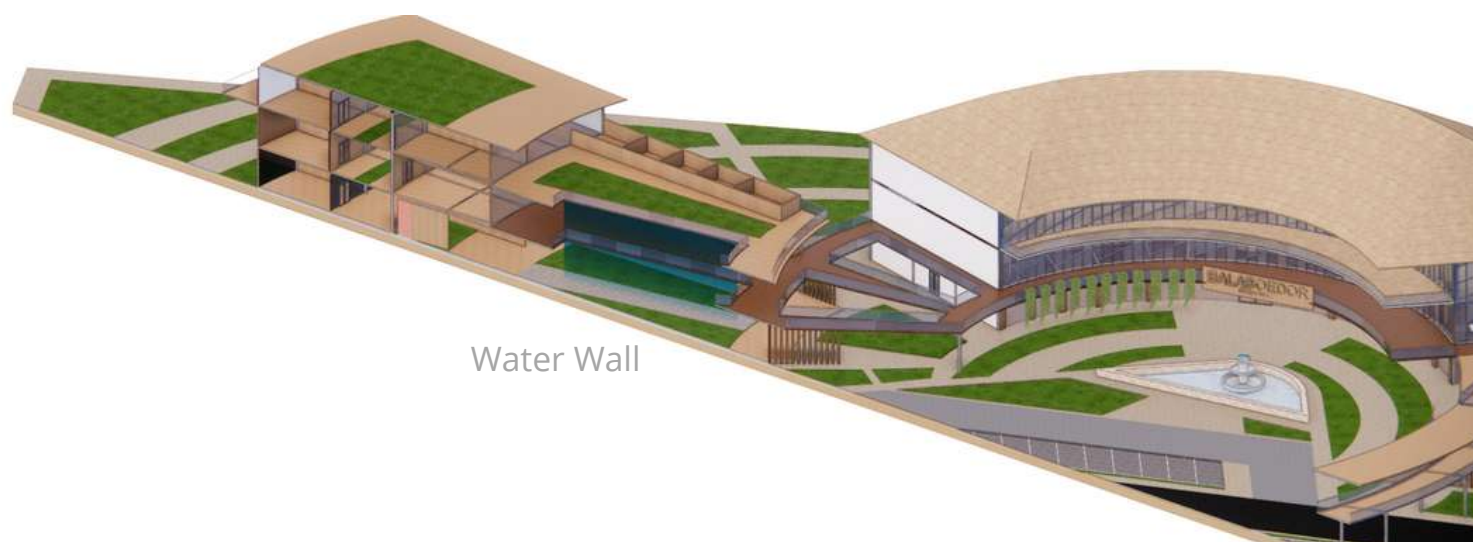
The use of a water wall in this building mass is to form a biophilic presence in the building so that it has a presence of water with a height of 8 meters so that water is felt in the building which is in the front garden and has outdoor space near the retail area.



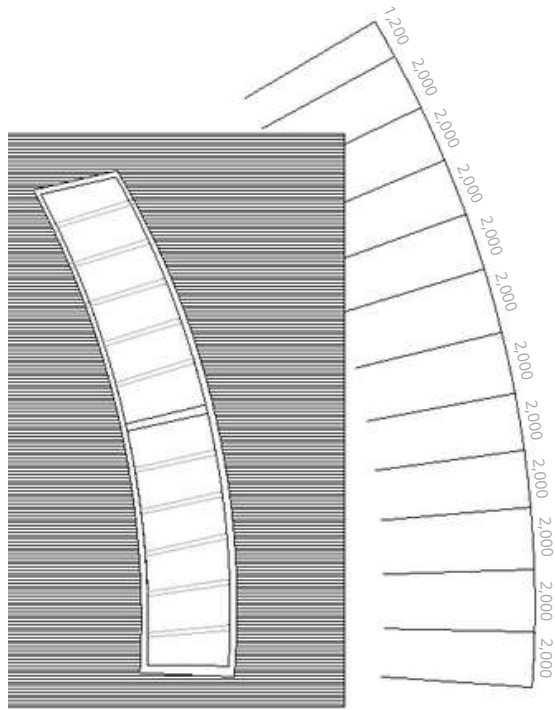
DETAIL GARDEN POOL
1 : 50



GARDEN AREA PLAN
1 : 500

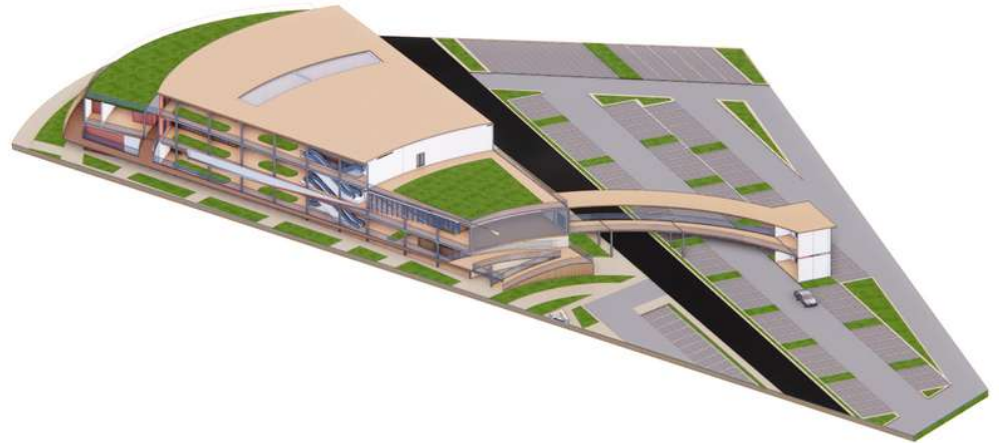


4.7.3 Skylight Detail



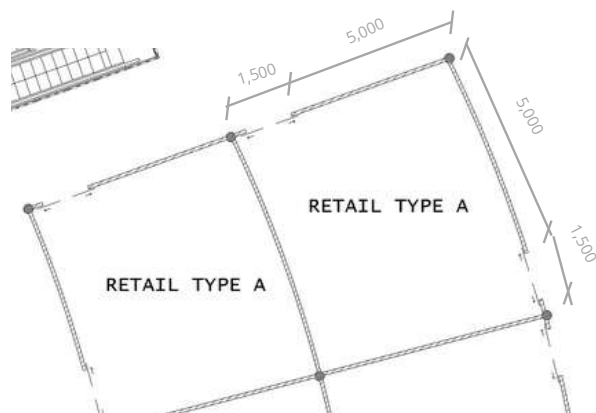
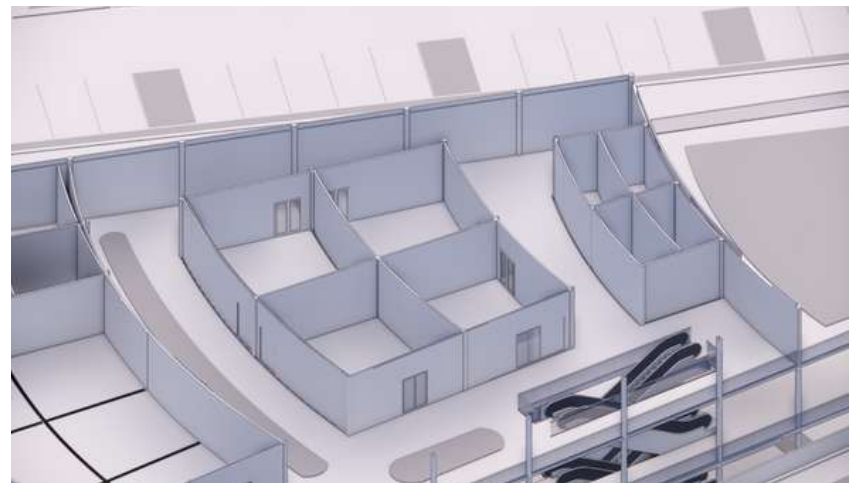
The use of skylights in buildings as a presence of natural lighting so that it looks healthier in buildings because it has natural lighting that enters every room in this building.

Skylight

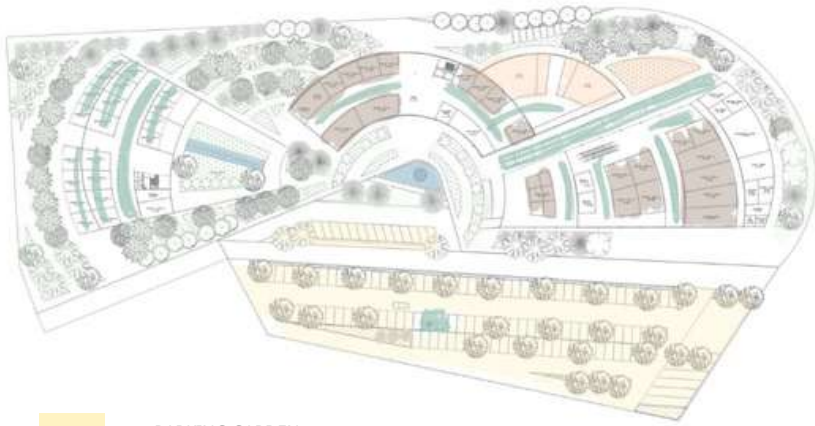


4.7.4 Retail

This use at retail A has two doors that can be passed by disabilities because it has an adequate door width, 2 accesses are made to make it easier for visitors to move from any direction

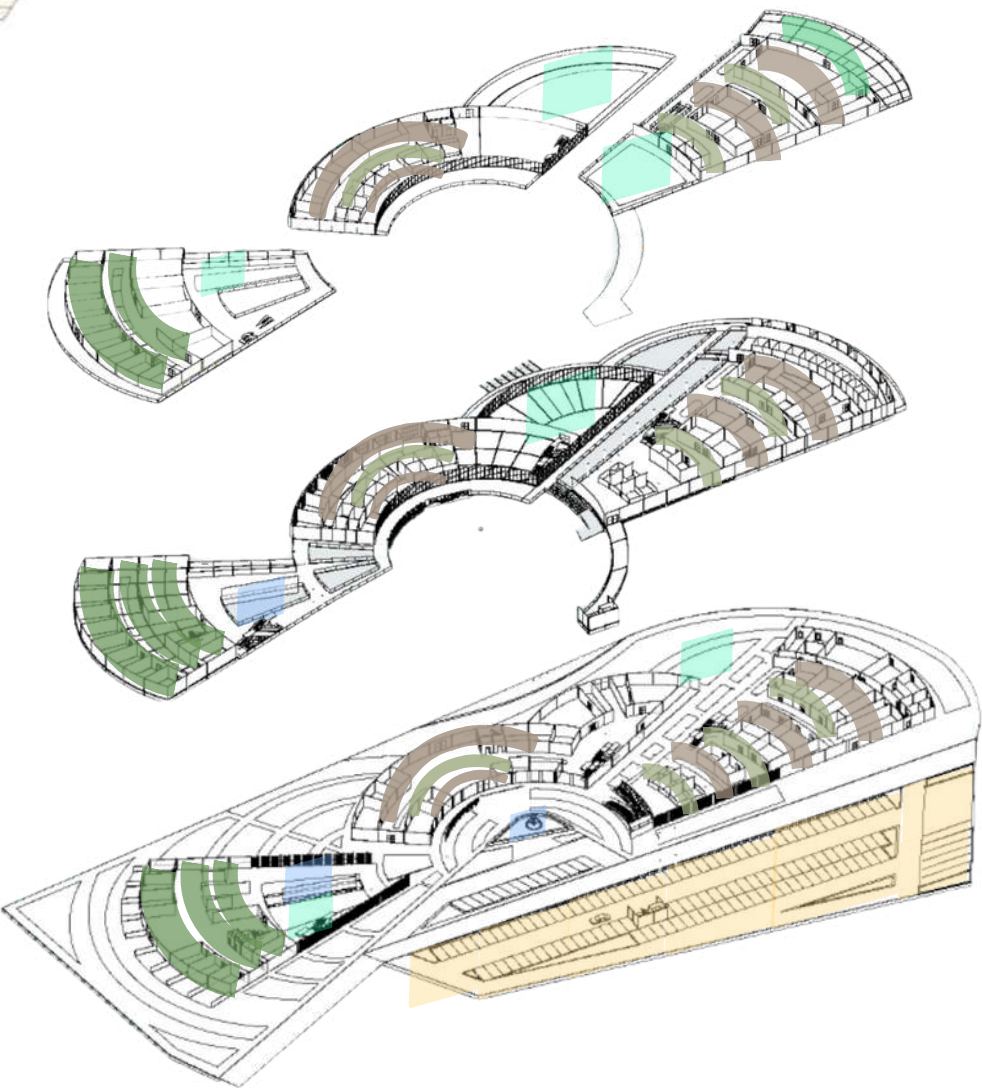


4.8 CONCEPT & SCHEMATIC BIOPHILIC



The use of biophilic in this building is located from the parking area which has many plants, entering the building the presence of water can be seen from the presence of a fountain and also the presence of a water wall. Besides that, the retail corridor has plant accents on the edges so that it still maximizes rentalable space and also combines biophilic in the building.

- PARKING GARDEN
- GARDEN CORRIDOR
- PRESENCE OF WATER
- GARDEN
- RETAIL GARDEN



PARKING GARDEN



FLOWER RETAIL



RESTAURANT GARDEN



CRAFT RETAIL



FOOD RETAIL

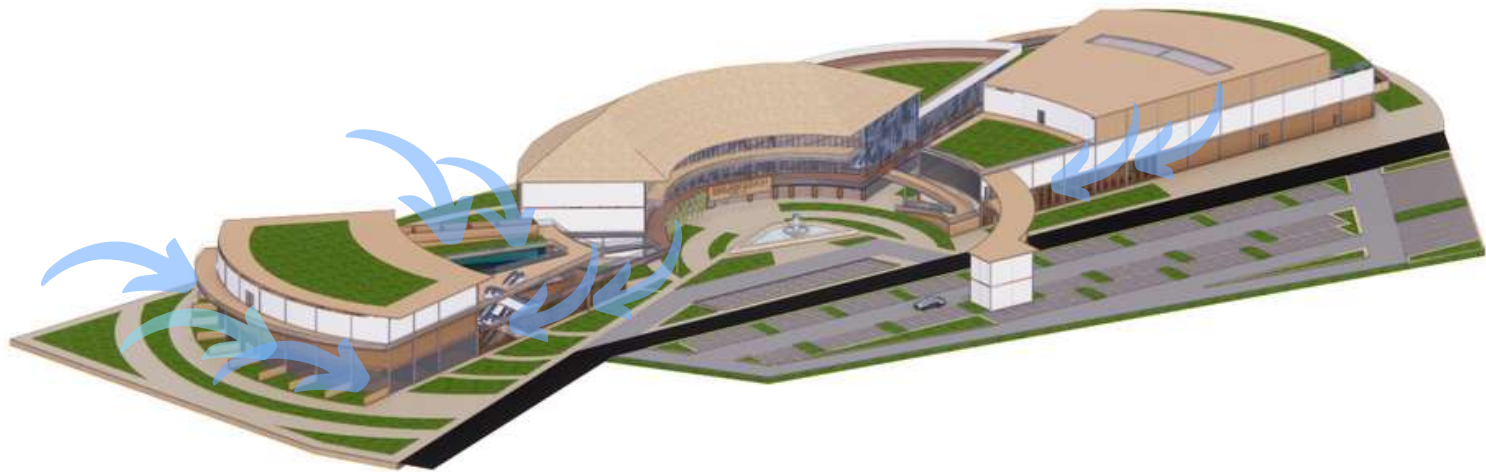


ATRIUM

4.9 CONCEPT & BUILDING SAFETY AND BARRIER FREE UTILITY SYSTEM DESIGN

4.9.1 Natural Ventilation Scheme

The natural ventilation scheme in this design has almost the same principle as natural lighting, namely using secondary skin on the outside but on the mass 3 because it is more open so that more natural air enters inside. Having some gaps on the east and south sides of the building will provide room for thermal variability because it will increase the potential for wind to enter the building.



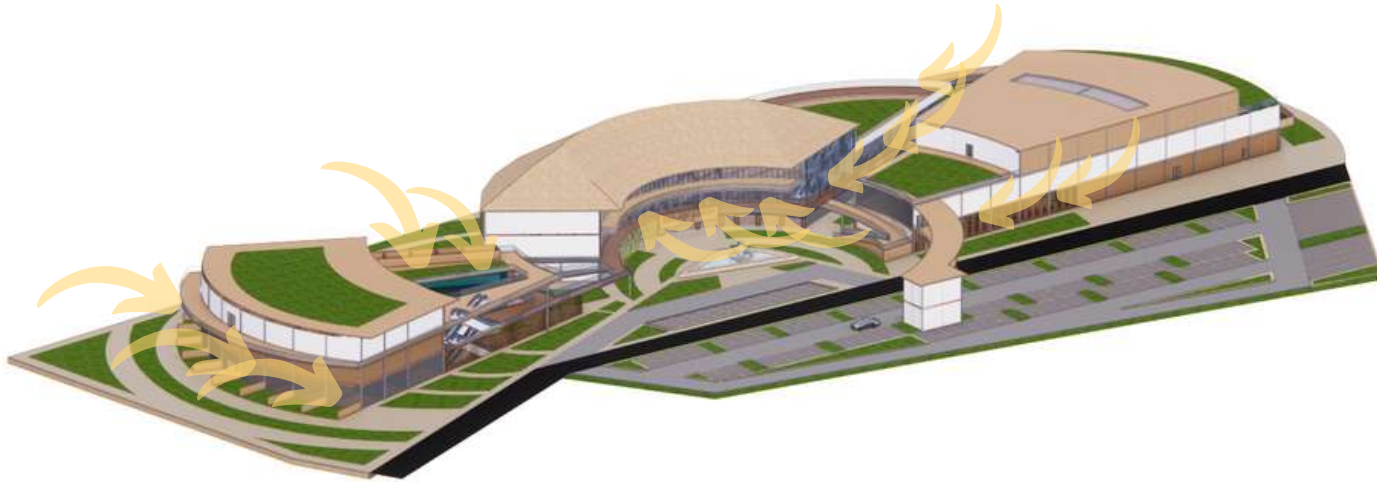
Natural Ventilation Scheme Whole Building



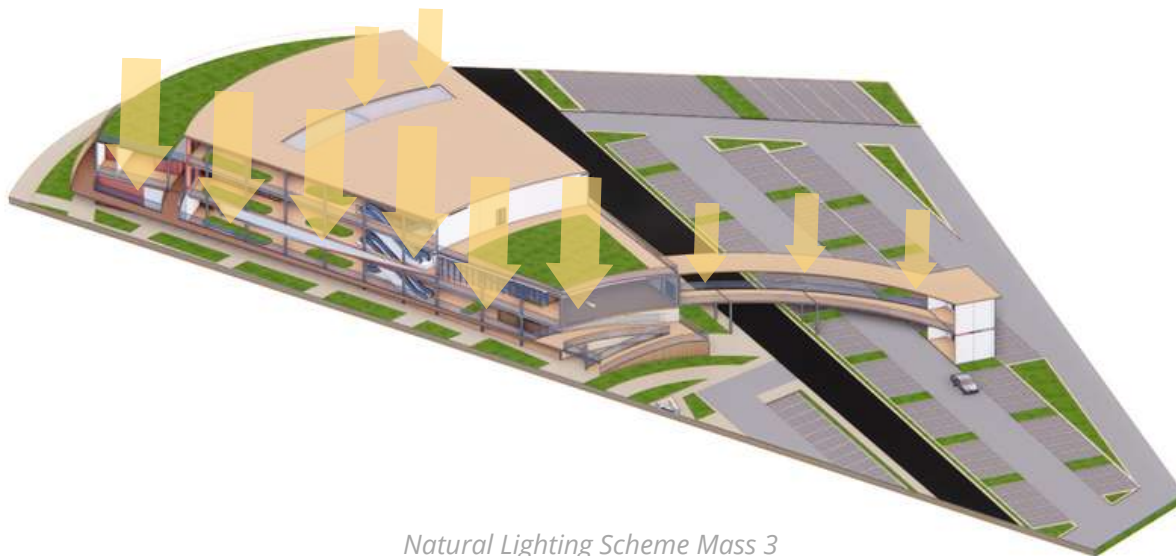
Natural Ventilation Scheme Mass 3

4.9.2 Natural Lighting Scheme

The scheme for the inclusion of natural lighting or natural lighting in the design of this shopping center is more dominant through open areas and also many openings because it has large windows, and in mass 3 has a more open area because it directly uses natural light. The cavity on the vertical side is also an entry area for natural lighting. The existence of a garden area that requires more open areas so that it has lots of access to natural lighting.



Natural Lighting Scheme Whole Building

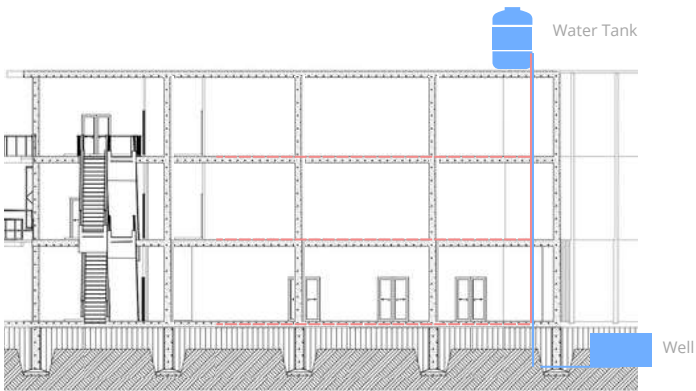
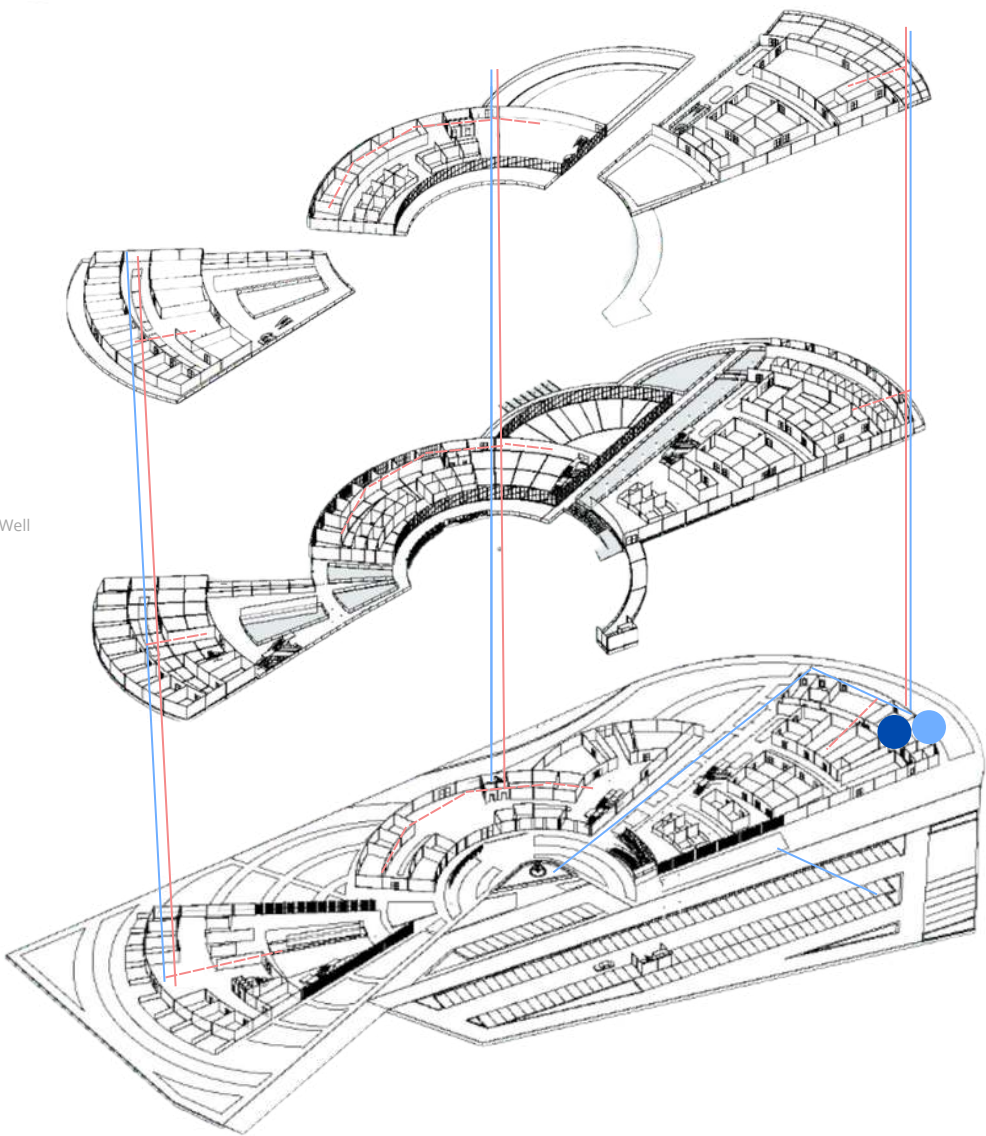


Natural Lighting Scheme Mass 3

4.9.3 Clean Water Systems



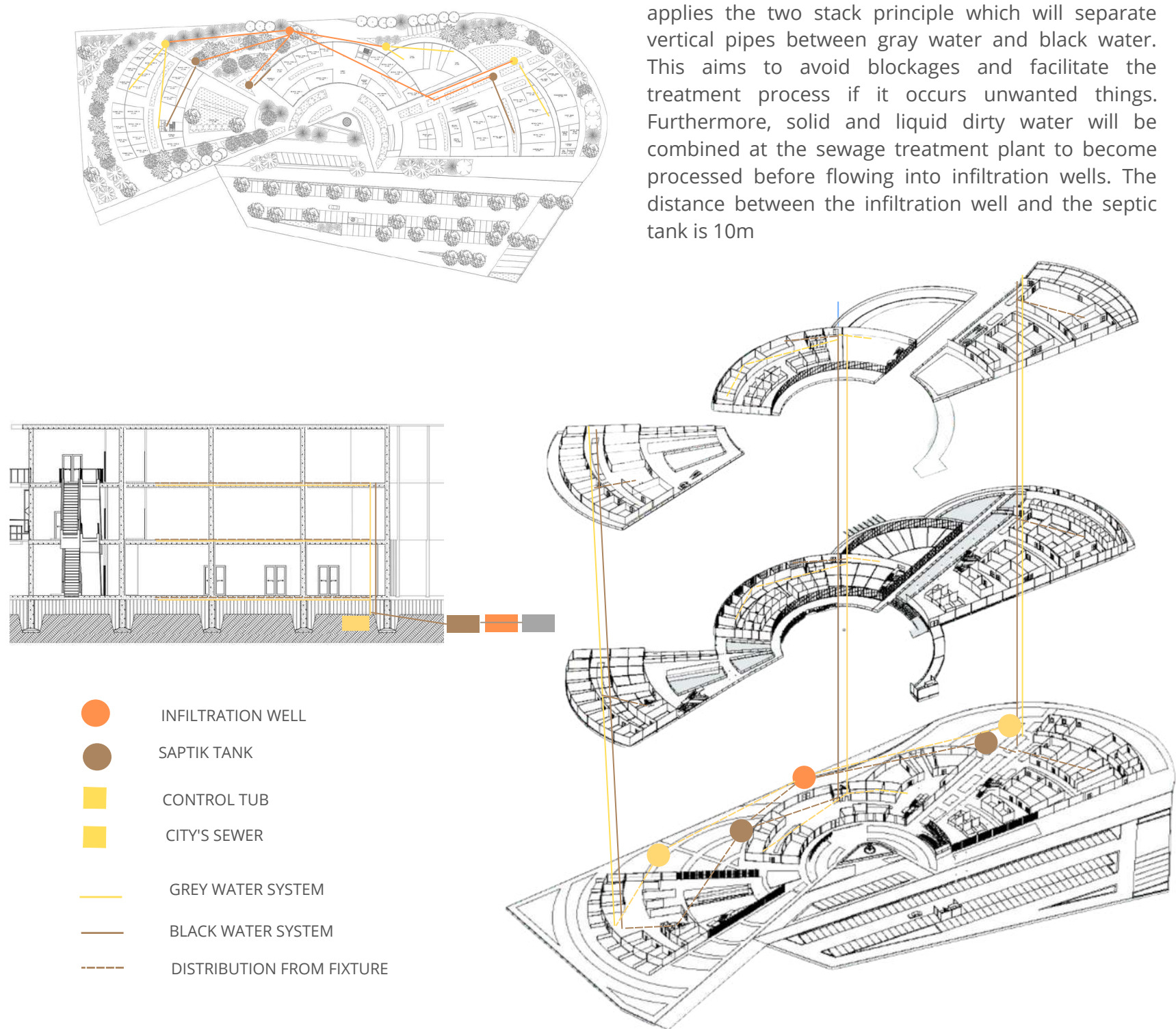
In the design of this shopping center using clean water sources from PDAM and wells, from groundwater tanks which are pumped to the roof tank, and from the roof tank to the bottom feed to the rooms that need water. Have a tank in each building because this building has 3 forms of mass so that there is a roof tank for each building



- WELL
- SPRINKLER GARDEN
- WATER PUMP ROOM
- POOL
- PIPE GARDEN
- DOWN FEED PIPE
- UP FEED PIPE
- - - DISTRIBUTION UPPER TO FIXTURE

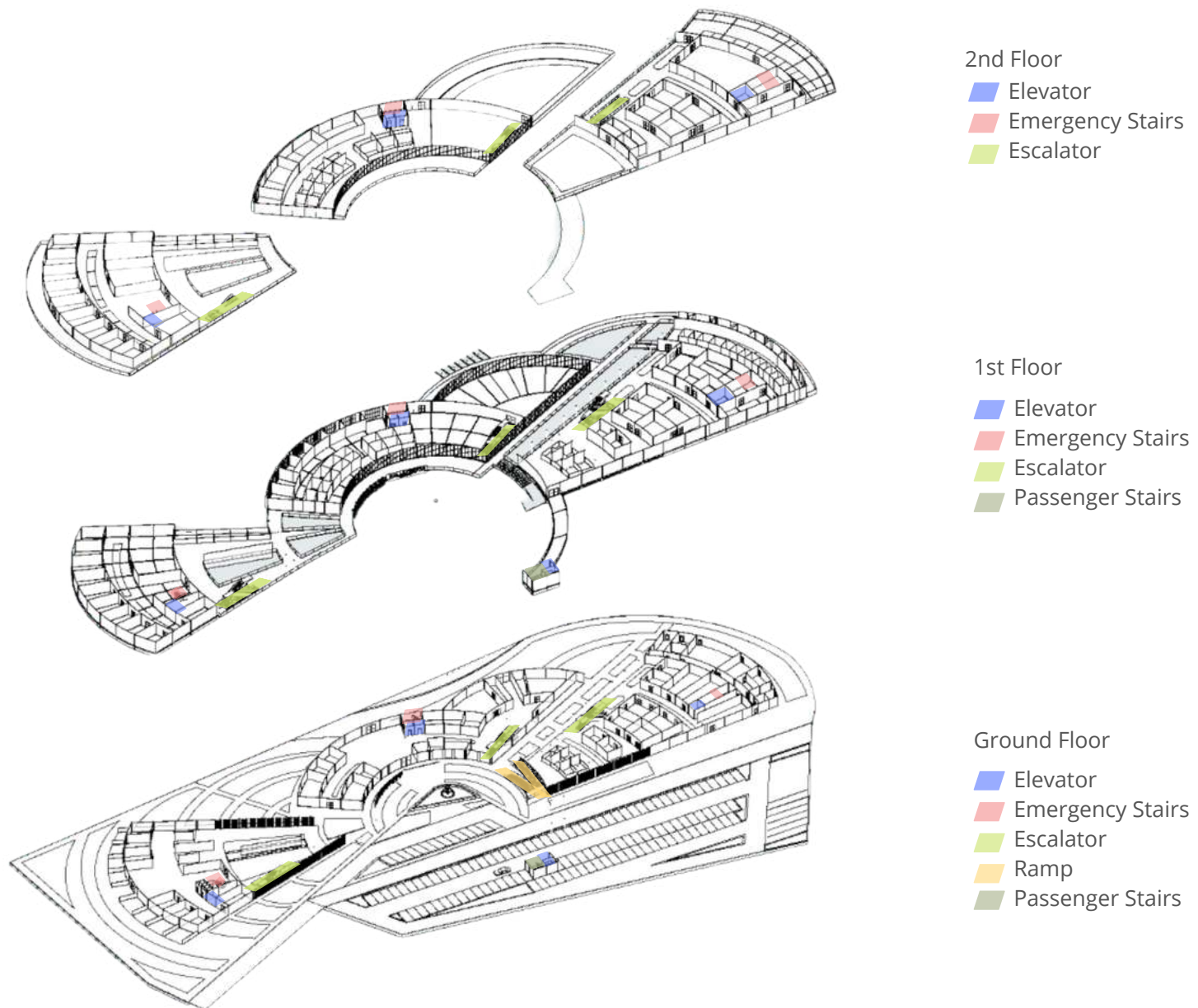
4.9.4 Grey Water Systems

The dirty water utility system in this shopping center applies the two stack principle which will separate vertical pipes between gray water and black water. This aims to avoid blockages and facilitate the treatment process if it occurs unwanted things. Furthermore, solid and liquid dirty water will be combined at the sewage treatment plant to become processed before flowing into infiltration wells. The distance between the infiltration well and the septic tank is 10m



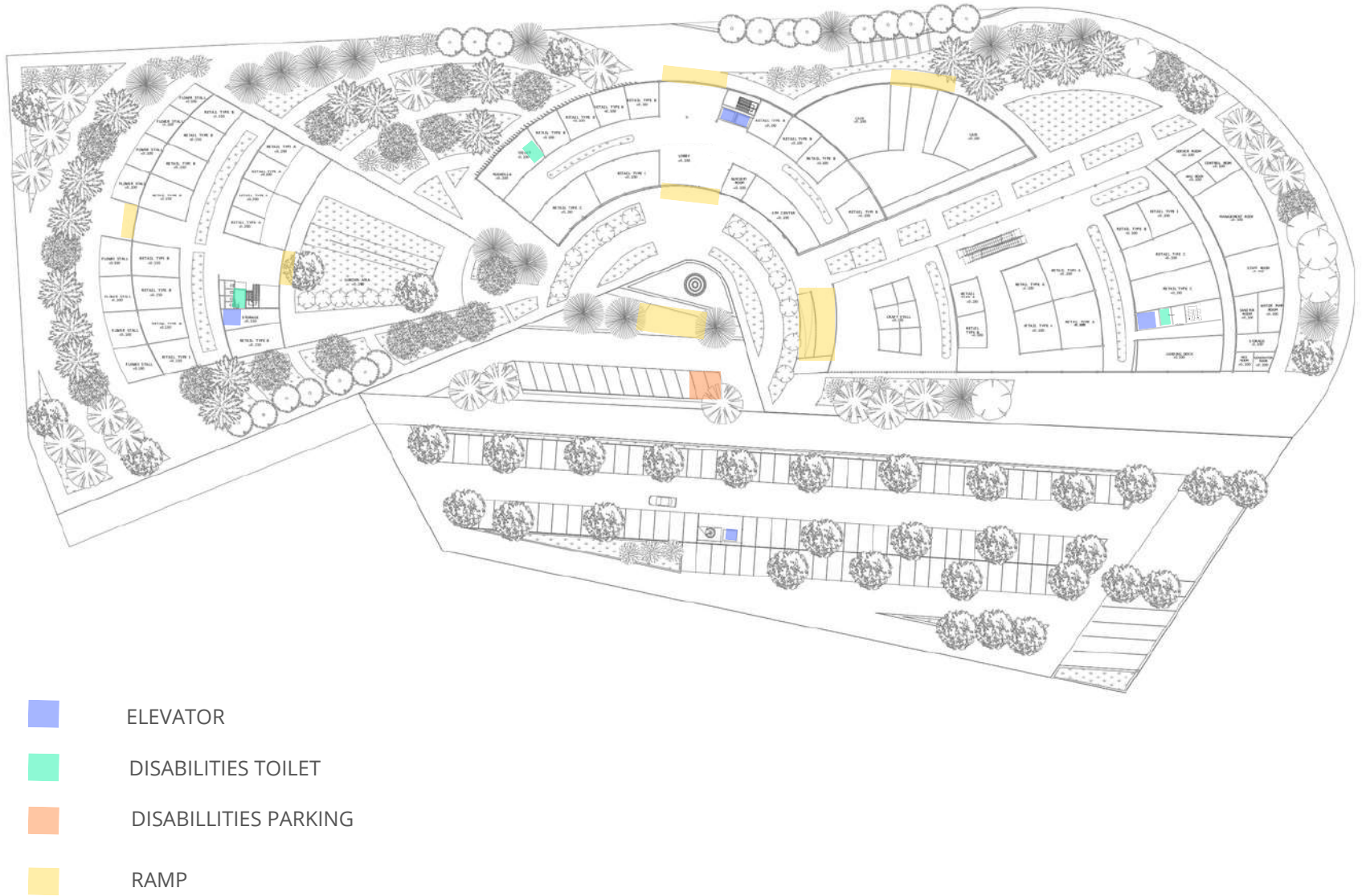
4.9.5 Vertical Transportation

Because it has a concept garden walk concept so that vertical transportation in this shopping center has elevators, escalators, emergency stairs also ramp for the disabilities, so this building is safe for people with disabilities because it has a ramp and also the elevator makes it easy for them to access up and down, each building has an elevator and escalator that makes it easy for visitors to move around



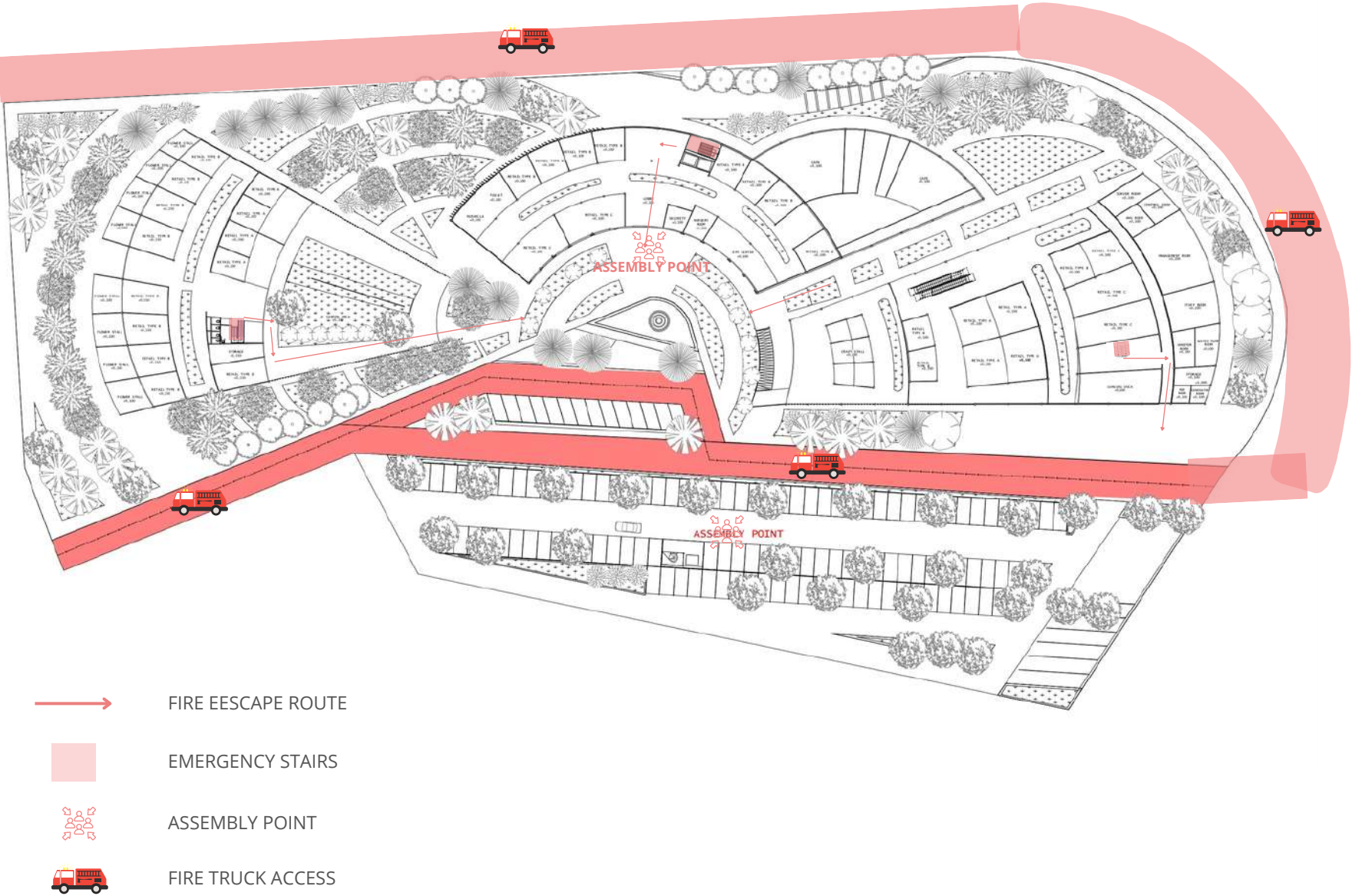
4.9.6 Barrier Free Design

This plan can be used by all people including people with disabilities. There are disabled toilets in an easy-to-reach location. There are also disabled parking located in strategic place and guiding block on outside pavement. It is near to the building, also there's elevator as a vertical access to going up and down by people with disabilities



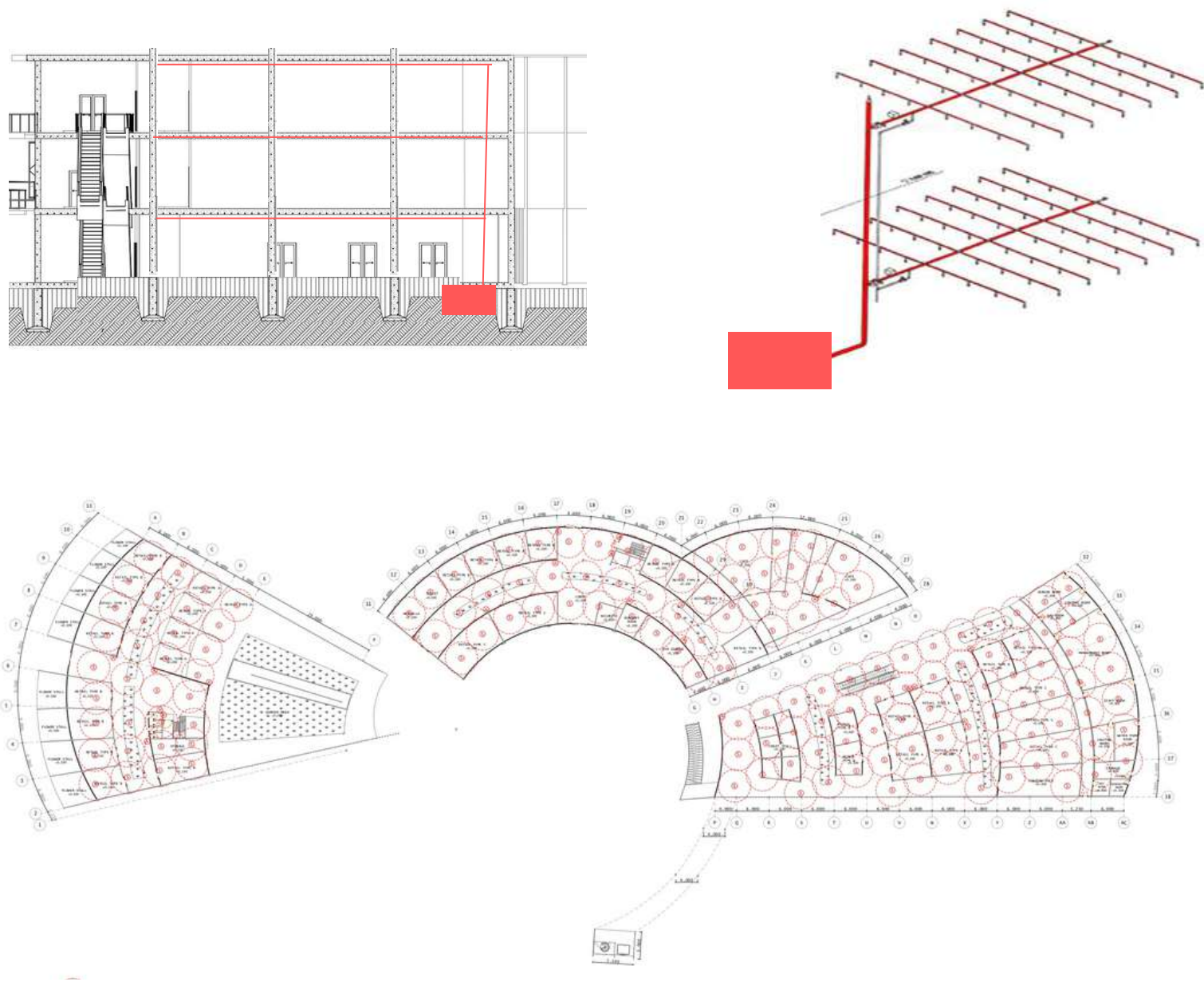
4.9.7 Building Safety

Fire Escape is located at 1 point, which is at the end of the parking building. This emergency stairs has also been directly connected to the assembly point, so visitors can go directly to a safe place when an emergency situation occurs, then it can be reachable by fire fighter truck

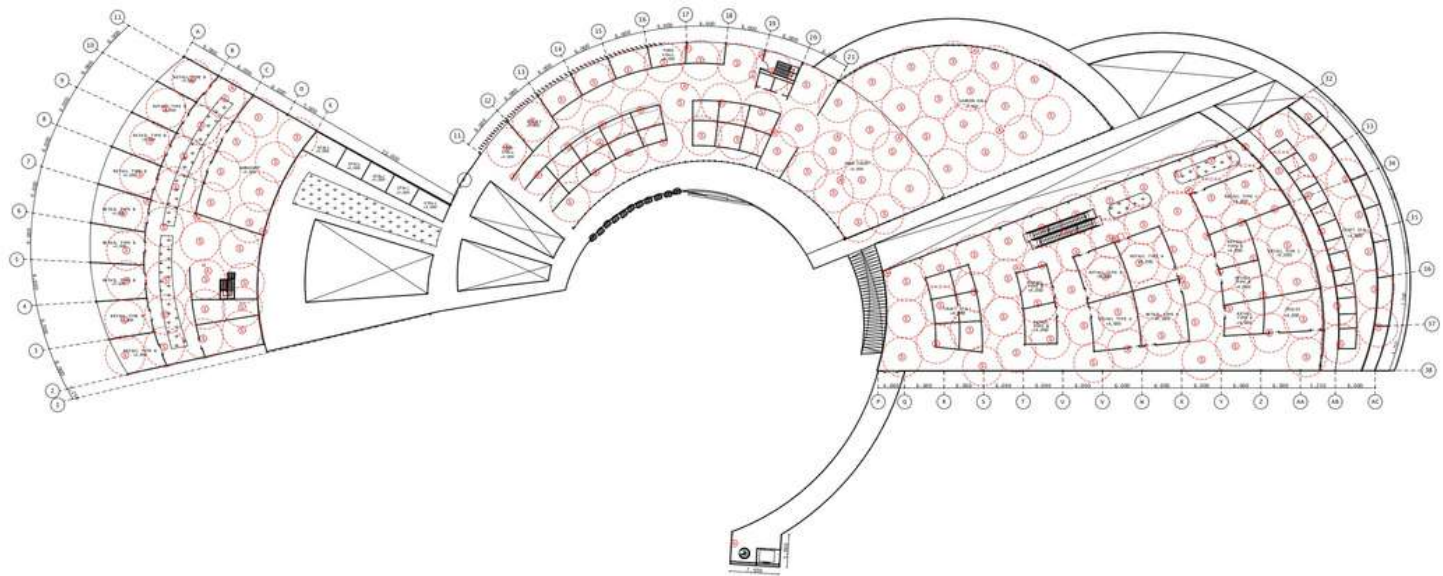


4.9.8 Fire Protection

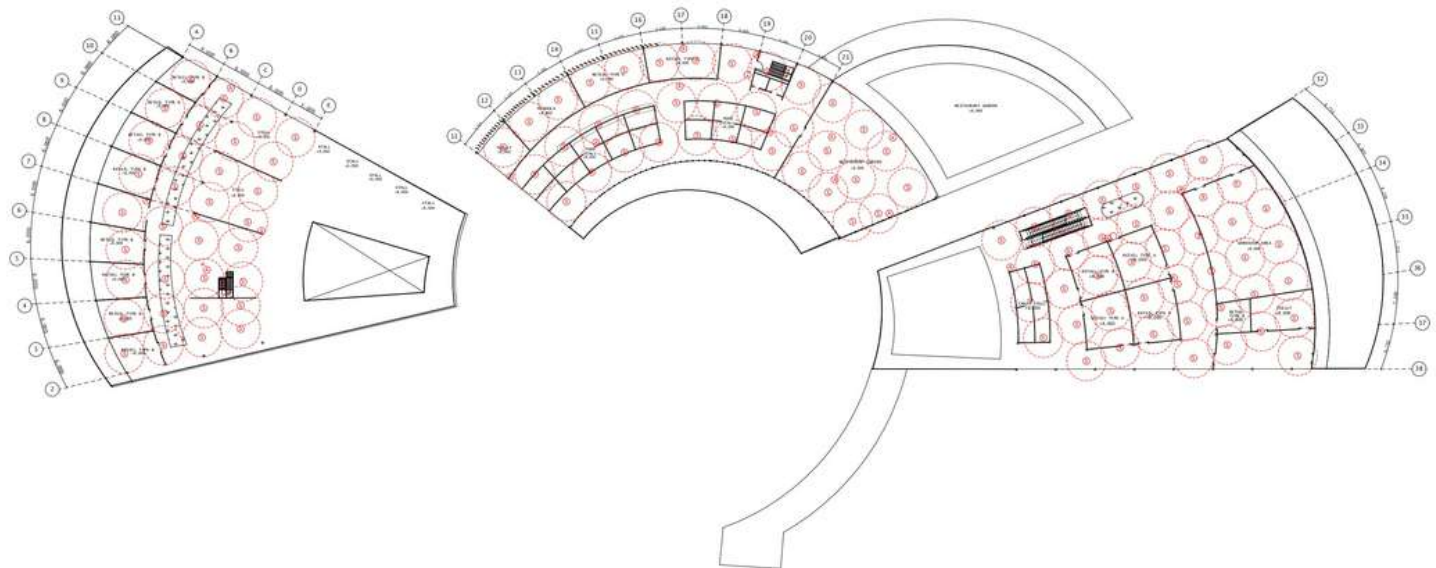
In this fire protection, tools are used such as hydrant boxes, fire extinguishers, and also the use of sprinklers because they have a fairly large building so that the use of sprinklers is very necessary. Using sprinkler with type of water pipe because using this type can let out water without waiting for hot air. so that the source of the fire will not have time to spread too widely.



Fire Protection Ground Floor



Fire Protection 1st Floor



Fire Protection 2nd Floor

- S Sprinkler
- A APAR
- H Hydrant Box

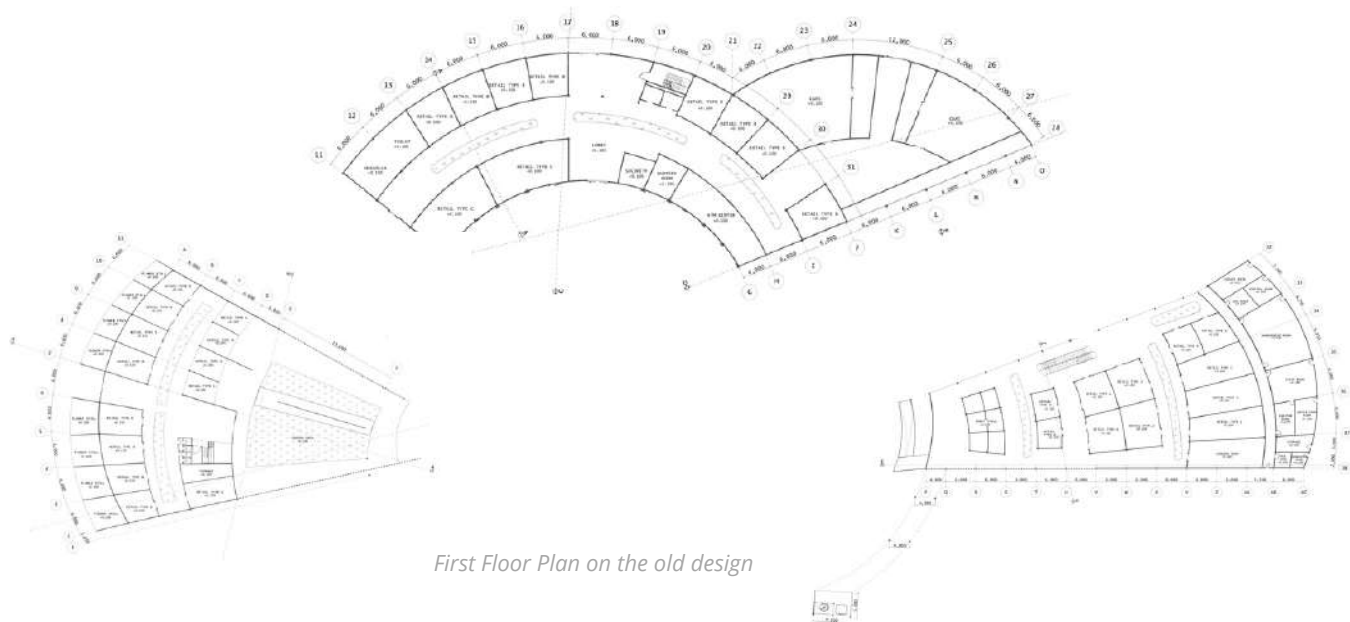
05 DESIGN REFLECTION

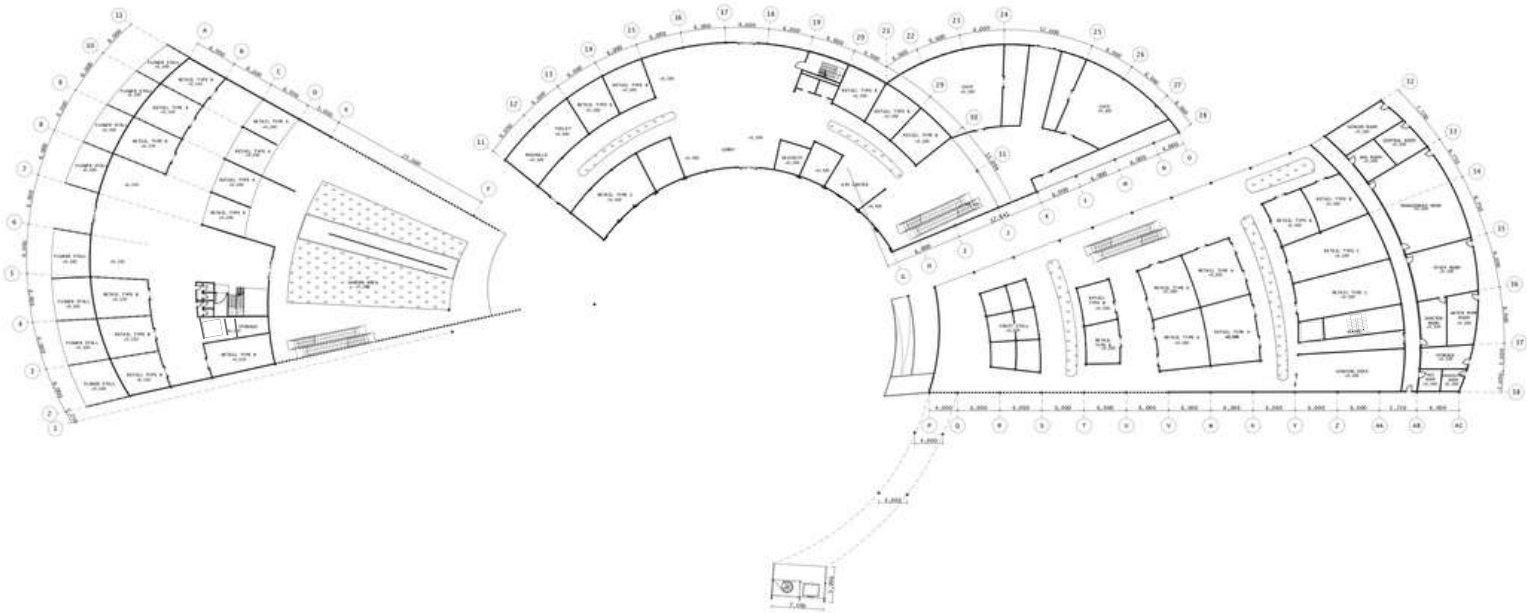
DESIGN REFLECTION

In this chapter will explain about the evaluation that has been done by the examiner to the design development and also the response to the evaluation, in the process of evaluation of the design, the design of shopping center in Magelang has been able to answer specific problems and major problems in handling the case of the application of the concept of garden walk with biophilic approach, but in terms of review aspects of design that have been applied to the shopping center, there are several indicators and parameters that are key to other specific problems in which this parameter becomes a technical aspect that must be considered in the design. Here are the results of the evaluation of the response from the examiner to the design.

5.1 FLOOR PLAN REFLECTION

In the previous floor plan between retail and garden, gardens were more dominant because they wanted to make more biophilic areas but after the final evaluation the jury expressed their opinion to make the area a little wider in the retail space because to attract visitors' attention by providing wide space for selling so that it still maximizes rentalable space, in the next design a larger atrium area is made so that visitors can carry out activities such as exhibitions and so on





First Floor Plan on the new design

In addition to adding an atrium, the added use of vertical access to make it easier for visitors is also added, especially for visitors with disabilities

5.2 STRUCTURE REFLECTION

For the structural system before the evaluation this building just using 300/200mm beam and there's no structural support or adequate and right structural system, the 300/200 mm beam with very wide span and curvy is not adequate.

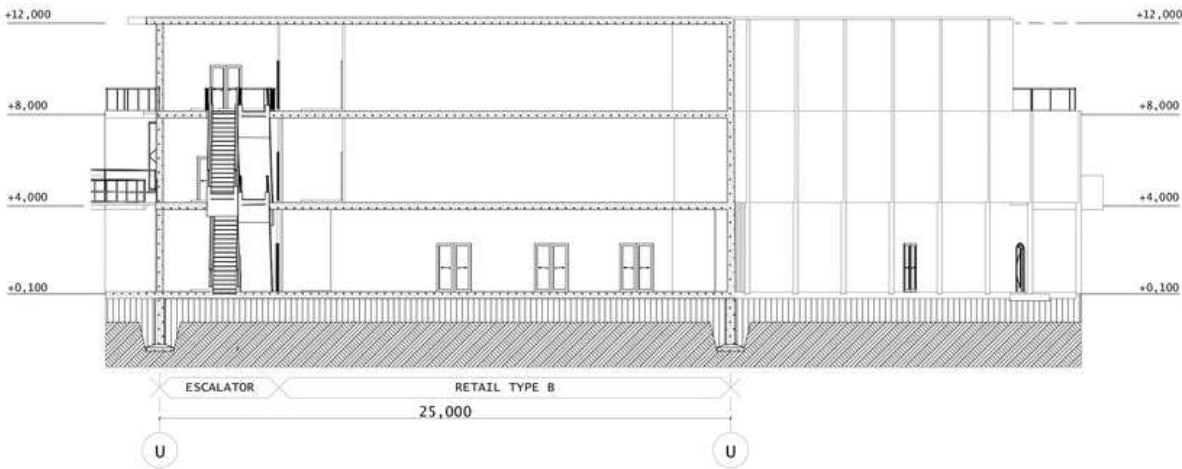
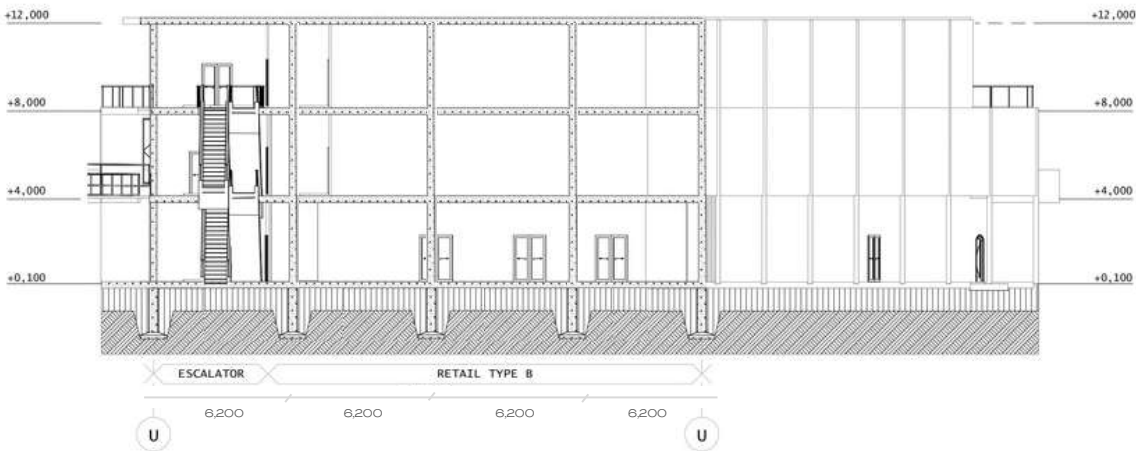
Mencari Dimensi Balok, Kolom dan Pelat Lantai

Bentang Antar Kolom6,0 m

No	Description	Rumus			Perhitungan (m)
1 Balok Induk					
	Tinggi Balok	1 / 12 x	Bentang antar Kolom	0,50 m	
	Lebar Balok	1 / 2 x	Tinggi Balok	0,25 m	
Jadi Ukuran Balok Induk (m)				0,25 x 0,50	
2 Balok Anak					
	Tinggi Balok	1 / 15 x	Bentang antar Kolom	0,40 m	
	Lebar Balok	1 / 2 x	Tinggi Balok	0,20 m	
Jadi Ukuran Balok Anak (m)				0,20 x 0,40	
3 Kolom					
	Dimensi Kolom	Lebar Balok Induk	+ 0,2 x 0,5	0,35 m	
Jadi Ukuran Kolom (m)				0,35 x 0,35	
Apabila Ingin Dimensi Lain Maka, Harus >= dari Luas Kolom					
	Luas Penampang	0,35 x 0,35 m		0,123 m	
	Check Ukuran Kolom	0,15 x 0,82 m		0,123 m	
	Check luas Penampang	0,12 >= 0,12 m		ok	
Jadi Ukuran Kolom yang dipakai (m)				0,15 x 0,82	
4 Pelat Lantai					
	Dimensi Kolom	1 / 40 x	Bentang antar Kolom	0,15 m	
Jadi Ukuran Tebal Lantai (m)				0,15 m	

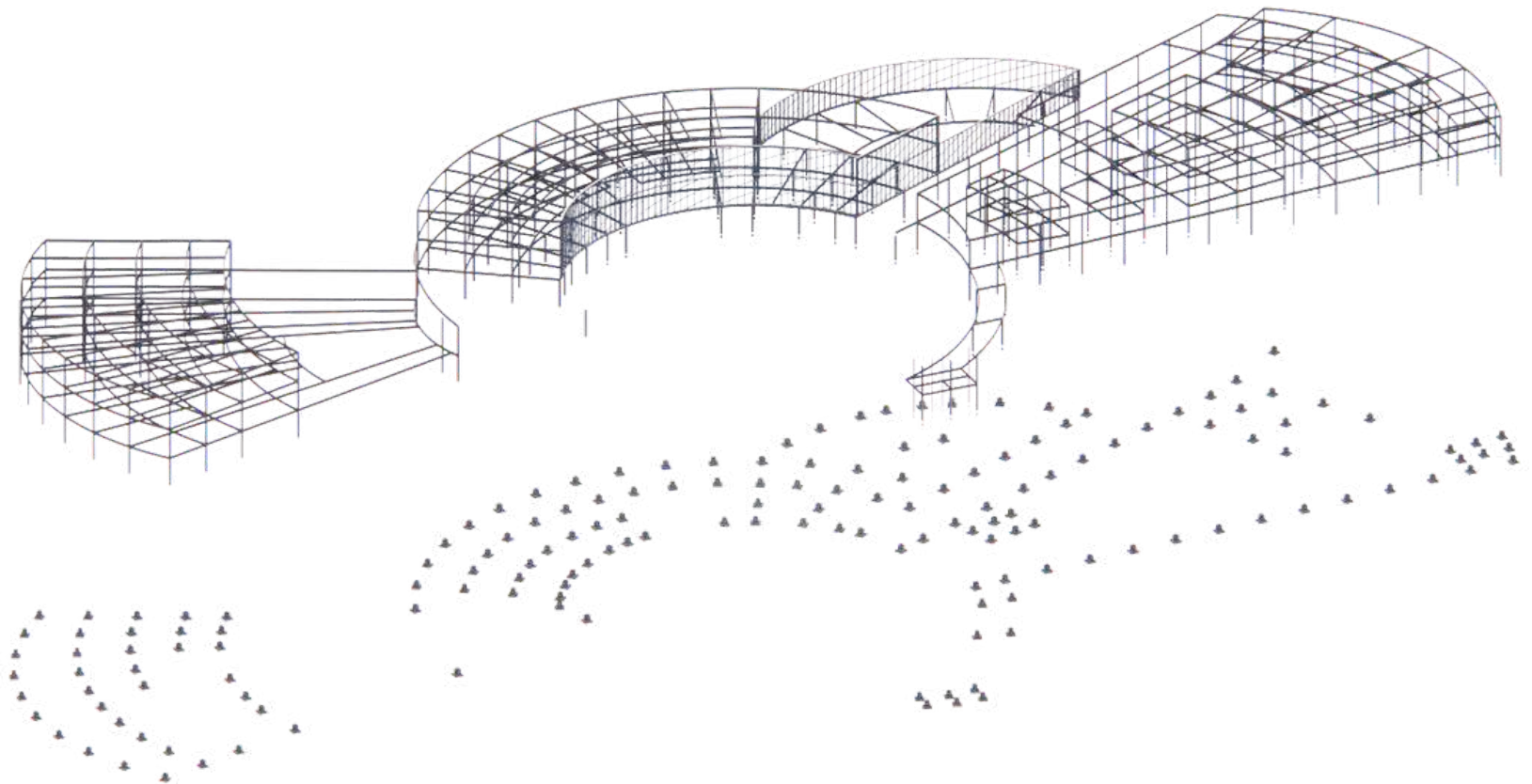
After the evaluation im using this calculation for the beam and column with every 6 meters column. The structure of this central building uses a rigid reinforced concrete frame. The structural module has dimensions of 6000 mm x 6000 mm. However, at some points, such as the vertical circulation area, the distance can reach more than 6000mm. The structure is enough to withstand the weight of a 3-story building. The dimensions of the main column are 350 mm x 350 mm. Beam dimensions 250mm x 500mm. Using foundation footplate to hold 3 floors with a curve shape

Section F, structure on the old design



Section F structure on the new design

SECTION F
1 : 150

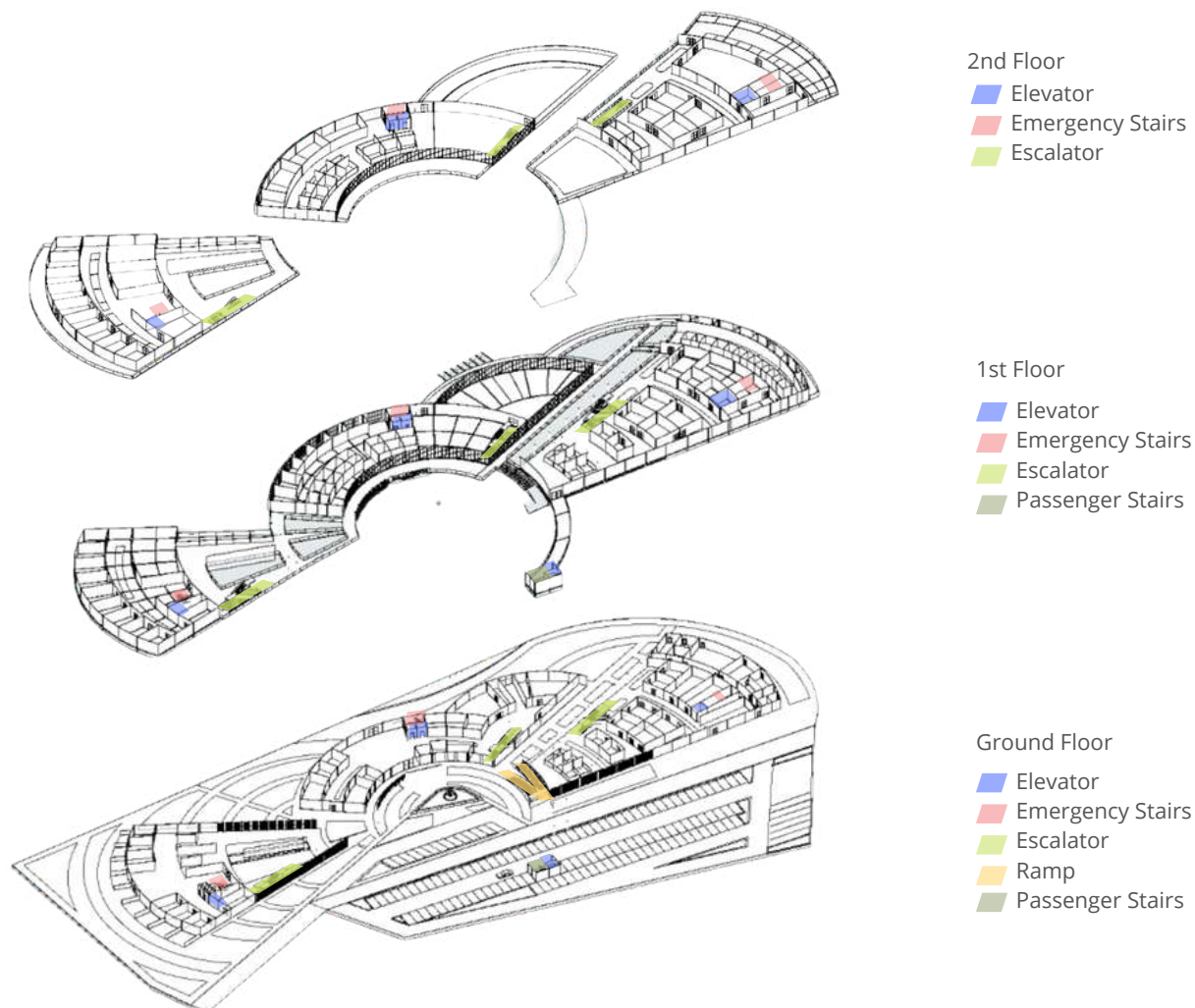


Based on the calculations that have been made for the main beam of 250mm x 500mm and for the child beam of 200mm x 400mm so that it has a column of 350mmx 350mm with a floor slab of 150mm. The foundation used is a foot plate foundation because to withstand such a large load, it is better to use a foot plate that uses concrete material

5.3 VERTICAL TRANSPORTATION REFLECTION

From the concept that I took for this main feature is to walk for users because it is a garden walk shopping center then from the final evaluation the jury said that the building for vertical access is not very visible in the design because it only provides mass 3 using escalators, and is inadequate and not support persons with disabilities. Then to evaluate this building I made several revisions for vertical access so that it can be easy for people with disabilities to use.

1. Mass 1, an escalator is added on the outside so that people can easily use it to go up while the elevator is placed on the inside which can then be used by people with disabilities,
2. Mass 2 an escalator is added on the right because it makes it easier for visitors and it already has elevator facilities in the second building
3. Mass 3, access for people with disabilities is added with an elevator on the east side which is slightly entered so that visitors can see the whole building



5.4 ATRIUM REFLECTION

Reflecting from the final evaluation, From the Jury said that there's no wider space for retail or place for exhibition since it should have more space for the retail, so it should maximize the place for retail but also using biophilic. The design actually already get more space for the retail also for the garden space, and to maximize the placement for the retail it will using the atrium on a lobby, so it will have a wider space for the exhibitions.

One of the main concerns in the use of biophiles is to blend humans with nature. Several steps have been tried in the design to provide a circulation that has the vibes of a garden inside which is much wider so that visitors can feel the plants inside, besides the use of the atrium in the middle of the building can make it a magnet for the circulation of people in it. This can be seen from the long circulation of the corridor which is quite wide and connects each unit, and the amount of light that enters can also make it feel wider



06

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PERDA RTRW Borobudur

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Tata Ruang Magelang, Sitarunas (atrbpn.go.id)

ATTACHMENT



Direktorat Perpustakaan Universitas Islam Indonesia
Gedung Moh. Hatta
Jl. Kaliurang Km 14,5 Yogyakarta 55584
T. (0274) 898444 ext.2301
F. (0274) 898444 psw.2091
E. perpustakaan@uii.ac.id
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Nomor: 1866466931/Perpus./10/Dir.Perpus/IV/2022

Bismillaahirrahmaanirrahiim

Assalamualaikum Wr. Wb.

Dengan ini, menerangkan Bahwa:

Nama : Afa Rahima Lailatunnaja
Nomor Mahasiswa : 18512092
Pembimbing : Tony Kunto Wibisono, Ir.,MSc., GP
Fakultas / Prodi : Teknik Sipil dan Perencanaan/ Arsitektur
Judul Karya Ilmiah : DESIGN OF GARDEN WALK SHOPPING CENTER IN MAGELANG
WITH BIOPHILIC ARCHITECTURE APPROACH

Karya ilmiah yang bersangkutan di atas telah melalui proses cek plagiasi menggunakan **Turnitin** dengan hasil kemiripan (*similarity*) sebesar **10 (Sepuluh) %**.

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Wassalamualaikum Wr. Wb.

Yogyakarta, 7/4/2022

Direktur



Joko S. Prianto, SIP., M.Hum



BALABOEDOR GARDEN WALK SHOPPING CENTER



Magelang is a city with the nickname "City of a Million Flowers," based on its strategic location, which is on the main transportation route of Semarang-Magelang-Yogyakarta. As one of the regencies in the Magelang Regency, which has a famous tourist attraction, namely the Borobudur Temple, it is expected to develop potential economic value in the tourism sector to be able to improve the welfare of the surrounding community. This temple is a magnet to attract tourists both from within the country and even tourists from abroad. The large number of tourists visiting Magelang Regency creates potential business opportunities, including handicraft, food, and plant businesses. However, many of the many existing tourism potentials have not been developed optimally.

So to optimize tourism potential, this project proposes the need for a biophilic architectural approach related to the characteristics of the city of Magelang, namely the city of a million flowers that connects nature with humans so that it can be helpful for those who make a design that can solve economic problems and take advantage of tourism potential.





Lee Kwan Yew



Anggrek



Bungur Raya



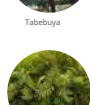
Tabebuia



Gandaria



Pine



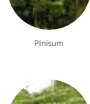
Pinusum



Tanjung



Palm Tree



Kersen



Pakis

2nd Floor

- Food Retail
- Craft Retail
- Luxury Garden Retail
- Restaurant Garden
- Food Retail
- Craft Retail
- Luxury Garden Retail
- Restaurant Garden

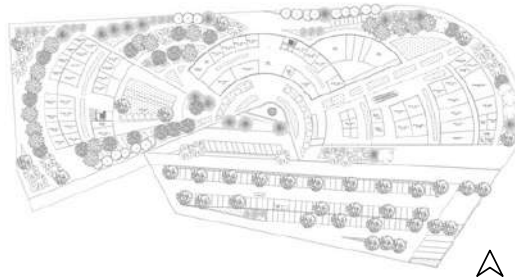
1st Floor

- Hall
- Food Retail
- Craft Retail
- Luxury Garden Retail
- Hall
- Food Retail
- Craft Retail
- Luxury Garden Retail

Ground Floor

- Parking Area
- Lobby
- Security
- Food Retail
- Craft Retail
- Luxury Garden Retail
- Cafe Garden
- Management Room
- Service Room
- Loading Dock
- ATM Center

SITE PLAN



SECTION SITE



RETAIL CRAFT



CIRCULATION



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Australian Institute of Architects

SUPERVISOR
Ir. TONY KUNTO WIBISONO, M.Sc

AUFA RAHIMA LAILATUNNAJA
1851092



GARDEN WALK SHOPPING CENTER

CULINARY, CRAFT, AND LUXURY PLANTS

Shopping Center pertama di Magelang yang dirancang bersama taman didalamnya. Terinspirasi oleh Magelang sebagai kota sejuta bunga dan kekayaan alam lokal, setiap fasilitas di sini selalu mengupayakan semaksimal mungkin dalam menciptakan suasana nyaman pada tamu dengan menawarkan taman hijau di setiap sudutnya

-  GARDEN RESTAURANT, FOOD COURT
FOOD TENANT
-  CRAFT TENANT, FLOWERS TENANT
-  WORKSHOP
-  GARDEN HALL, GARDEN CAFE
GARDEN PLACE

CONTACT US FOR INFORMATION +6282138001



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18512092



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