Final Architectural Design Studio
Department of Architecture
2022

Laboratorium
Pemodelan Arsitektur dan Perkotaan

Design of

Eco Hub :

Urban Spatial Arrangement of Tugu Jogja Area with re-naturalization approach



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INTERNATIONAL UNDERGRADUATE PROGRAM OF ARCHITECTURE

KAAB 한국건축학교육인증원 Korea Architectural Accrediting Board
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AUTHENTICATION SHEET

Final Architectural Design Studio entitled :

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Design of Eco Hub: Urban Spatial Arrangement of Tugu Jogja Area With Re-Naturalization Approach

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



Sultan Arya Manarul Hidayat

PREFACE

Assalamualaikum Wr. Wb.

Praise and gratitude are given to Allah SWT. for his blessing so that this thesis can be completed through various process that has been passed. The thesis project which I raised is titled "Design of Eco Hub: Urban Spatial Arrangement of Tugu Jogja Area With Re-Naturalization Approach"

There is no denying that it took a lot of effort to complete this thesis. However, this work would not have been completed without the people around me who had given the support both physically and mentally. Hereby I wanted to express appreciation and gratitude to:

1. The Almighty God Allah SWT. who has given me various forms of guidance and inner strengths so that I can complete this final project.
2. My Two Beloved Parents, my mother Ari Cahyani, and my father Hendi Hidayat who has given me various supports and advices so that I can fulfil my obligations during my study up to the Department of Architecture, Universitas Islam Indonesia.
3. Dr.-Ing. Ir. Ilya Fadjar Maharika, MA., IAI. as supervisor who has given the various guidance to me in compiling this thesis since the beginning of the proposal submission with various inputs and new insights until the completion of this final project.
4.Ir. Wiryono Raharjo, M.Arch., Ph.D as 1st jury and Dr. Ir. Revianto Budi Santosa M.Arch, IAI. as 2nd Jury who has given loads of input, criticism, and positive advice to the author so that the content of this thesis can be improved.
6. My dear friends Nak QQ, Nak Rafi, Nak Jau, Nak Fae, Nak Daffa, Nak Ummi, Nak Bdur, Nak Natan, Nak Ocyd, Nak Tyas and many other beloved classmates who has given me the closest support since semester 1 through various ups and downs, jokes and laughter, encouragement for myself until it was declared that I had passed this final thesis project.
8. My Siblings, Zayn, Lodi and Azim who has became a system of encouragement to each other from home to me as the eldest brother during the early lectures on campus until the preparation of this thesis to the final stage.
9. My Beloved Grandmother, Nek Nino for the never ending support and prayer, as well as other big family members who had given me the blessings to me so that I keep motivated.
10. And Lastly, I wanted to thank myself for having fought so hard through the tears, the laughter, the satisfaction and dissatisfaction, and the various things that have been passed. Although there are still many shortcomings, of course over time many new things that are learned will eventually build a better self to continue to work and innovate.

As the author, I realizes that in the preparation of this report is far from perfection in many ways. 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 thesis will become useful for all who read it, as well as the author in particular.

Wassalamualaikum Wr. Wb.

Yogyakarta, 1st August 2022



Sultan Arya Manarul Hidayat

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Pangeran Diponegoro St.
Jendral Sudirman St.
Tugu Jogja
P. Mangkubumi St.



Abstract

Urban development is unavoidable, and one of the most important factors influencing it is accessibility. Making it easier to get to and from cities encourages individuals to move in quest of a better living. The worse the environmental quality, the more heavily populated the city is, or when the city's population increase has surpassed the carrying capacity of its environment. The expansion of urban infrastructure to meet the requirements of its residents frequently consumes green space, lowering the amount of green open space in cities. Landowners may also readily sell their land because it is more cost effective than only being utilized for agriculture.

Tugu Jogja is a monument that is often used as a symbol of the city of Yogyakarta. Located at the intersection of Jalan Jenderal Sudirman and Jalan Margo Utomo, Tugu Jogja has a symbolic value which is a magical line that connects Parangtritis Beach and Panggung Krapyak in Bantul Regency, Yogyakarta Palace in Yogyakarta City and Mount Merapi in Sleman Regency. Being a widely known landmark throughout the country, Tugu Jogja is no wonder it has always been the primary destination for tourists to visit this area.

Regarding the arrangement of the monument area itself, it is increasingly possible to develop improvements in various aspects, not least in terms of re-greening the area and beyond. Along with the continued development in the area, the balance between the existence of nature, which has also been present in the life of the Javanese community since ancient times, has turned their attention to culture in learning from nature and living sustainably with nature. This is also in line with the main goals of the 2030 SDGs, mainly to preserve the environment. Creating a more modern Tugu Jogja area is also considered rich in all its uniqueness but still in line with the principles of environmental conservation in real terms.

CHAPTER 1:

BACKGROUND















Yogyakarta

as a *special region*









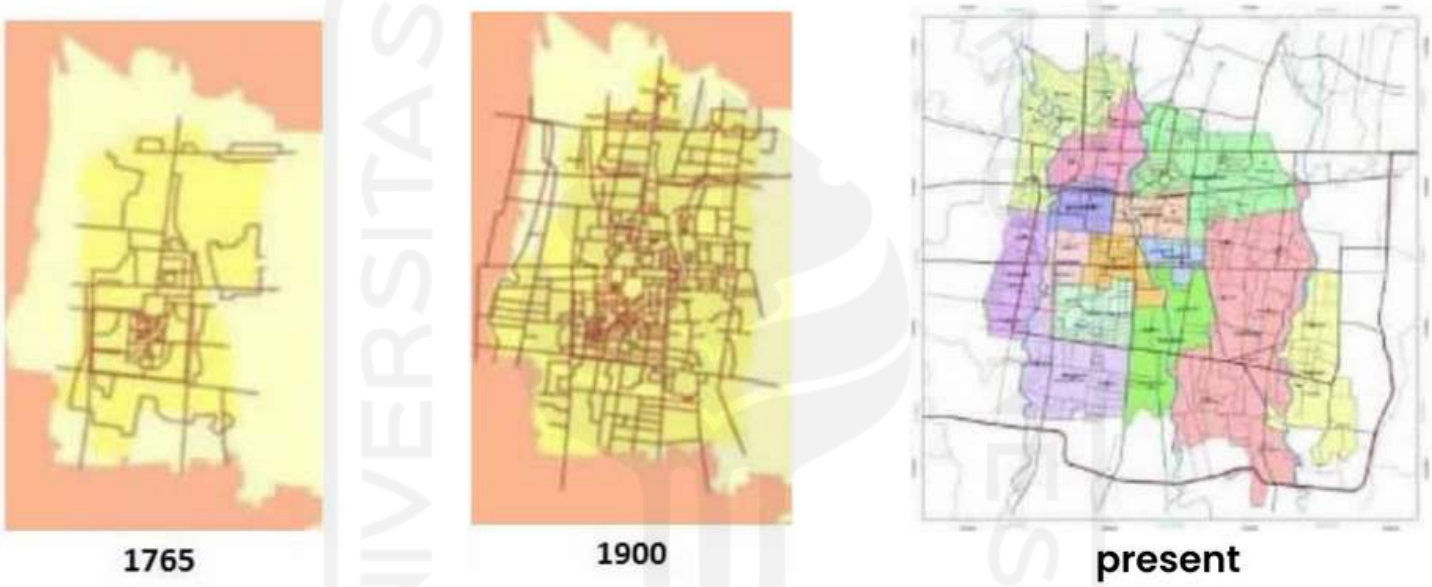


Picture: Yogyakarta City Picturesque
Source: shutterstock.com

The Special Territory of Yogyakarta (DIY) is a provincially autonomous region located in the southern portion of central Java Island, with Yogyakarta City as its regional capital. The phrase "special" refers to Yogyakarta, which is renowned as a culturally rich place with both physical material culture (tangible culture) and a tangible value system (intangible culture). Yogyakarta which known as the City of Struggle, the City of Students, the City of Culture, the City of Tourism, the City of Gudeg, and the City of Bikes for its many advantages. Furthermore, this region has a rich history, dating back to before the Republic of Indonesia's independence.

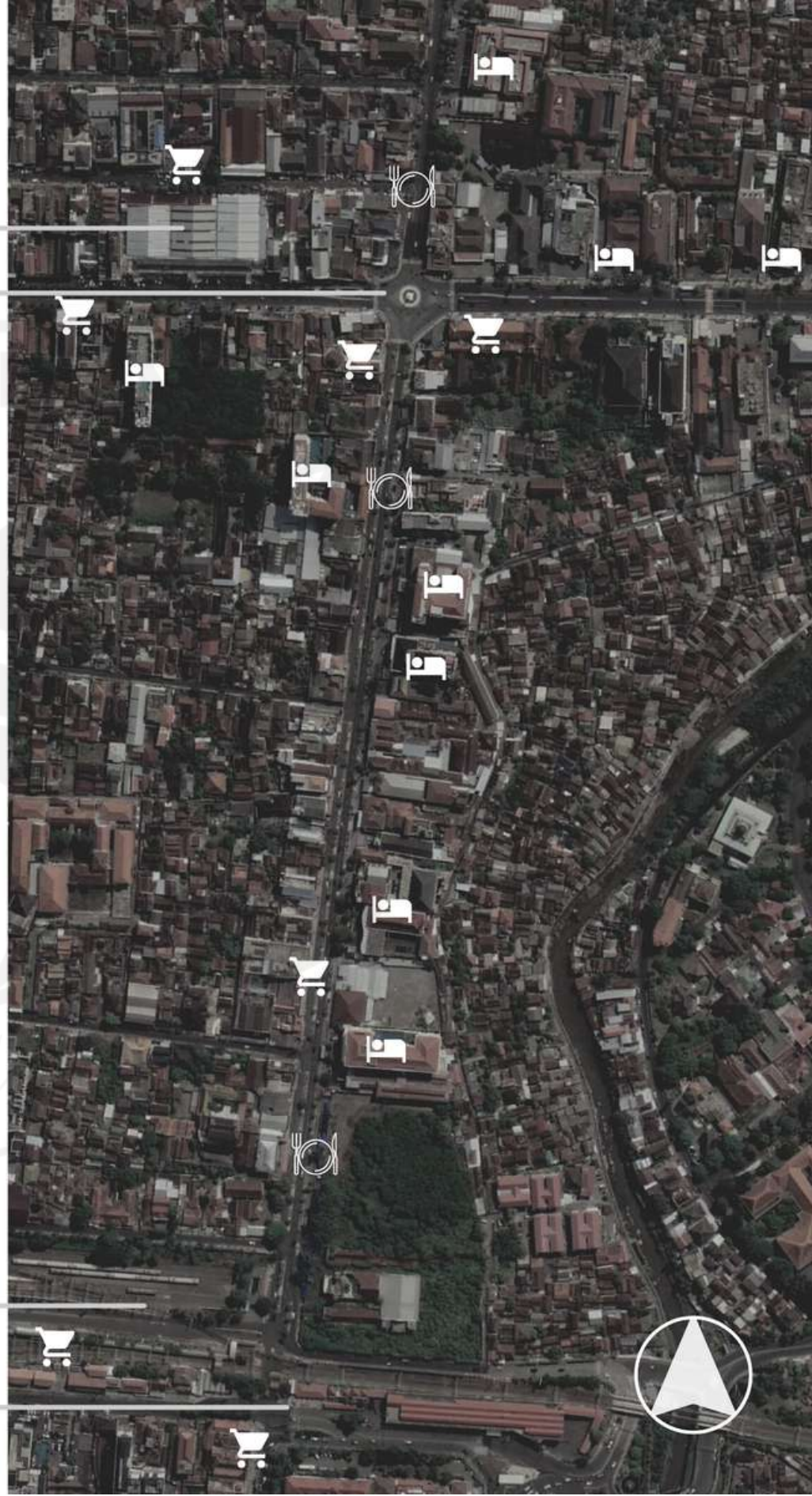
Yogyakarta is a big city that maintains traditional concepts and Javanese culture. The city of Yogyakarta is home to the Sultanate and Pakualaman. The city of Yogyakarta as one of the largest cities in Indonesia, the fourth largest city in the southern part of Java Island by population was acting as the capital of the Republic of Indonesia in 1946.

Yogyakarta is one of the cities with a series of unique and historical nuances. It is no wonder it captivates the hearts of many people to be visited by many travelers or just passed by many people. Developments that are increasingly being carried out, until now, are increasingly improving the layout of this city which is exceptionally rich in history. It leads to the welfare of the local community, which is increasingly inviting more visitors with, of course, a more beautiful area in terms of appearance.



Picture: Development of Yogyakarta City year to year
Source: phimeno.com

Yogyakarta is such a city with series of unique and historical nuances. It is no wonder it captivates the hearts of many people to be visited by many travelers or just passed by many people. Developments that are increasingly being carried out, until now, are increasingly improving the layout of this city which is exceptionally rich in history. It leads to the welfare of the local community, which is increasingly inviting more visitors with, of course, a more beautiful area in terms of appearance.



As one of the cities that swiftly emergin, this city's population grows significantly each year, making it a congested city . Because of the rising population, the development demands for commerce and services are increasing. Many people also come here to study in this city since it is the centre of education. These development is the primary reason why many visit or move to Yogyakarta. Glancing at the development that continues to grow, there is an imbalance in the existing space, so it is built without considering the need for non-functional spaces usually used for commercial or tourism.

LEGEND

- Shops
- Hotels
- Culinary Spots



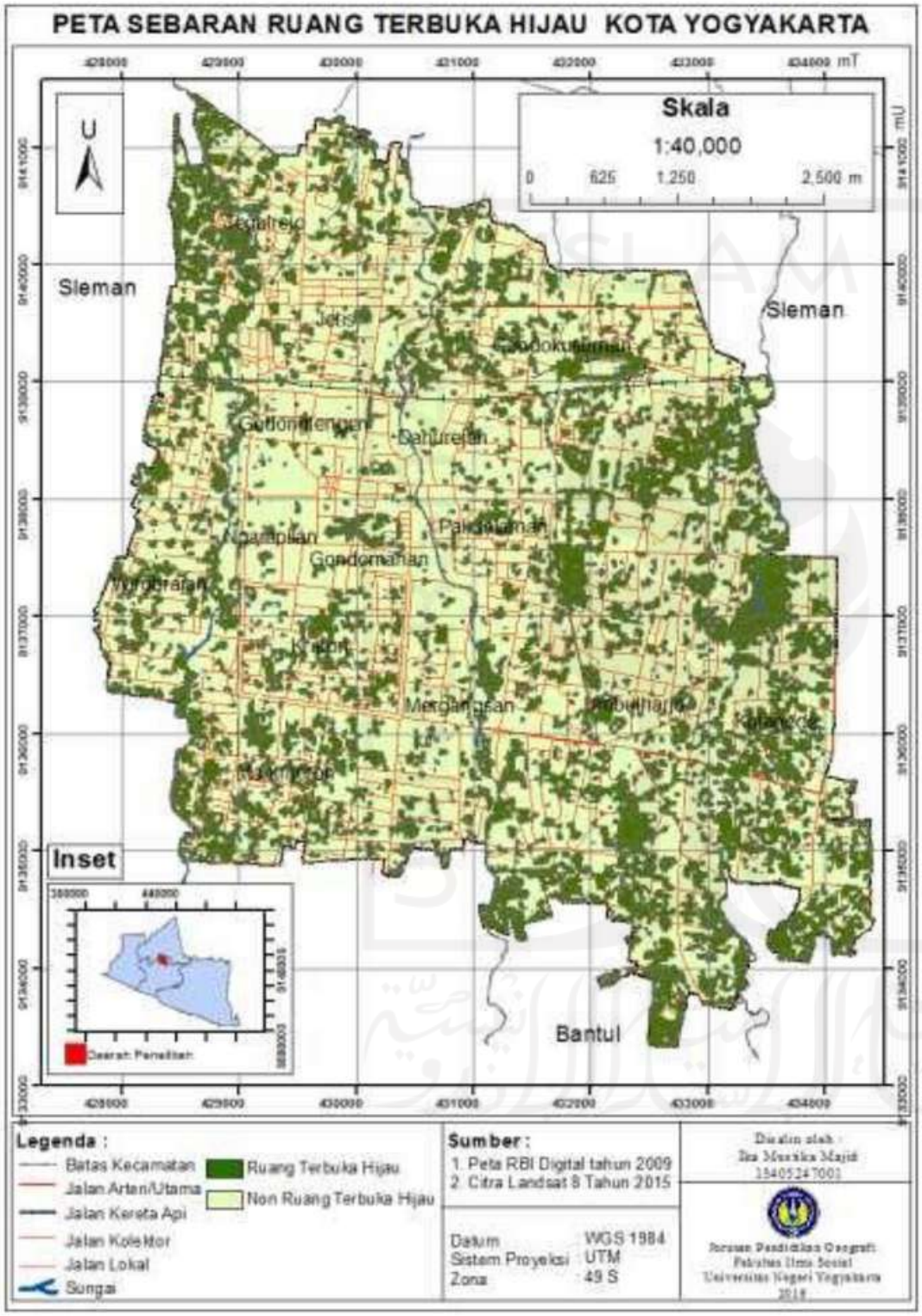
Picture: Open green Space of Yogyakarta City
Source: DLH Yogyakarta

The presence of green open space (RTH) in Jogja is only 8.11 percent, with shade trees planted on the roadways contributing 2.3 percent. Meanwhile at the same time, the remainder are in resident-owned residential green open space.

Pramu Haryanto, Head of the Parks and Road Protection Section of the Yogyakarta City Environment Service (DLH), stated that the minimal proportion of green open space in Jogja is 30%. This composition is made up of 20% DLH green open space and 10% private sector green open space.

> **"RTH in the city of Jogja has not yet reached 20 percent, only 8.11 percent. For more private green open space, around 15 percent has been achieved."**
>
> *- Mr. Prabu*

it was also mentioned that in the future, the Yogyakarta City government will try to add or expand the green open space. For now, it is stated that there are around 50 green open spaces in Yogyakarta City. In the following years there will continue to be additional green space, but we do not know how many, if only adding trees on the roads is quite difficult to meet these needs, especially in the near future given the increasingly rapid development.



Picture: Map of open green space in Yogyakarta City
Source: Dhaniar, 2017

The following is a map of the distribution of green space throughout Yogyakarta City. Visually, the green part appears to be quite dominating, but numerically, this amount is still not enough to meet the need for the required green space. Given the continued development in the area, the land will continue to be eroded gradually.

Several problems have been raised and resolved of the several development projects that will be carried out or have been running, but some have caused several new issues.

Several Previous and Proposed Development



warta.jogjakota.go.id

Malioboro Pedestrian Area Arrangement

The realization of Malioboro as a pedestrian area can now be enjoyed by all local residents and tourists, because the arrangement of the Malioboro pedestrian area has been completed and inaugurated as a pedestrian area.



solopos.com

New Abu Bakar Ali Parking Building

The relocation of the parking lot on the Malioboro Public Road is the first step in preparation for the emptying of the sidewalk on the east side of Malioboro from the row of motorbikes. The Abu Bakar Ali Parking Building consists of 3 floors with steel construction which is used for parking tourism buses, cars and motorbikes.



jogja.tribunnews.com

Mangkubumi Area Arrangement

In the Regional Regulation (Perda) number 2 of 2010 concerning the Spatial Planning of the City of Yogyakarta, it is explained that the Mangkubumi area is included in the buffer zone for natural and cultural protection, trying to harmonize parts of Mangkubumi, Malioboro, to the Palace.



travel.kompas.com

Relocation of Street Vendors of Malioboro

Malioboro Terrace, where the relocation of Malioboro street vendors reside now. As for the street vendors in Malioboro who were relocated, they have always been part of shopping tourism in the area. Tourists who come to stroll around and look for souvenirs there. The purpose of this arrangement is for future management.



krjogja.com

Tugu Station TOD

The Tugu Station will be developed and directed to become a Transit Oriented Development (TOD) whose development is aligned with the grand framework of the future development of the Malioboro Area. It is a solution to what has been happening in the Malioboro area such as traffic jams, parking and others.

nasional.tempo.co

Malioboro Congestion The Main Problem of Tourism

Air quality in the downtown area of Yogyakarta City and its surroundings must be maintained, by minimizing the effects of vehicle pollution. Yogyakarta is the main choice of tourist destination after Bali because tourists feel calm and comfortable.



properti.kompas.com

Yogyakarta City Development Grows Out of Control

The realization of Malioboro as a pedestrian area can now be enjoyed by all local residents and tourists, because the arrangement of the Malioboro pedestrian area has been completed and inaugurated as a pedestrian area.



republika.co.id

Yogyakarta Lacks Green Open Space

Open Green Space for urban areas should be 30 percent. In the city of Yogyakarta, it has accumulated more than 30 percent, but public open space is still 18.5 percent. The Yogyakarta City Government continues to try to acquire land to be used as green open spaces.



radarjogja.jawapos.com

Lack of Public Space makes Jogja Even Packed

Jogja still lacks public space to "escape" the crowds. The government must be bolder in releasing land for public use. Aside from reproduction, public areas must be made comfortable. Then socially. Allows large groups to engage in public. So yet, the accessible public space has solely been used as a garden.

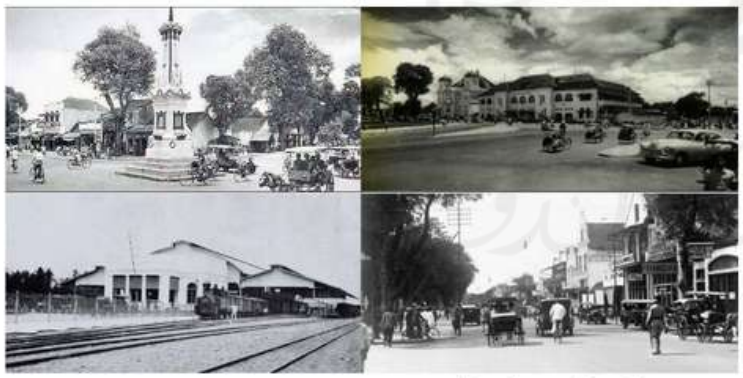




Picture: Malioboro Area
Source: tripadvisor.com

Envisioning the Future of Malioboro-Tugu Area through its Development

As we know, especially when stepping into the Malioboro-Tugu area, the thing that comes to mind is the uniqueness of the atmosphere of the economic center area of Yogyakarta City, which is not often found in other cities throughout the archipelago. Glancing at history, the name Malioboro is taken from the name of a British Colonel, Marlborough, who lived from 1811-1816. If interpreted from the Sanskrit language, the name Malioboro means Wreath.



Picture: Old Sightings of Malioboro Area
Source: phimeno.com

Since the beginning of the establishment of the area, the Malioboro area has functioned as the center of the economy and government of the city of Jogja. Along with the continued development of development such as the post office, Java Bank, to the construction of stations in order to improve regional performance and accessibility for residents to more public facilities. The more activities that occur, continue to refer to the expansion and many new developments up to the current 21st century era. Still unchanged, the Malioboro area still remains a primary destination for many people, especially travellers to visit this area.

Like the situation today, the sun is shining when thousands of people are jostling along Malioboro Street until midnight comes, enjoying the vibrant atmosphere. They don't just stand on the sidewalk but can spill over to the road during long holidays. The atmosphere was so boisterous. Bursting laughter, the screams of car horns, the strains of traditional melodies, to the shouts of traders selling their wares, the hubbub of the Malioboro area is a sign that this area will continue to evolve as time passes. New shops are mushrooming even widespread, newly unique restaurants to try, Hotels erecting like never before, and so on.


1910s
1920s
1940s
2000s
1980s
1960s
2010s
GOLONG GIÉIG
Present
?
The Future

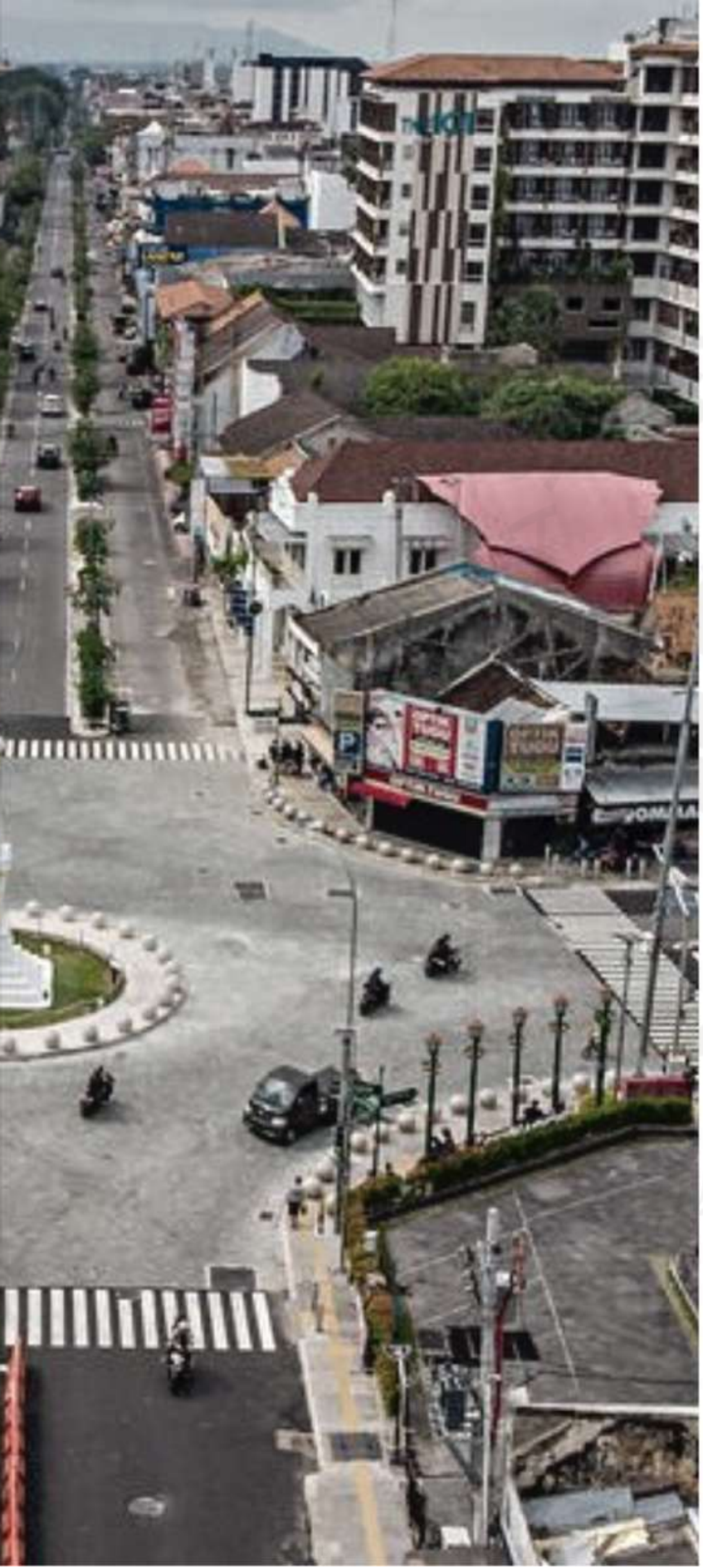
Tugu Jogja Area

Tugu Jogja is one of the icons of the Province that cannot be missed. In addition to various tourist sites such as natural attractions, beaches, markets, and playgrounds, Tugu Jogja is a tourist spot and act as the symbol of Yogyakarta. Tugu Jogja holds various attractions ranging from history to its unique scenery. Besides that, the architectural form in the surrounding area are also interesting which are considered classics from the Dutch era, which are harmonious in building a unique atmosphere in the heart of Yogyakarta.

After a long time standing through many improvements, this Yogyakarta top monument has become even better with several buildings after being renovated. Of course, the role of the government is also present in orchestrating developments, especially in this area. The revitalization process is being carried out and improving this iconic area's image. However, many other things have not been touched with the rapid growth.

The existence of the Kranggan Market area that is really packed, shops that have not implemented more tidiness in maintaining the aesthetic appearance of the building so that it is disrupting the overall ambiance. Plus, the uninhabited buildings are not well maintained and affect the general beauty and construction of new buildings that lack properties in line with the dominating colonial architecture. The most important thing is the reforestation of the area, which continues to be eroded by the rapid development to create less and less green open space, as in the report published by the Caritra Foundation.





It was also found that during various kinds of long holidays, the city of Yogyakarta, especially the Tugu Jogja area, became increasingly crowded, both for tourists who came and people passing by carrying out various activities. From the many designs that have been carried out, one of the government plans that continue to be echoed is to make the Yogyakarta City area, especially the area parallel to Jalan Malioboro, a semi-pedestrian. The local government stated that this is to reduce the volume entering the room and later realize the Grand Design of the Malioboro area as a tourist area with minimal motorized vehicles. It is also restful for tourists to enjoy the beautiful and peaceful city of Yogyakarta.

Therefore, in terms of realizing this, this final design studio project is intended to provide several solutions for the realization of the Yogyakarta City area, especially the Tugu Jogja area, to look more beautiful, modern, and organized, of course, with a more ecological approach, to equalize the provision of green communal space with many natural elements. Realizing the implementation of SDG 2030, especially in terms of maintaining ecosystems and ultimately improving the welfare of the local people by implementing design solutions that will be adopted later.

Picture: Tugu Jogja Area
Source: jogjaprov.go.id



Picture: Urban Spatial Development Project
Source: archdaily.com

Urban Spatial Arrangement for better arranged city

The spatial structures of urban activities are viewed as the result of a trade-off between economic conditions that reward spatial concentration of employment activity on the one hand while favoring spatial dispersion of homes on the other. The expense of commuting mediates the balance between these two sets of circumstances. These three aspects are codified and that defines the geographical patterns of work, residential activities, and commuting all at the same time. The solution conditions result in a single-equation model that predicts the distances between city zones based on their residential and employment density.

Initiating urban spatial transformation by combining spatial analysis using the Geographical Information System (GIS) method with site planning, which is green space provision. Currently, changes in existing urban land use are experiencing degradation of quality of life, physical development that covers almost the entire land surface where the impacts that occur affect various living conditions in urban areas. This is reminiscent of the need for further development of designing an urban area that is more appropriate to the existing functions, so as to be able to provide a new addition to the formed environment.



Picture: Urban Spatial Development Project
Source: www.wolfcreekcompany.com

Organizing urban areas through a green approach

Naturally vegetated areas steadily disappear as urban populations rise, leaving fewer green spaces for residents to enjoy and fewer trees to help clean the air and improve the environment. When new developments and large-scale building projects don't contain green spaces, they can lead to urban heat islands, poor air quality, and a lack of pleasant urban community places. A green city is a site of identity, memory, and belonging for its people. Cities with a strong environmental footprint tend to have a distinctly urban character that other towns and districts can follow. To improve environmental quality as a broad canopy, sustainable city planning and the revival of green city zones are essential catalysts.

Renaturing cities and acquiring high-quality space for inhabitants is no longer a desirable goal; it is a must. Each city is distinct. Cities vary not just in terms of size and density, population distribution, and green space, but also in terms of their climatic and cultural surroundings, topography, and susceptibility to climate change. When it comes to increasing urban resilience through the use of natural solutions and regreening initiatives, what works in one place may not work in another. However, urban regreening programs often allow for the "repair" and restoration of some of the harm done to ecosystems while increasing urban resilience, which may eventually contribute to the resolution of important social concerns.



Picture: SDGs 2030
Source: sdgs.un.org

Further development for greener and more sustainable city for the masses based on SDGs 2030

Sustainable development activities make use of all available resources in order to improve the community's quality of life and welfare. Development is also fundamentally an endeavor to preserve a balance between the natural environment (biological and non-biological natural resources) and the constructed environment (human and artificial resources), so that the nature of their interaction and interdependence stays harmonious. The notion of environmental balance must underpin all development and reform initiatives aimed at achieving human wellbeing and the long-term viability of the universe's function.

Given this topic's importance to global development efforts, recent movements pushing to address sustainable development from an urban perspective have taken place throughout the world. The effects from this activity can be seen in the inclusion of a stand-alone goal on cities and urban development in the 2030 Agenda, Sustainable Development Goal 11, "create cities and human settlements inclusive, secure, resilient and sustainable". There is also recognition of the cross-cutting nature of urban issues, which impact several other Sustainable Development Goals, including SDGs 1, 6, 7, 8, 9, 12, 15, and 17, among others.



Picture: Tugu Jogja Area
Source: detik.com

Problem Statement

Based on the backgrounds and preliminary studies described above, the following problem formulations are obtained:

General Problems

How is the further spatial development of designing the Tugu Jogja area can lead to a more organized urban area in terms of regional spatial design, to the re-greening of the area so that it becomes beautiful, modern, but still maintains the preservation of the nuances of locality so that it can become a sustainable urban area?

Specific Problems

1. How to design the proper spatial arrangement of Tugu Jogja Area and ultimately making the area to be more well integrated?
2. How with the considerations towards SDGs 2030 guidance can achieve a progressing sustainable urban space for the masses?
3. How can the final design with adopting the re-naturalization of urban space can ultimately be upscaling the regional nuances and benefiting for greater impact?

Goals and Objectives

Goals

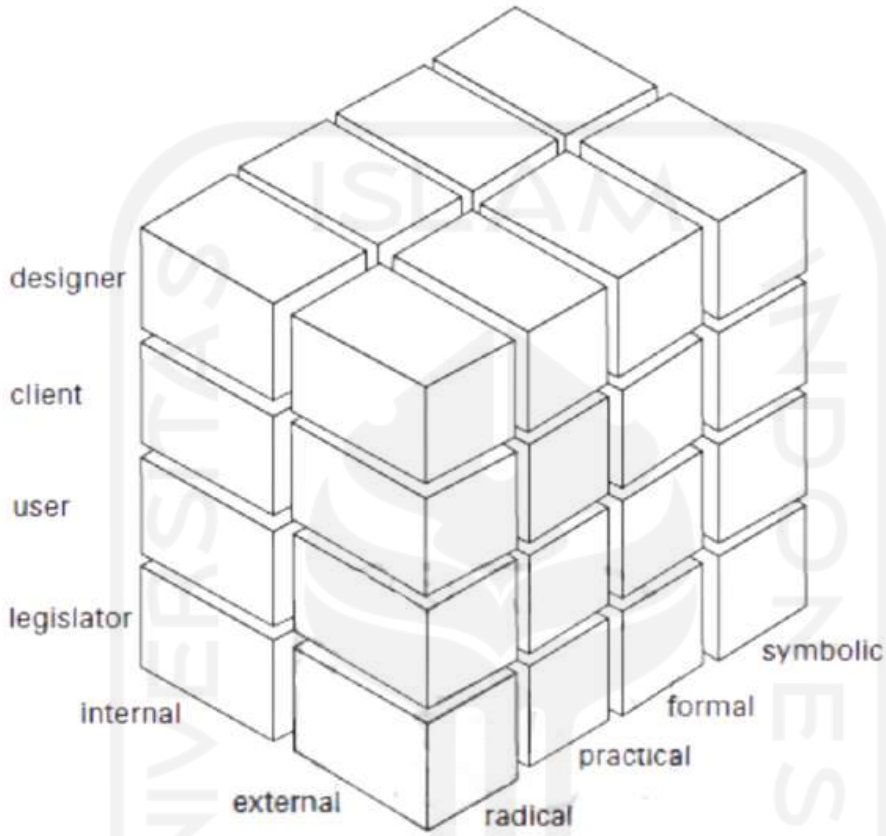
1. Designing the proper spatial arrangement of Tugu Jogja Area and ultimately making the area to be more well integrated.
2. Achieve a progressing sustainable urban space for the masses in the design by the considerations towards SDGs 2030 principles and practices.
3. Creating a final design with adopting the re-naturalization of urban space can ultimately be upscaling the regional nuances and benefiting for greater impact.

Objectives

1. Creating an area that is integrated with all solutions to the realization of a green, sustainable urban area.
2. Able to increase the level of interest for development of many people to participate in activities in the new and visionary Tugu Jogja area.
3. Creating a more beautiful, peaceful environment for Tugu Jogja, also caring for the balance of nature in preserving the future sustainable urban ecosystem with a local nuances that will never fade.

DESIGN LIMITATION

- Urban Spatial Arrangement in Tugu Jogja Area is intended to initiate a sustainable development by bringing the concept of re-naturalization, creating a greener city by the project being initiated.
- The development of the design is intended to become the central for regional hub for people to collaborate, doing interactions, ease circulation between areas surrounding, while being in a prominent eco friendly area..
- Reclaiming the urban area that is being rapidly developed, bringing back the nature and make it as guideline towards a better city that aware of a healthy green city for the future, for mutual prosperity between organic forms.



Design Problem Thinking Matrix

According to Lawson (2005), the classic design thinking approach, image design, and the merging of design and science are all examples of design thinking. By combining design with science, the creative phase becomes more thorough and may be assessed in a scientifically sound manner, according to the thinking technique.

	Formal Problem	Practical Probem	Symbolic Problem	Radical Problem
Regulation *Yogyakarta Special Region Regional Regulation -* *No.5 Year 2019* *Governor of Yogyakarta Special Region Regulation* *No.40 Year 2014*	**Realization of Sustainable Cultural Conservation Area** structuring the area through sustainable and innovative development that can harmonize with the environment as well as meet the needs and demands of the community	**Urban Area Arrangement** arrangement and development in the cultural heritage area that responds to the existing spatial structure so as to be able to elevate local values, modernity, and uphold environmental sustainability	**Pilot Area Development** as an area dominated by cultural heritage buildings and included in the specialization area of regional tourism areas, the development through an approach that is appointed to become a provider of a progressive environment. Thus puts forward new applications by harmonizing existing historical values to become a pilot for developing the central area civilization.	**Balanced Development** the development of an urban area explicitly requires the application of development that refers more to a sustainable order. This is aimed at realizing the vision of a greener and adaptive future urban environment
User *Locals and Tourists*	**Progressive Atmosphere** further development in the Yogyakarta City area, especially around the Tugu area, creating a new atmosphere for the community with all innovations in its design, being able to improve performance or traffic mobility than the overall activity that occurs, in the end being able to grow in swift	**Sustainable Community** several applications that are concerned with environmental sustainability such as the provision of green space, environmentally friendly technology and so on in order to create development through appropriate design solutions	**An Overview of the Future Living** gathering, visiting, or working, whatever the activity, in a progressive area, it can find all the advantages of various efficiencies among the natural beauty of the environment as it passes through to become a memory to tell and to adapt	**Rejuvenation of Historical Area** a new face for the urban area in Yogyakarta, especially around the iconic monument, not only gives a new impression, but is also able to teach the beauty of the harmonization between the application of sustainable design in many circles.
Client *Tourism and Culture Office of Yogyakarta* *Public Works, Regions and Housing Office of Yogyakarta*	**Regional Management** the arrangement of the Tugu Yogyakarta area has become one of the priorities for the local government to build a more advanced face of the city of Yogyakarta. By further promoting the realization of a more comprehensive urban area, the regional vision that has been dreamed of or initiated will be realized so that it is more impactful.	**Spatial Arrangement of Tugu Jogja Area** with the rapid development of development that is increasingly spreading, a balanced outcome is needed to create an urban environment and a tourist destination of choice to become more respected for all aspects of its novelty that blends harmoniously with the locality of Yogyakarta.	**Urban Area Arrangement** Structuring the urban area is needed to realize the ideal regional spatial, in line with the vision of realizing a progressive society into the future with collaboration between the local government and several scholars, learning the City of Yogyakarta, which is aspired to be more restful for everyone.	**Realization of the Ideal Regional Society** As the community has lived and carried out various activities up to now, the government's role as the initiator of realization, is able to provide many people with new opportunities in a more supportive environment.
Designer *the Architect*	**Refined-Cultural Typology** a development typology that focuses on the development of urban areas that can elevate the value of local identity with the embodiment of more forward-thinking principles.	**Sustainable Area Development** an embodiment of a sustainable urban center environment as a gateway to the formation of a more developed and growing but adaptable community life	**Progressive Urban Environment** glancing at the rapid development amid many developing community actors, through several design innovations in the formation of urban space to become a magnet, more interest in regional identity so that it is advancing	**Harmony of past and future** designing the spatial arrangement of the Tugu Jogja area through a re-naturalization approach, embracing the existing heritage atmosphere with newly designed applications

Title:

Design of Eco Hub: Urban Spatial Arrangement of Tugu Jogja Area with Re-Naturalization Approach

WHAT	HOW	VALUE
Describe "imaginative" building that fulfill the most important design problem in the matrix	Describe the design strategies/framework (concept, pattern, force based)	Describe expected value/additional value, goals with your design
Alternative 1 **Citadel for Common Unity** A massive building that contains various spaces for certain activities that involve the collaboration of natural and artificial things, becoming a beacon for the surroundings.	The concept of a unified building containing various new and existing spaces, using a more diffuse pattern, is able to become a monument of future sustainable urban life space making.	forming a center of local civilization where the architecture inspires a sustainable future for the environment, providing flexible spaces to use, and becoming a new landmark to experience.
Alternative 2 **Blossoming Urban Web** A structure that spreads but remains unified, becomes a meeting place for many individuals to collaborate and synergize with each other, with an architecture that is inherent to the surroundings but has growing elements.	Spaces that are spread out, seem to be attached to the surrounding environment, various spaces are created as new places for the community to develop, with the available space maximizing development with a balanced architectural concept.	Providing a space for the surrounding community to collaborate and develop together, with building designs that are attached to the surrounding environment so that they can increase various values from the formation of the existing urban atmosphere with a greener and fresher approach
Alternative 3 **Breathing Communal Complex** A complex composed of layers that describe the harmony of life between living things, adding various spaces to the environment for developing together.	The implementation of sustainable architecture which consists of a unitary functional space is formed based on the potential of human movement patterns so that space is formed based on the expected needs by prioritizing the concept of the future environment.	The provision of spaces that are integrated with each other, based on the existing problems and needs of the community, makes the available space a place to develop not only for human development, but also for the development of a greener and more harmonious urban environment.
Accumulation **Urban Web for Mutual Prosperity** Center for local region to provide a new space for collaboration, exploring cultural richness in new forms of expression, and creating many new opportunities for everyone. In such vibrant place, the connection towards sustainable design thinking is applied as picturing a future public urban space to be role model.	Sustainable design guidelines and practices will be the main anchor toward defining the space and atmosphere. Space arrangement will be defined by the potential circulation plot as well as vista to enhance the harmony inward and outward. Mass plotting is defined based on the existing spatial condition and other existing condition especially the heritage buildings which will try to disguise as a unity. Space also defined by the needs from its user as well as the potential new functions to be adopted for the new typology.	Provision of an integrated spaces where locals and visitors meet and interact with each other, in an environment between past-present-future conjoined vibrantly and harmoniously. In such place, able to provide society with new green urban space, creating better mobility, and ultimately elevating the local nuance of a new developing premise of a stable sustainable development for the future of the Yogyakarta City and beyond.

Originality and Novelty

The final project with the theme Urban Network Design as a Monument Area Arrangement with a re-naturalized architectural approach has never been initiated by any party. Several design project themes are quite related in terms of typology and the approach used. The focus raised is different from the theme of the final project proposed by the author. By making this final project report in order to avoid plagiarism of ideas, here are some of related project references:

1 Transformation of City Boundary Monument Architecture in the Design of Mixed-Use Building as Gateway to the Western City of Yogyakarta in the Gamping Area

Author : Risma Mawar Novia Safitri
Institution : Universitas Islam Indonesia
Publication : 2018
Similarity : Heritage Area, For 'Monument Architecture'
Difference : Re-naturalization Approach

2 Design of Mixed Use Lempuyangan Market Building and Public Housing in Yogyakarta Emphasied on Appropriate Site Development And Energy Efficiency and Conservation

Author : Yoga Gayuh Mukti
Institution : Universitas Islam Indonesia
Publication : 2017
Similarity : Typology
Difference : Building Function

3 Mixed-Use Building In Solo Baru Sukoharjo With Green Architecture Approach

Author : Luthfi Naufal
Institution : Universitas Muhammadiyah Surakarta
Publication : 2017
Similarity : Approach
Difference : Location, Heritage Area Development

Main References

Safitri R. (2018), Transformation of City Boundary Monument Architecture in the Design of Mixed-Use Building as Gateway to the Western City of Yogyakarta in the Gamping Area (Final Project Thesis, Universitas Islam Indonesia).

Mukti Y.G. (2017), Design of Mixed Use Lempuyangan Market Building and Public Housing in Yogyakarta Emphasied on Appropriate Site Development And Energy Efficiency and Conservation (Final Project Thesis, Universitas Islam Indonesia).

Naufal L. (2017), Mixed–Use Building In Solo Baru Sukoharjo With Green Architecture Approach (Final Project Thesis, Universitas Muhammadiyah Surakarta).

CHAPTER 2:

PROBLEMS AND STUDIES

understanding Nature

The physical world and everything residing in such as vegetation, animals, the landscape, and other features and products of the Earth, as opposed to humans or human creations. There are numerous ways to peek at nature. One way is to look at it as a system. Systems are parts that work together to create an overall picture. In the case of nature, the parts are organisms and their environments.



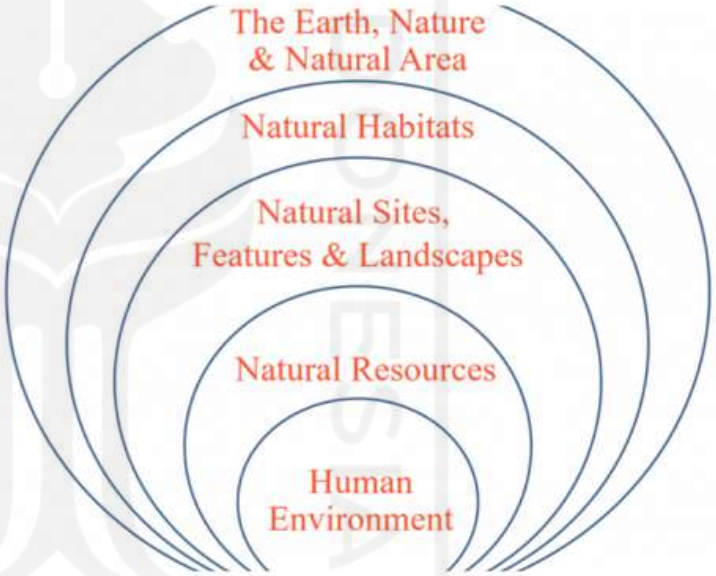




Nature refers to the general domain of biological organisms and, in certain situations, the processes connected with inanimate objects and how specific sorts of things live and change on their own, such as the weather and geology of the Earth. It is frequently referred to as the "natural environment" or wilderness, wild creatures, rocks, forests, and other objects that have not been significantly transformed by human involvement or exist amid human interference.







Picture: Interlinks of Nature
Source: IUCN





Nature is a captivating and intriguing thing. It may be examined in a variety of methods, it literally present across every inch of the Earth.

about
Urban Re-Naturalization



Picture: HYBRITAT - RENATURALIZATION AND METABOLISM
Source: iaacblog.com

Renaturalization is a process that entails reversing the effects of human-caused environmental degradation. This includes restoring natural processes and systems to their former state, often through interventions such as restoration ecology or land management practices. The term was first coined in 1976 by German philosopher Peter Sloterdijk as a means of critiquing modern industrial society's relationship to its surroundings. It has been suggested that renaturalization can play an essential role in mitigating climate change, preventing biodiversity loss, improving soil quality, and increasing agricultural productivity. Sustainable development is an approach for developing societies that meet the present needs without compromising people's ability to meet their own future needs. There are many definitions of sustainable development, but they all aim at finding ways to develop society, so it does not damage nature or overexploit resources beyond sustainable levels while also ensuring equity among nations and communities.



Picture: Re-greening of a subdivision of the City
Source: researchgate.com

Why

Re-Naturalization?



improving urban resilience and limit the degradation of biodiversity by

Re-Naturalization

Renaturalization, or the restoration of natural ecosystems, is an important aim of contemporary city planning. The goal is to create cities that are more livable, eco-friendly, and aesthetically pleasing, by returning natural areas to their original state.

Sustainable Development Biophilia Ecology Improving Life Quality



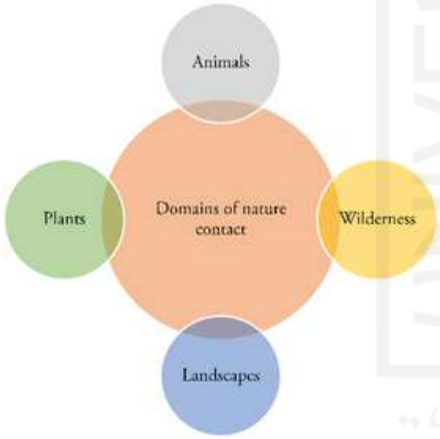




Biophilic Design

a design concept in which to describe the use of direct nature, indirect nature, and space and place conditions to promote occupant connectedness to the natural surroundings.





Domains of Nature Contact (Frumkin, 2001)
source: researchgate.com



Basic Elements of Biophilic Design (Duzenli, 2015)
source: researchgate.com



Spaces that hold strong link to ecological systems evokes a relationship to a larger whole, which enriches the experience by providing calm, reminiscence, insight, and recurring anticipation. Biophilic design aims to produce optimal environment for humans as living entities, so improving population livelihoods, endurance, and well-being.





Urban Biophilic Design

According to **Timothy Beatley**, the primary goal of biophilic cities is to foster an environment in which citizens desire to actively engage in, maintain, and connect with the natural landscape that surrounds them. He also devised methods for doing this through a framework of infrastructure, governance, knowledge, and behavior; these dimensions can also be indications of existing biophilic traits in present cities.

- tangible contact with natural features
- contact with images and or representations of nature
- spatial relationships to enhance well-being















One concept by Kellert in which nature in the built environment is used to meet human needs, intended to honor and respect nature while also providing an enriching multimodal urban environment. Kellert's biophilic concept has been defined by the characteristics and features listed below:

Direct Experience of Nature

Air	Climate circulation, temp, and humid are all sensed through the air, allowing for a balanced climatic condition indoors and out.
Light	Enables for time of day and season orientation, and is associated with navigation and comfort. Natural rhythms and forms, as well as motions and shades, can be caused by sunlight.
Water	Water in fact is multisensory thus can be utilized for offering motion, sound, sensation, and vision in structures.
Plants	Bringing plants to the building elements of external and internal areas will creates a direct connection to nature both physically and mentally.
Weather	Climatic condition awareness formerly meant individual wellness and survival, and so it today fosters alertness and cerebral engagement.
Landscapes	Incorporating self-sustaining ecosystems into the architectural environment will eventually enhance a more rich space to people in which they reflect spaciousness and an abundance of organic life, which is consistent with human development and heritage.
Fire	The natural feature is rather challenging to be implemented, although when done well, it gives color, warmth, and dynamism, which are all pleasant and agreeable to people.
Animal	Although certain special applications were required, engagement with them might create curiosity, cognitive stimulation, and enjoyment.

Indirect Experience of Nature

Images of Nature	When this is added, it is shown to be emotionally and intellectually fulfilling to people, usually as additions.
Natural Materials	Natural materials are preferred by people since they may be cognitively engaging. Organic resources are vulnerable to time's patina; this alteration elicits reactions from humans.
Natural Colors	Earth tones were those that usually seen in nature and are typically mellow brown, green, and blue colors. However, one research showed that red blooms on plants were exhausting and bothersome to inhabitants.
Air and Light Control	Indoor lighting and mechanical ventilation could be utilized creatively to simulate air circulation and light in situations where natural ventilation and lighting not possible to be accomplished.
Organic Shape	Introducing organic shapes into rooms may transform a static area into an exciting and attractive complicated place.
Evoking Nature	This leverages natural elements to affect the structural design of the project. These are not necessarily items that exist in nature, but rather components that reflect natural landscapes.
Information Richness	Numerous ecosystems are varied and packed with many biotic and abiotic factors. Hence, the purpose of this feature is to include these aspects into the building's environment.
Change and the Patina of Time	People are fascinated by environment as well as how it, like us, changes, adapts, and ages through time.
Natural Geometries	Nature's varied patterns will elicit sentiments of greater connectivity, and the geometries can also have hierarchically ordered sizes and meandering flow rather from being straight with severe angles.
Biomimicry	This is a design technique that mimics natural applications as answers to human and technological concerns. Utilizing these natural functions in building structure may inspire human ingenuity and environmental awareness.

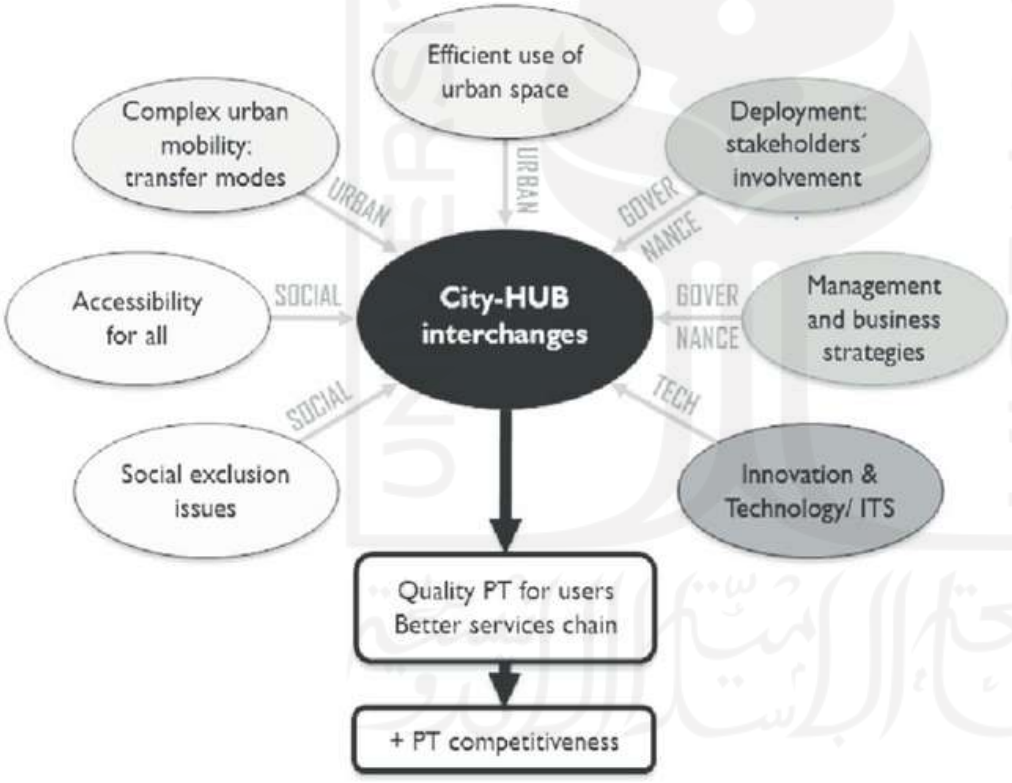
creating a

HUB

for beacon of the city



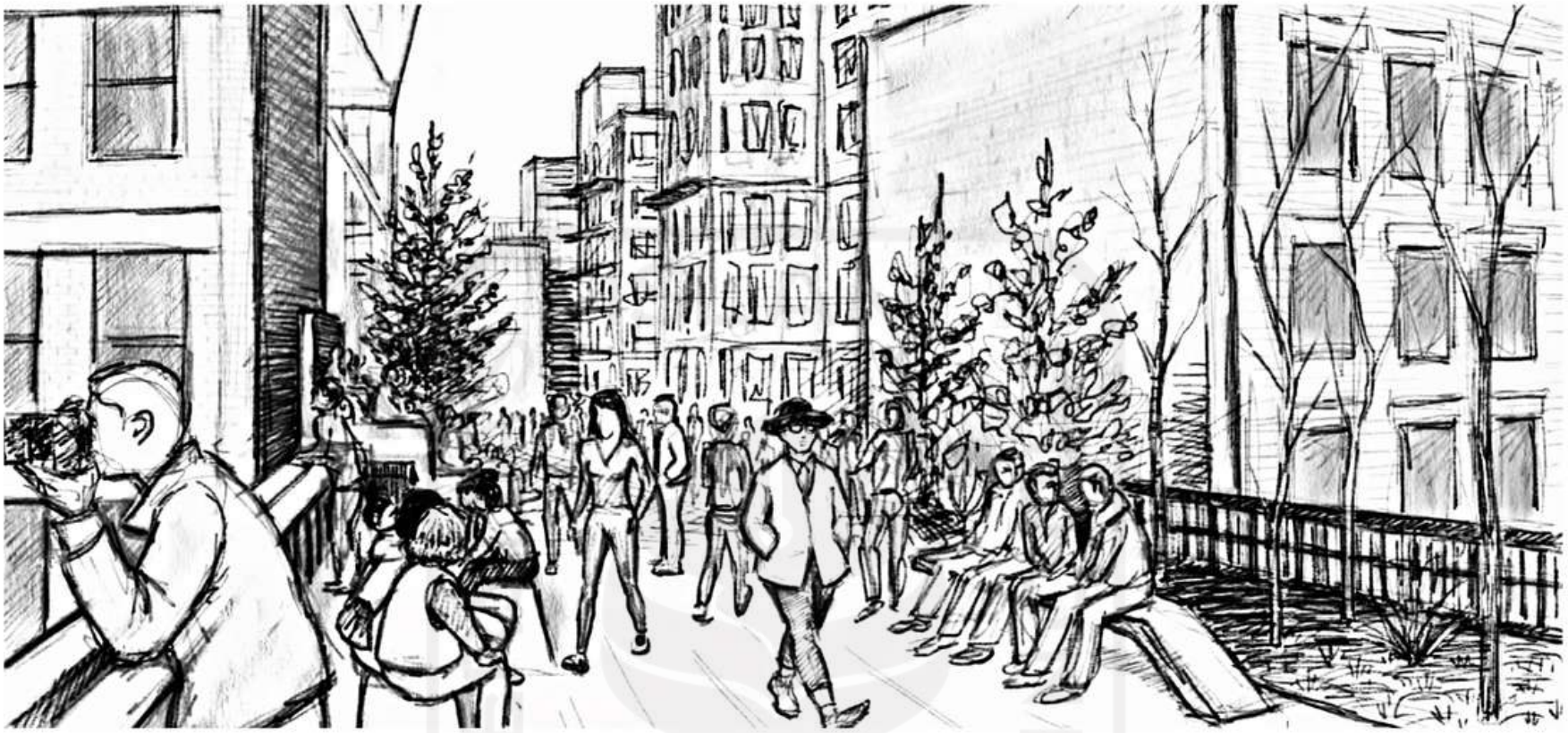
Picture: Re-greening of a subdivision of the City
Source: researchgate.com



A city hub is a central area of a city which serves as the focal point for economic and social activity. A city center is generally regarded as the heart of a town or large urban area. It typically includes commercial, governmental, cultural and residential districts all within close proximity to one another. Urban areas are densely populated places with significant concentrations of people who live in relatively crowded conditions without much open land left for natural vegetation or recreational activities.



Eco Hub is a center for sustainable urban life that facilitates collaborations among different institutions, companies, and individuals to develop innovative ideas and solutions that promote environmental conservation. The aim of the eco hub is to provide an environment where people can relax, connect with their surroundings, learn new things, enjoy nature and appreciate its beauty while maintaining optimal ecological balance.



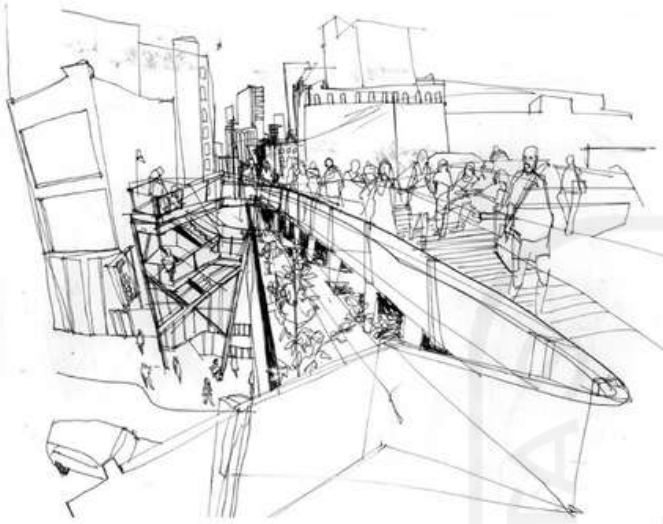
HIGH LINE

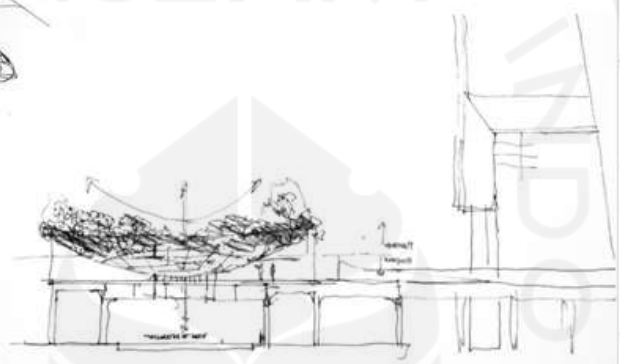
as GREEN URBAN SPACE

New York, USA

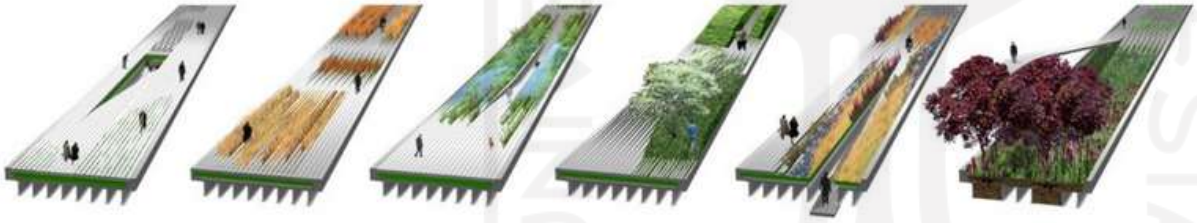
The High Line, is a 2.33 kilometers long city park created on an abandoned elevated train that runs from the Meatpacking District to the Hudson Rail Yards situated in Manhattan. It was designed in partnership with James Corner Field Operations and Piet Oudolf. The new park is influenced by the melancholy, wild beauty of this post-industrial ruin, where nature has reclaimed what was once an essential element of urban infrastructure, and it reflects the park's inherited legacy. A string of site-specific urban micro-climates along the stretch of railway that include sunny, shaded, damp, dry, windy, and protected locations is used to interpret the biodiversity which gained traction after it was abandoned.

The High Line surface is digitized into discrete units of paving and planting that are assembled along the 2.33 kilometers length of the line into a wide range of gradients ranging from 100 percent paving to 100 percent soft, densely vegetated biotopes through the use of an agritecture approach that is equal parts agriculture and architecture. The pavement method comprises individual precast concrete planks with open joints to allow for the growth of emergent vegetation such as wild grass via cracks in the sidewalk and the growth of trees and shrubs. The lengthy pavement pieces have tapered ends that comb into planting beds, resulting in a textured, "pathless" environment where visitors can explore in their own time. Among the concerns addressed by design are the recovery of uncontested public space, the adaptive reuse of obsolete infrastructure, and the utilization of preservation as a method for long-term sustainability. The park has something for everyone, from the wild to the manicured to the personal to the communal.

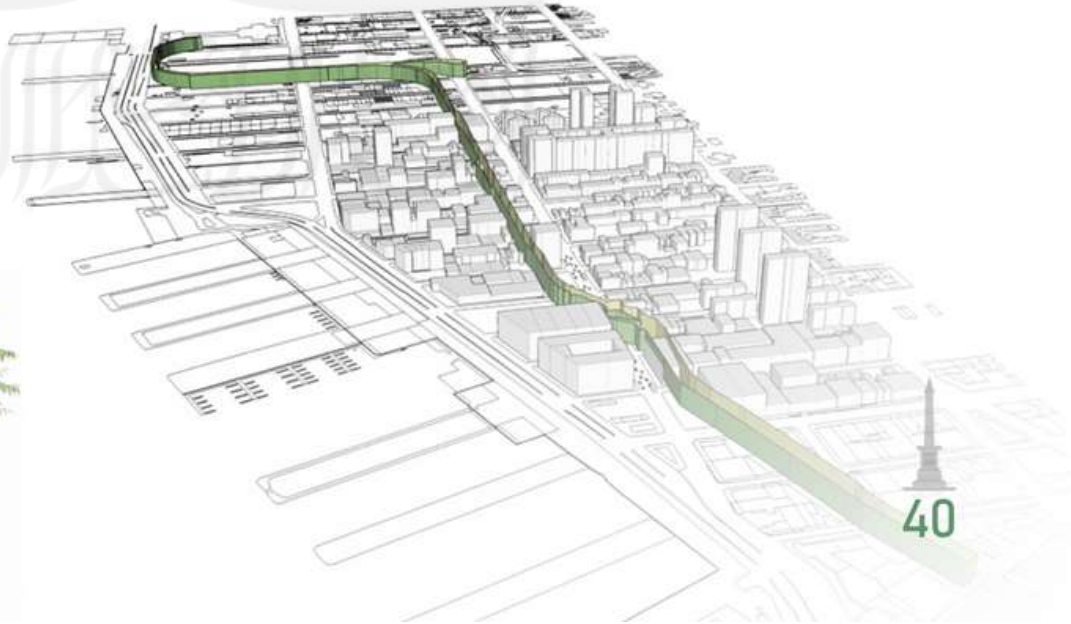





TENTH AVE
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TENTH AVE











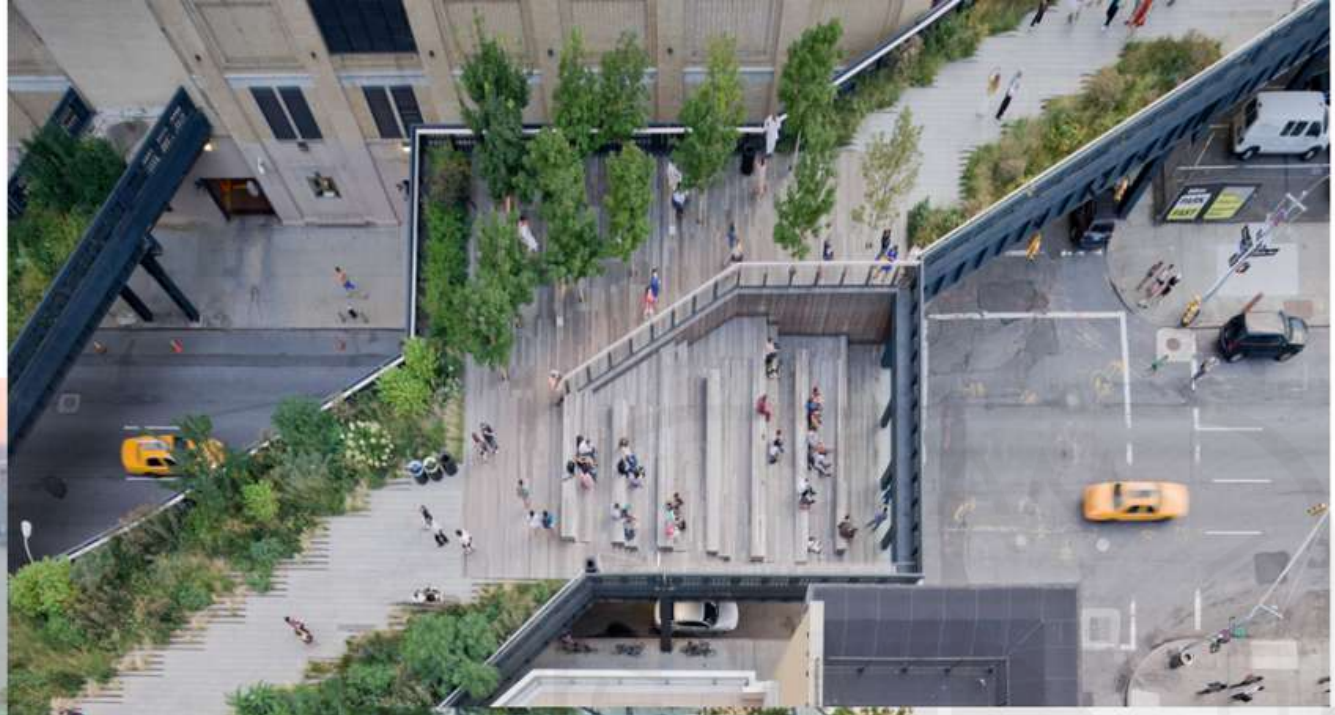
> an extraordinary gift to our city's future....It really does live up to its highest expectation.
>
> - *bloomberg*



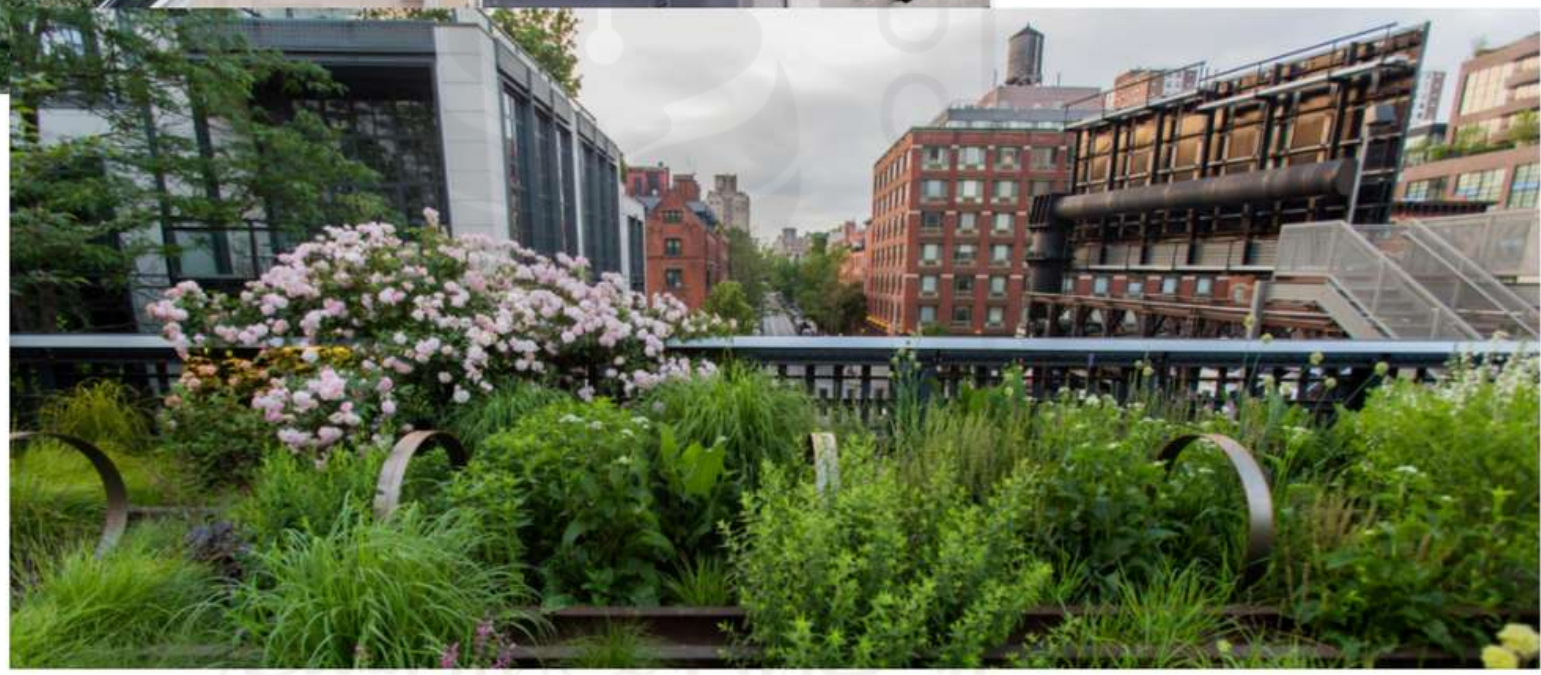
Naturalized vegetation modelled after those that grew along the abandoned rail lines, as well as vistas of the city and the Hudson River, are among the park's highlights. Intricate patterns of pebble-dash concrete pathways swell and contract, swing from side to side, and divide into concrete tines that blend the pavement with plants implanted in railroad-gravel matting. Almost like the paved portions had been taken over by vegetation. Hard pavement, the surface for people to walk on, has a blending or bleeding or suturing between it.



Since the park's establishment, the High Line has hosted a variety of temporary works and shows. The park has turned into a "tourist-clogged runway" since it went public.



The High Line has been committed to preserving the environment. As a repurposed element of industrial infrastructure, the park has a built-in environmental benefit. As crucial as the park's architecture is the way the High Line operates every day, we work to achieve sustainability.





The High Line has encouraged billions of dollars in urban development and resulted in the creation of tens of thousands of new employment since its construction. Initially envisioned as a single, quirky, and local solution, the High Line attracted 8 million people in its first year of operation and is gradually emerging as a worldwide development model. Over one hundred towns across the world have been motivated to repurpose their aging municipal infrastructure into public parks as a result of this initiative.



PARKROYAL HOTEL

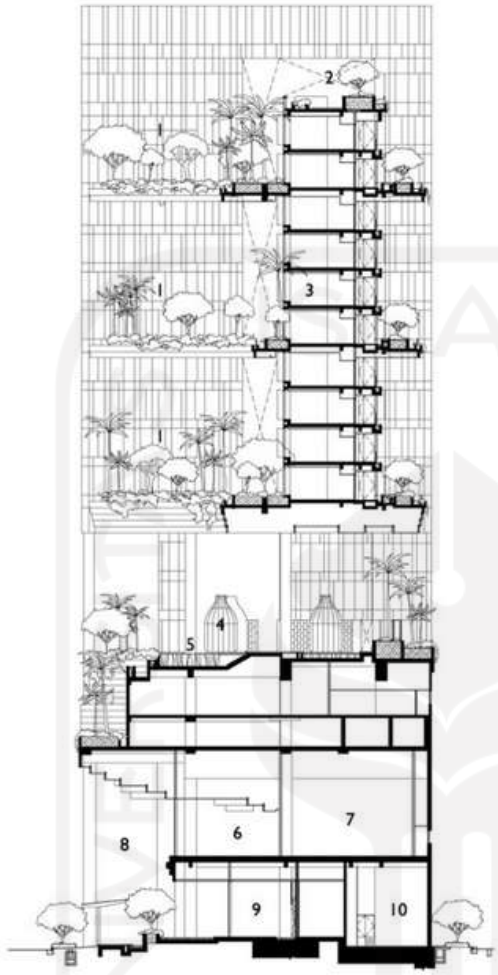
as SUSTAINABLE DESIGN HARMONY IN ACTION

Marina Bay, Singapore

Extensive vegetation, including green walls, water features and vast tiered sky gardens, is included in Parkroyal's design.

Parkroyal Hotel has been praised for its environmentally friendly design. WOHA Architects, the designer, has long been a proponent of a city that is as green as possible. As a result, the Parkroyal Hotel was constructed as a hotel that quadrupled the green-growing potential of its site.




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Between Hong Lim Park and Chinatown's apartment buildings, the Parkroyal Hotel is on a long and narrow location with views of the old shophouse neighborhood between the park and the Singapore River. There are several ways wherein the project may adapt to a wide range of settings, and the architects could make a great and green urban expression because the building is seen from and across a large parks to the north.

As a counterpoint to the all-encompassing abstraction of the city's surrounding high rises, the massing and features of this structure were carefully calibrated to maintain a human scale at all times. For an idealized green metropolis, the dominant concept was that of a structure as a garden.



Interspersed between every four hotel floors are curving sky gardens, clothed with tropical vegetation and supporting expanses of exotic trees. The hotel's trees and gardens blend seamlessly with those of the adjacent park, creating the impression of one long expanse of urban greenery.









> “We wanted to recreate an urban street scale, so that people walking and driving could pick up interesting details. And we wanted to work with the building’s mass and appearance, so we could avoid the usual city scale of building-as-silhouette, and so we could implement a garden-themed aesthetic”
>
> – *WOHA*



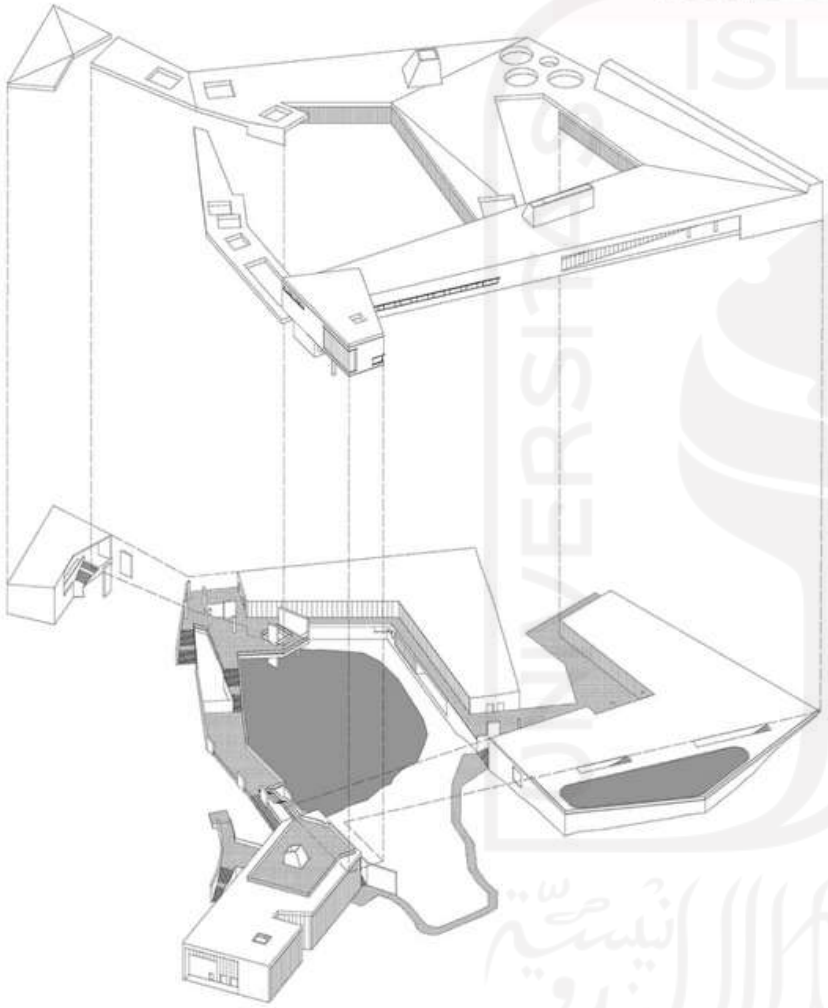
TAOYUANJU COMMUNITY CENTER

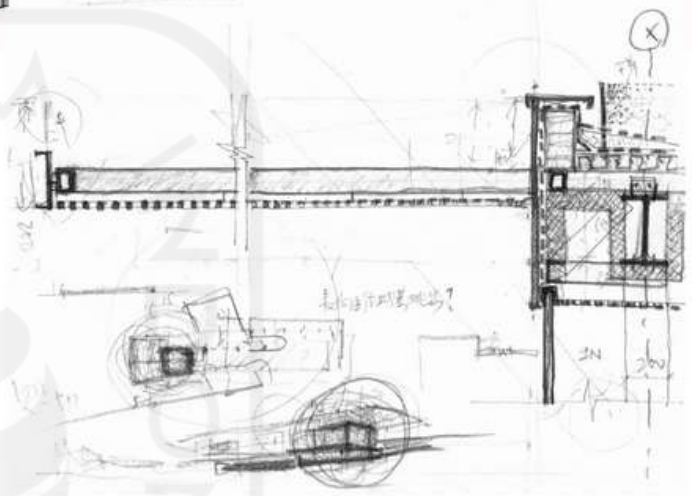
as GREEN COMMUNITY CENTER

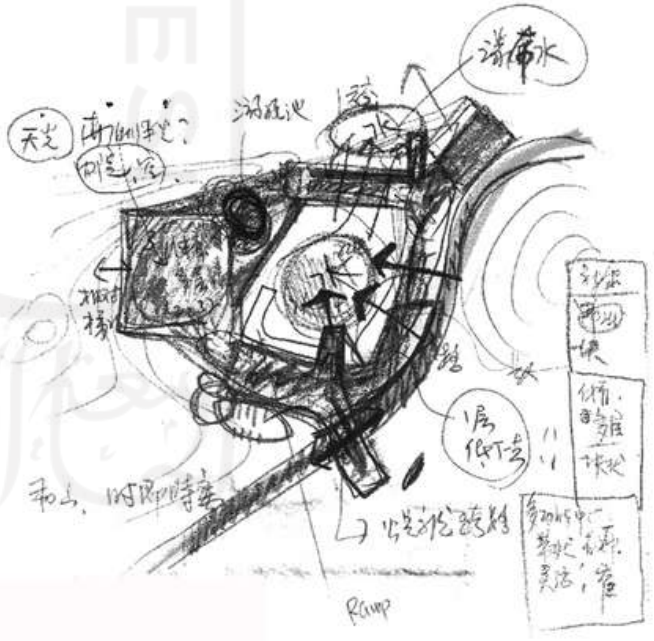
Chongqing, China

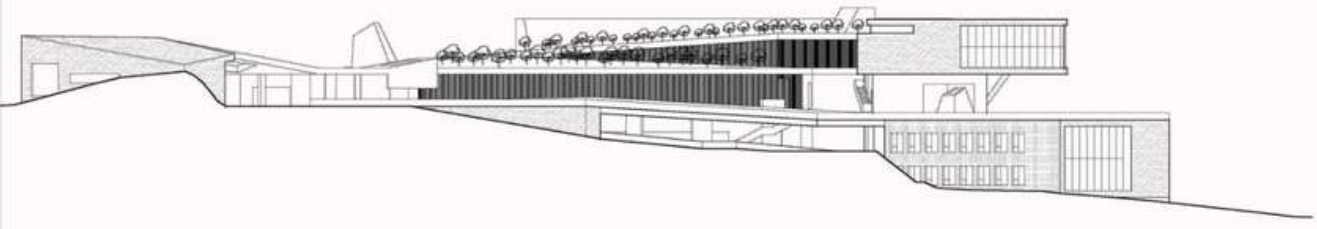
Located at Taoyuan Park in Chongqing, China, Taoyuan Community Center provides a place for people to come together. A beginning point is to try to merge the new structure's shape with the existing undulating topography. Building envelope thermal co-efficiency is improved by incorporating green roofs and walls into the structure's natural surroundings. Our design also takes into account the connection between the interior and exterior of architecture spaces. The cultural center, the athletic center, and the public health center are the three most important programs.








Ramp

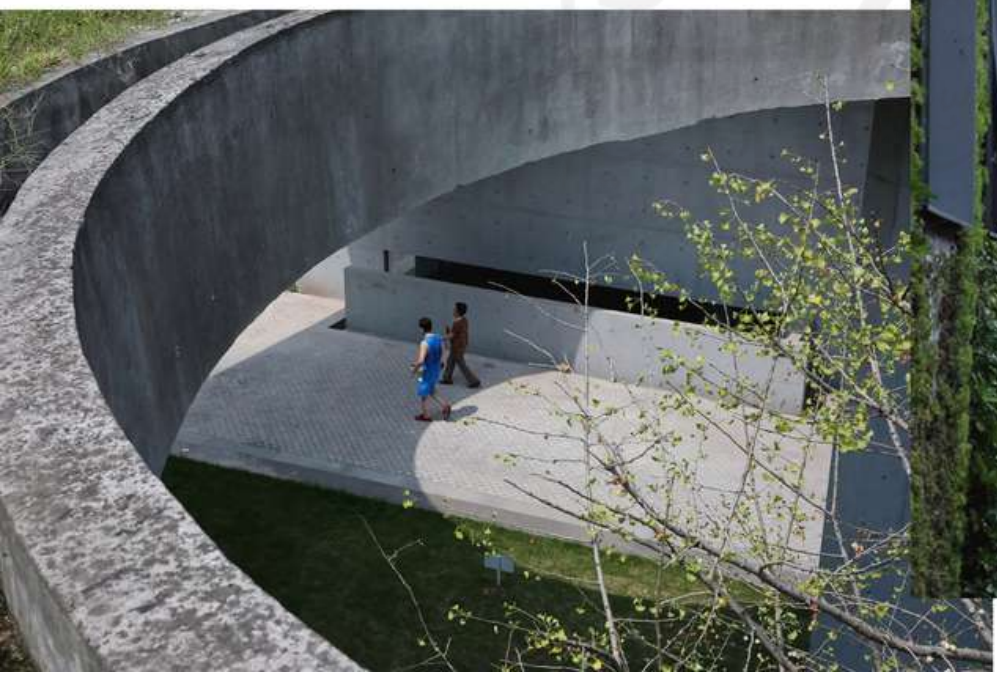




> “Instead of building an object in the field, we hoped to create an image of fusing architectural form and hilly landscape together.”



In order to create a unified, cohesive volume, a continuous roof connects the three different structures. For this reason, there is some variation in its elevation. Both a tiered garden and a green plaza for gatherings of the local community are shaped by the construction.

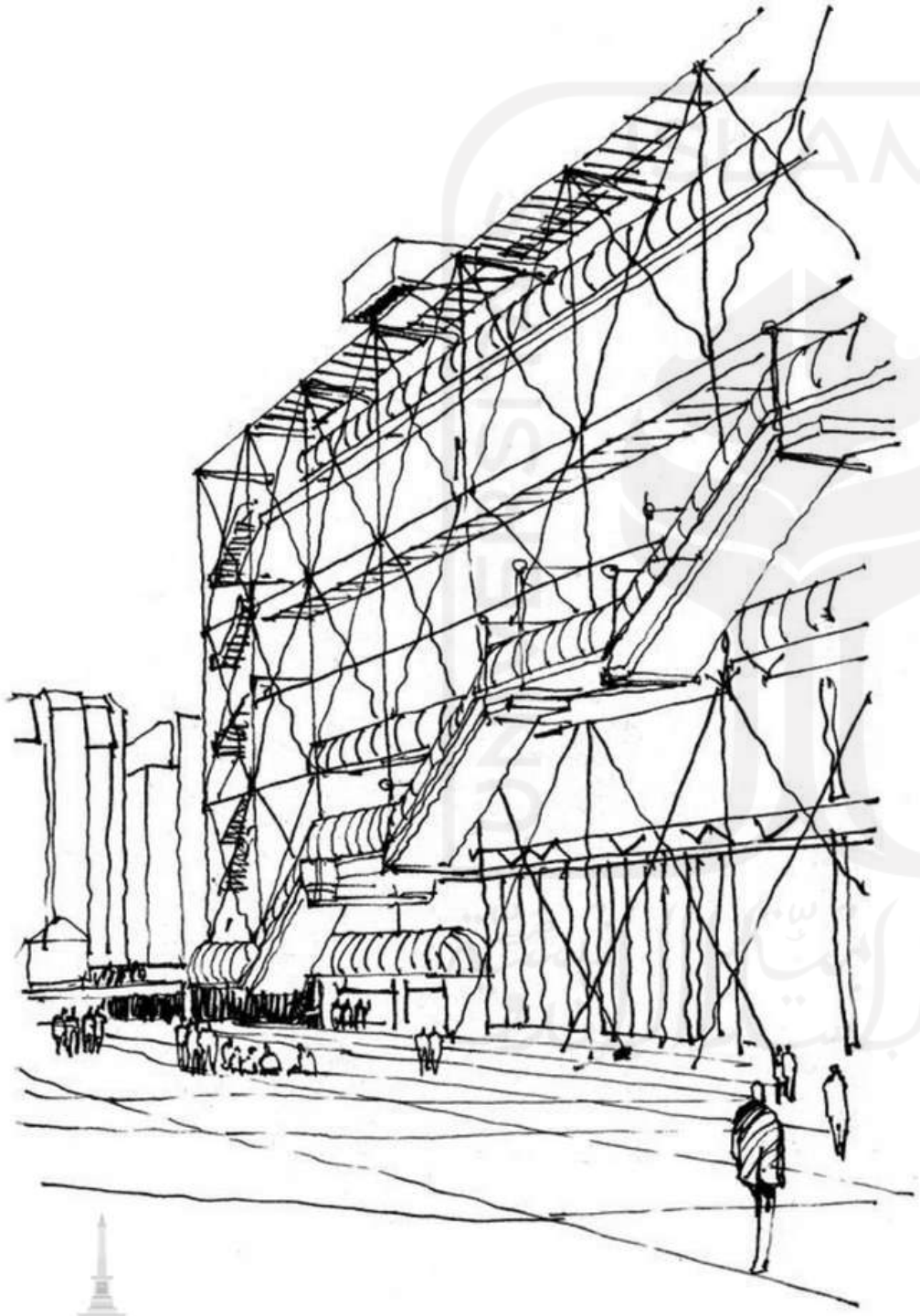








Publicity for the community center brings in a wide variety of people, including regular citizens, people from the nearby area, and members of the community center's own staff and participants themselves. As a result, the design takes into account their duration of stay, penetration, and interactivity. They walk, gather, perform, read, instruct, train, exercise, and confer with health professionals, among other things, around the institution.



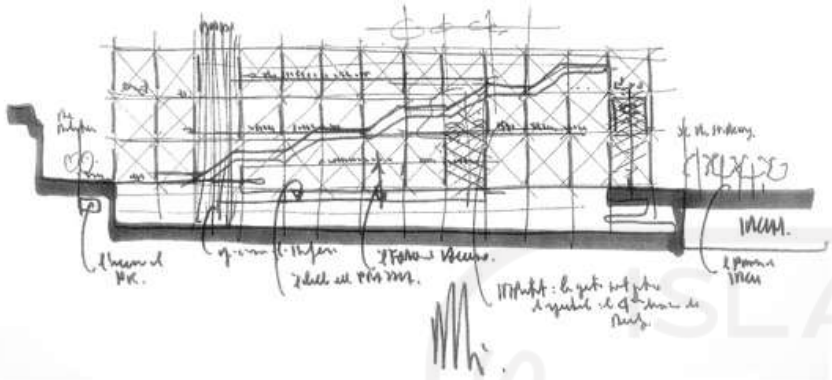
CENTRE POMPIDOU

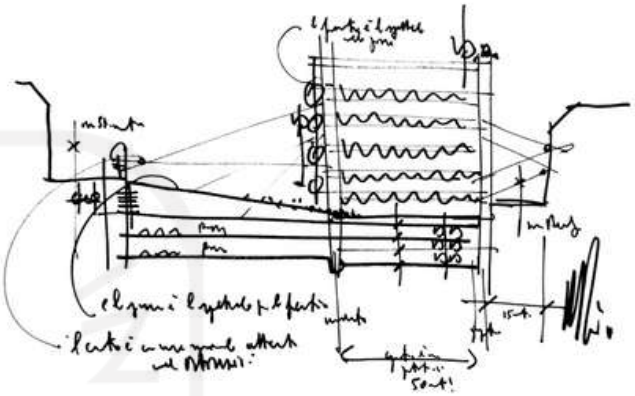
as CULTURAL CENTER

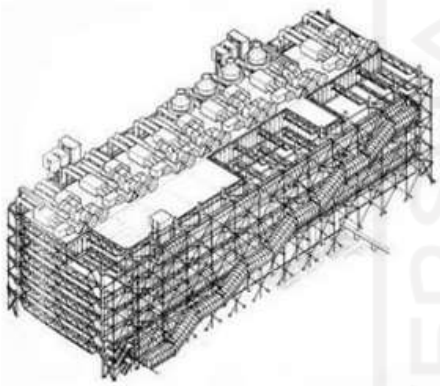
Paris, France

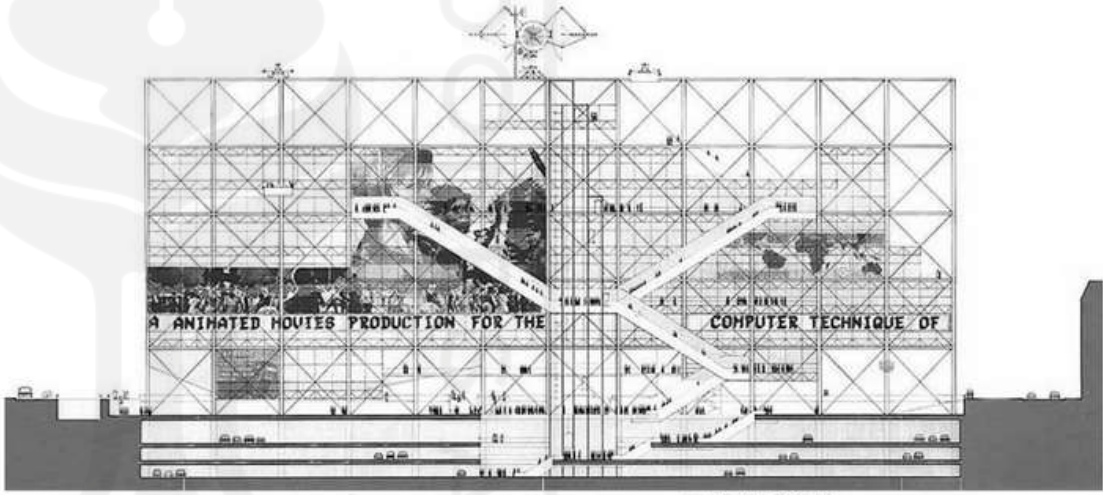
Located in the Beaubourg district of Paris, the Centre Pompidou is a large and complex edifice. It was created by the architectural team of Richard Rogers, Su Rogers, Renzo Piano, and Gianfranco Franchini in the style of high-tech architecture. The Musée National d'Art Moderne, Europe's greatest museum of modern art, is housed there, as well as IRCAM, a research center for music and acoustics. Art and literature from diverse cultures might be brought together in a single location. For the first time, the building's structural system, mechanical systems, and circulation were all visible from the outside.

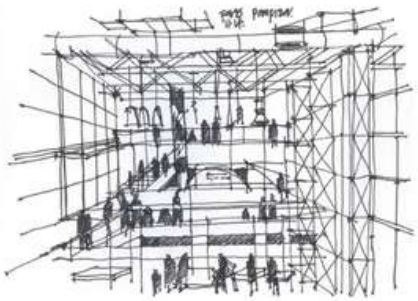
A community, not a structure, was the goal of the project, according to Piano, which includes a library, a museum, and a concert hall. The building amenities, corridors, lifts, and structural parts are all located on the outside of the structure. Making it easy to rearrange the interior areas. With more than 150 million visits since opening, the Centre Pompidou has earned its place among the city's most venerable cultural institutions. High-tech architecture was the final major style of the 20th century and one of the most significant.

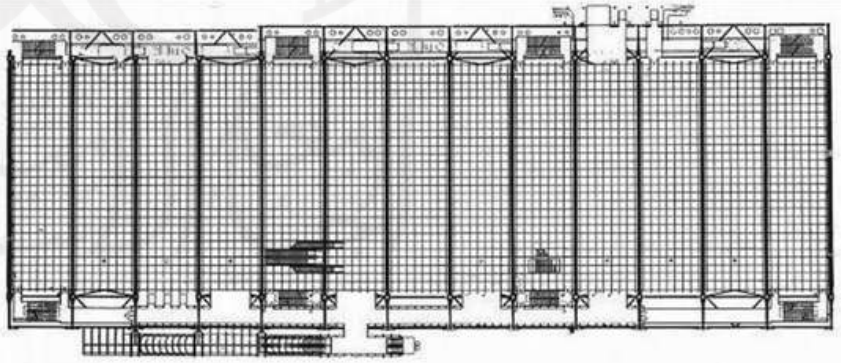


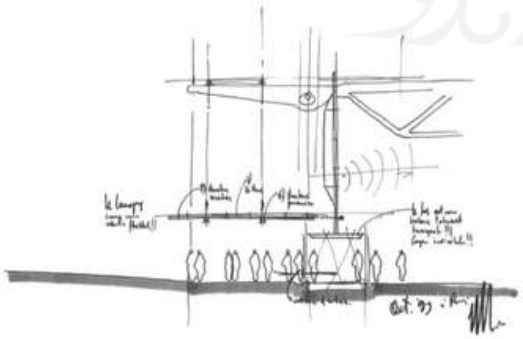





A ANIMATED MOVIES PRODUCTION FOR THE
COMPUTER TECHNIQUE OF







Centre Pompidou was primarily influenced by the work of well-known architects who experimented with concave shapes and flexible spaces. Rogers and Piano Price's Fun Palace, an unrealized concept, served as a model for this project's goal of maximizing practical flow, freeing up interior space, and fostering collaboration among the many disciplines.





A further important element was the architect's intention to create a meeting space not only for the art lover, but also for the local residents. The large slightly sloped paved piazza in front of the building fulfills this role introducing the high-tech structure of the building to its traditional surrundings and Paris street life.





As stated by Richard Rogers,
Pompidou proves that modernity and tradition can profitably interact and enhance historic cities.









Recycled Wood



The use of recycled wood as a sustainable material has gained increasing attention in recent years. The main reasons for this are environmental and economic. Recycled wood is an environmentally friendly product because it reduces the amount of waste that needs to be disposed, it uses natural resources more efficiently. Furthermore, recycled wood can be used in many different products such as furniture, flooring and construction materials.

Recycled Concrete



Recycled concrete (RC) is a sustainable material that has been used for building purposes since the 1960s. It is made from recycled materials, such as crushed concrete and asphalt pavement. RC can be used in place of regular concrete, providing an environmentally friendly option for construction projects. The benefits of using RC include its low environmental impact, resistance to weathering and corrosion, and ability to withstand heavy loads.

Recycled Steel



Recycled steel can be used as a sustainable material because it is made up of recycled material. This means that the recycled steel is environmentally friendly because it helps to reduce the amount of waste that is produced. Recycled steel is also a sustainable material because it is not vulnerable to weathering or leaching.

Natural Stone

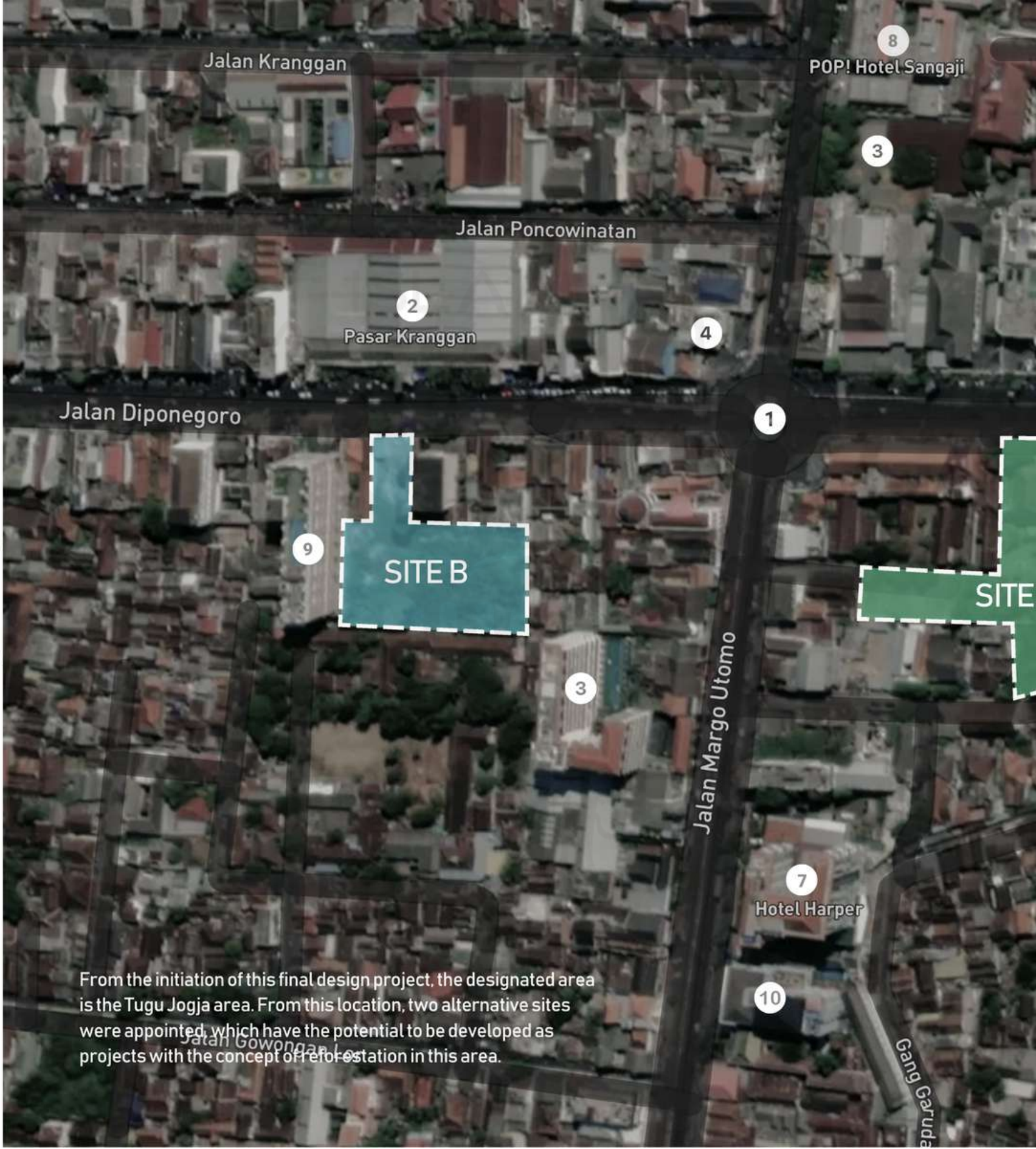


Natural stone is an increasingly popular material used in the construction industry. The many different qualities of natural stone make it a versatile choice for both interior and exterior applications. Natural stones . The many benefits of using natural stone as a building material include its sustainable nature and resistance to weathering and decay. The sense of touch is one of the most important factors when it comes to natural stone. This contact is what helps to create the feeling of texture and weight that natural stone has.

CHAPTER 3:

DESIGN PROBLEM SOLVING

Alternative Sites for Primary Development Locations



From the initiation of this final design project, the designated area is the Tugu Jogja area. From this location, two alternative sites were appointed, which have the potential to be developed as projects with the concept of reforestation in this area.



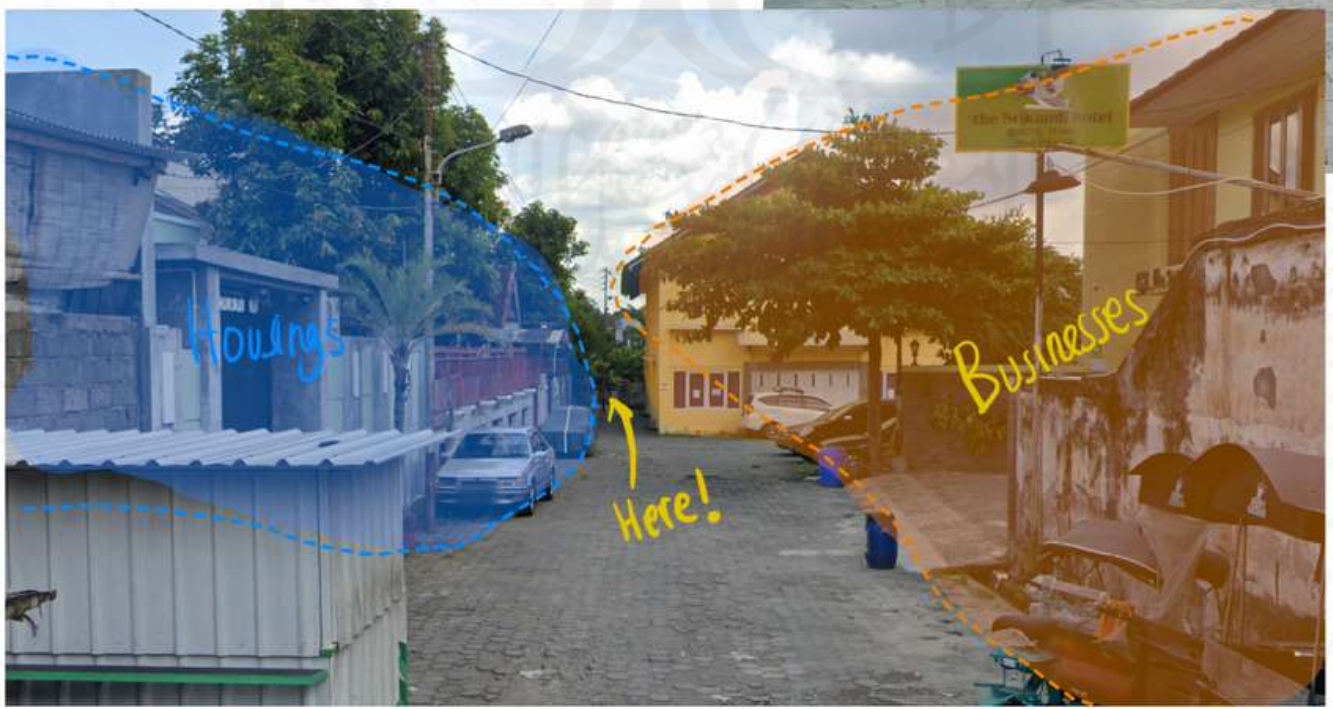
Places with High Volume of Visitors:

1. Tugu Jogja
2. Kranggan Market
3. Lor Tugu Foodcourt
4. Kebon Ndalem Coffee Eatety
5. Phoenix Hotel
6. Santika Hotel
7. Harper Hotel
8. Pop! Hotel
9. Grand Senyum Hotel
10. Arjuna Hotel

Going around...








Here too !
not maintained well
Greenery dominates here
Pedestrian occupied by cars


Tugu Jogja
Green


Old buildings
Roadways
SOFTLENS











The Tugu Jogja Area is one
creating the sense of city t









e of the busiest area in Yogyakarta City. Businesses, Hotels, Culinaries, even Tourism pours heavily in this area,
hat really develop so rapidly, becoming more vibrant and rich with its many uniqueness.













Situated southwest and the southeast of Tugu Jogja Area, the villages neighboring Tugu Jogja conists of many houses which are heavily packed and having less place for circulation, eventually less place for green area. A great part of this area are still owned by the Kesultanan of Yogyakarta


Gg. Kasuari


Gg. Kenanga


TANAH MILIK
KASULTANAN NGAYOGYAKARTA HADININGRAT
NO. SERTIPIKAT : HM. 00919
TAHUN SERTIPIKAT : 2014
LUAS : 13.465 M²


WARUNG
BU MARMI
0858 6615 8611
TERIMA PESANAN


ASUHAN
MLOSOPROJO









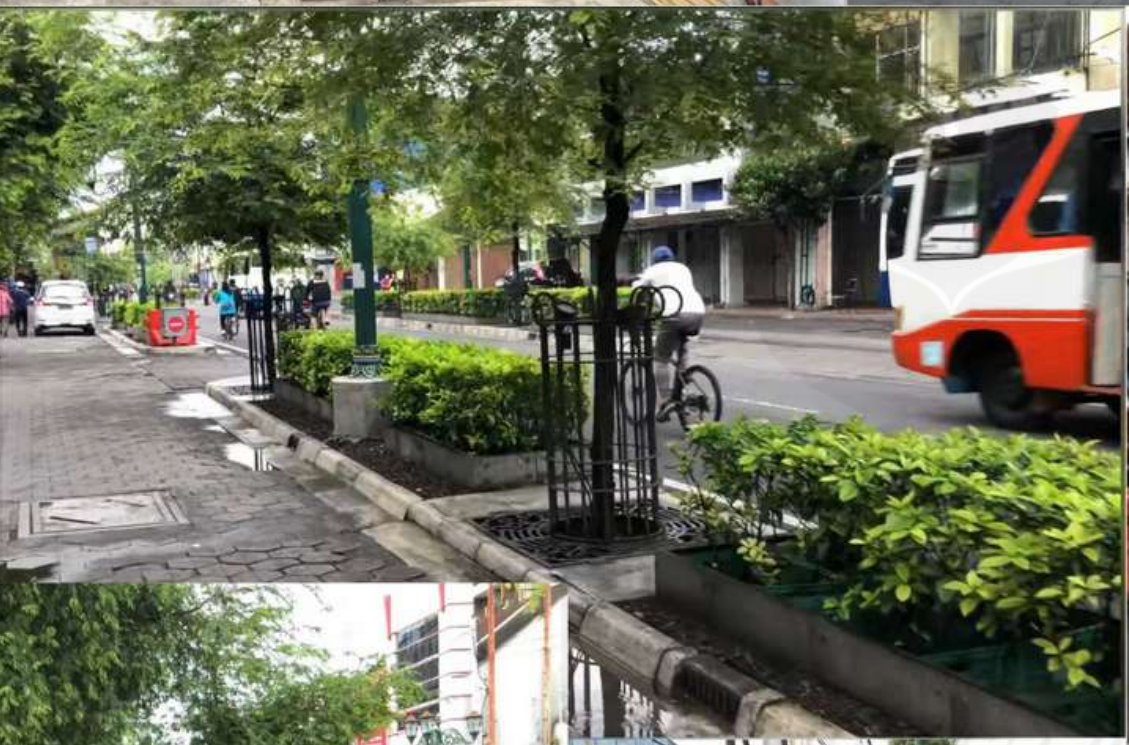




Going around the Tugu Jogja Area, the streets are the place where people tend to enjoy and look for zen while embracing the uniqueness of the city's distinct atmosphere, using car, bike, motorcycle, or even by walking.


PARKIR

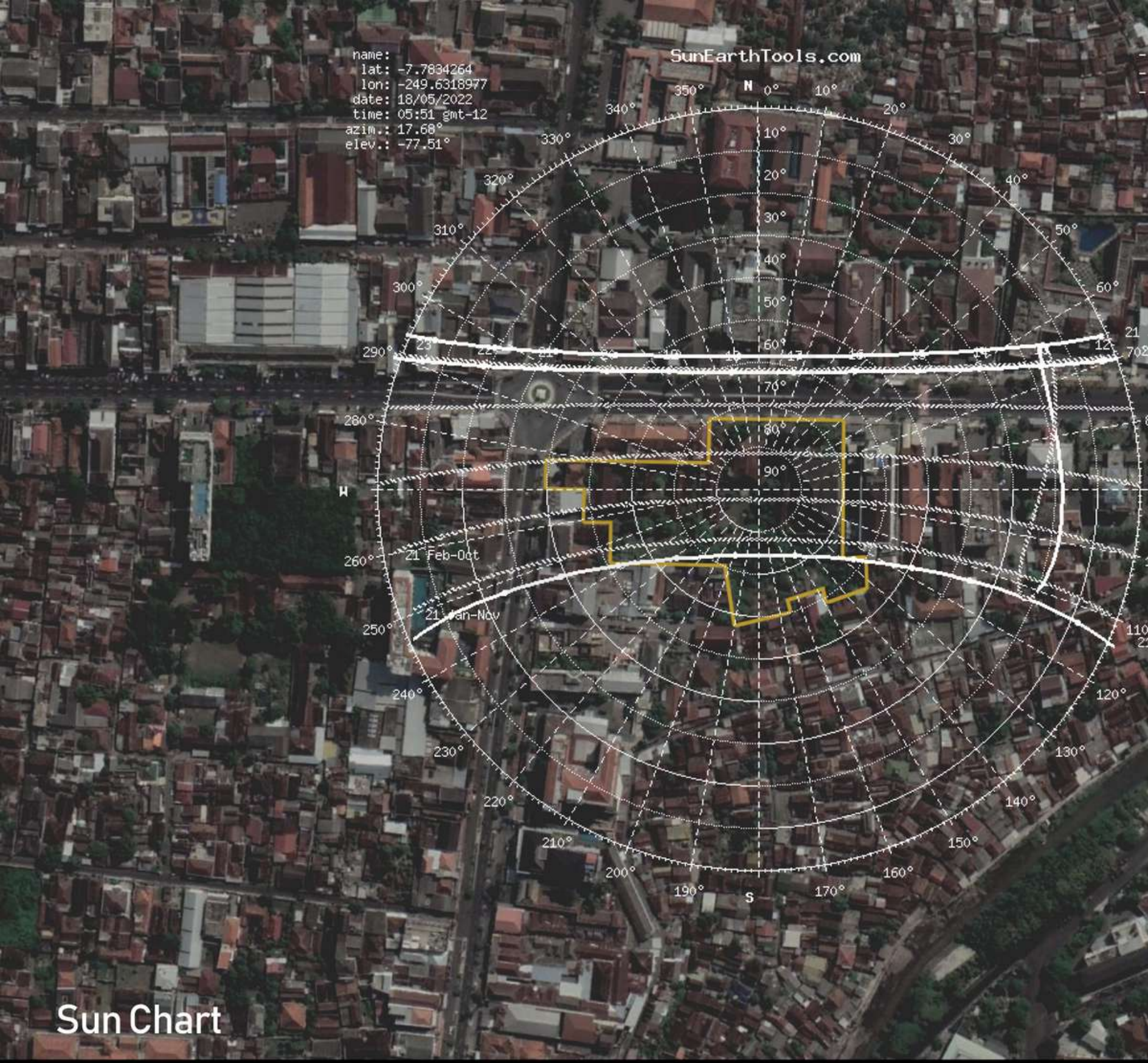





ARGUS
SOFTLENS & OPTIC CENTRE







Sun Chart

7°47'00.6"S 110°22'05.6"E



Location

Jl. Jend. Sudirman, Terban, Kec. Gondokusuman, Kota Yogyakarta, Daerah Istimewa Yogyakarta 55223

Total Site Area

± 11,600 m²



Selected Site



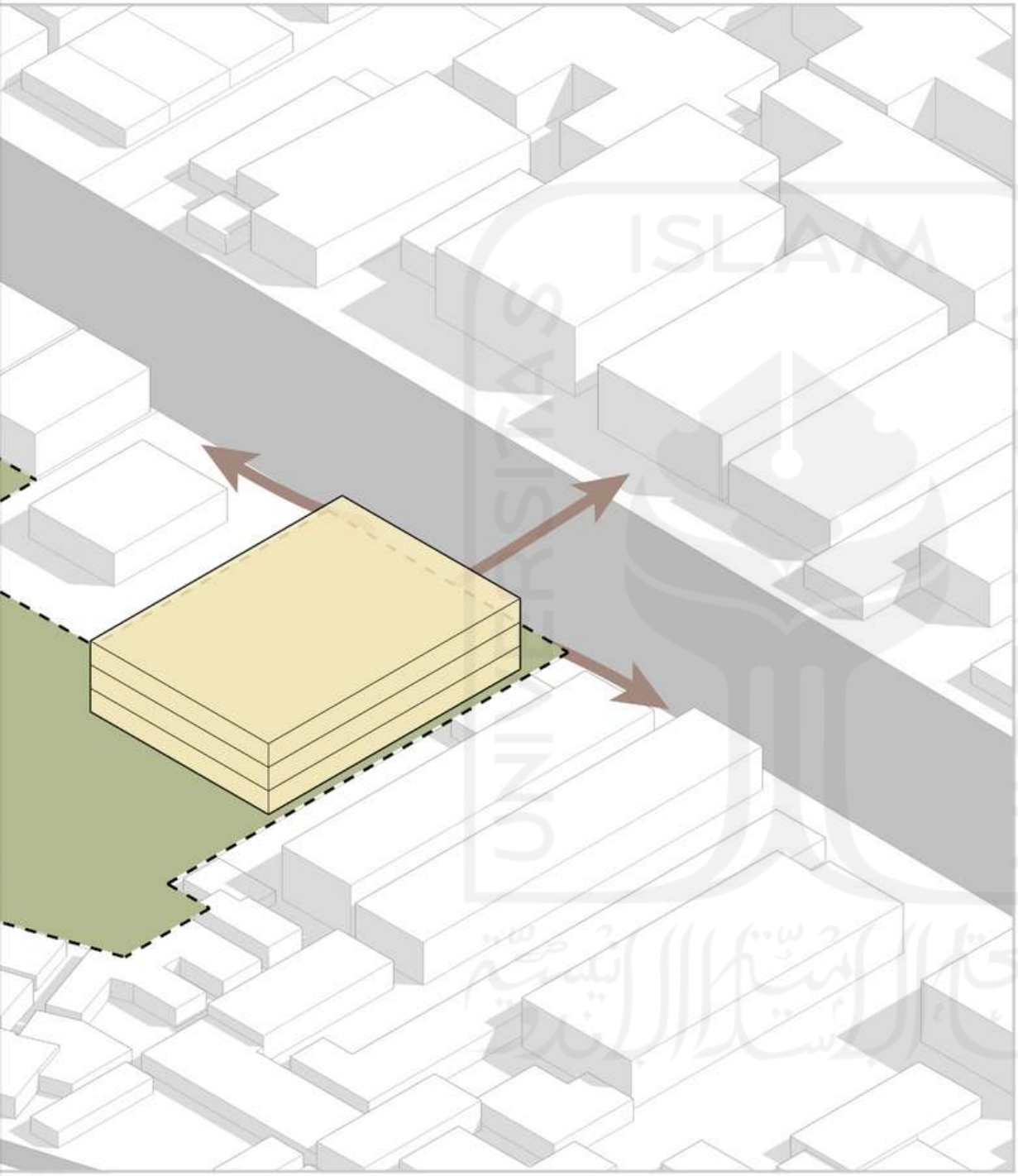
After conducting a survey of the two previously appointed sites, site A was chosen as the selected site. Considering the condition of site B which tends to be natural with the existing thick trees and shown in the site potential survey process, site A has more probability to be developed. The existence of abandoned buildings also adds added value as a material for developing the area with the adopted concept, "renaturalization".

Enlargement

Reduction



Site Development Plan



Annual Climate Data for Yogyakarta City

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	25.1 °C (77.1) °F	25.2 °C (77.3) °F	25.3 °C (77.5) °F	25.5 °C (77.9) °F	25.5 °C (78) °F	25.1 °C (77.1) °F	24.5 °C (76.1) °F	24.4 °C (75.9) °F	24.9 °C (76.9) °F	25.5 °C (77.9) °F	25.5 °C (77.8) °F	25.1 °C (77.2) °F
Min. Temperature °C (°F)	22.7 °C (72.8) °F	22.7 °C (72.9) °F	22.7 °C (72.9) °F	22.7 °C (72.8) °F	22.3 °C (72.1) °F	21.5 °C (70.7) °F	20.7 °C (69.3) °F	20.6 °C (69) °F	21.5 °C (70.8) °F	22.5 °C (72.5) °F	23 °C (73.4) °F	22.9 °C (73.1) °F
Max. Temperature °C (°F)	28.5 °C (83.2) °F	28.7 °C (83.6) °F	28.9 °C (84) °F	29.2 °C (84.5) °F	29.4 °C (84.9) °F	29.2 °C (84.5) °F	28.9 °C (84.1) °F	29.2 °C (84.6) °F	29.8 °C (85.6) °F	29.9 °C (85.8) °F	29 °C (84.3) °F	28.4 °C (83) °F
Precipitation / Rainfall mm (in)	342 (13.5)	312 (12.3)	338 (13.3)	299 (11.8)	155 (6.1)	117 (4.6)	67 (2.6)	48 (1.9)	75 (3)	192 (7.6)	355 (14)	381 (15)
Humidity(%)	89%	89%	89%	88%	85%	83%	81%	78%	78%	81%	86%	88%
Rainy days (d)	21	19	21	19	15	11	8	6	9	15	20	20
avg. Sun hours (hours)	7.7	7.9	7.7	7.6	7.8	7.5	7.0	6.8	6.3	6.4	5.9	6.7

Picture: Climate of Yogyakarta City
Source: en.climate-data.org

The difference in precipitation between the wettest and driest months is 333 mm | 13 inch. Temperatures vary by 1.1 degrees Celsius throughout the year.

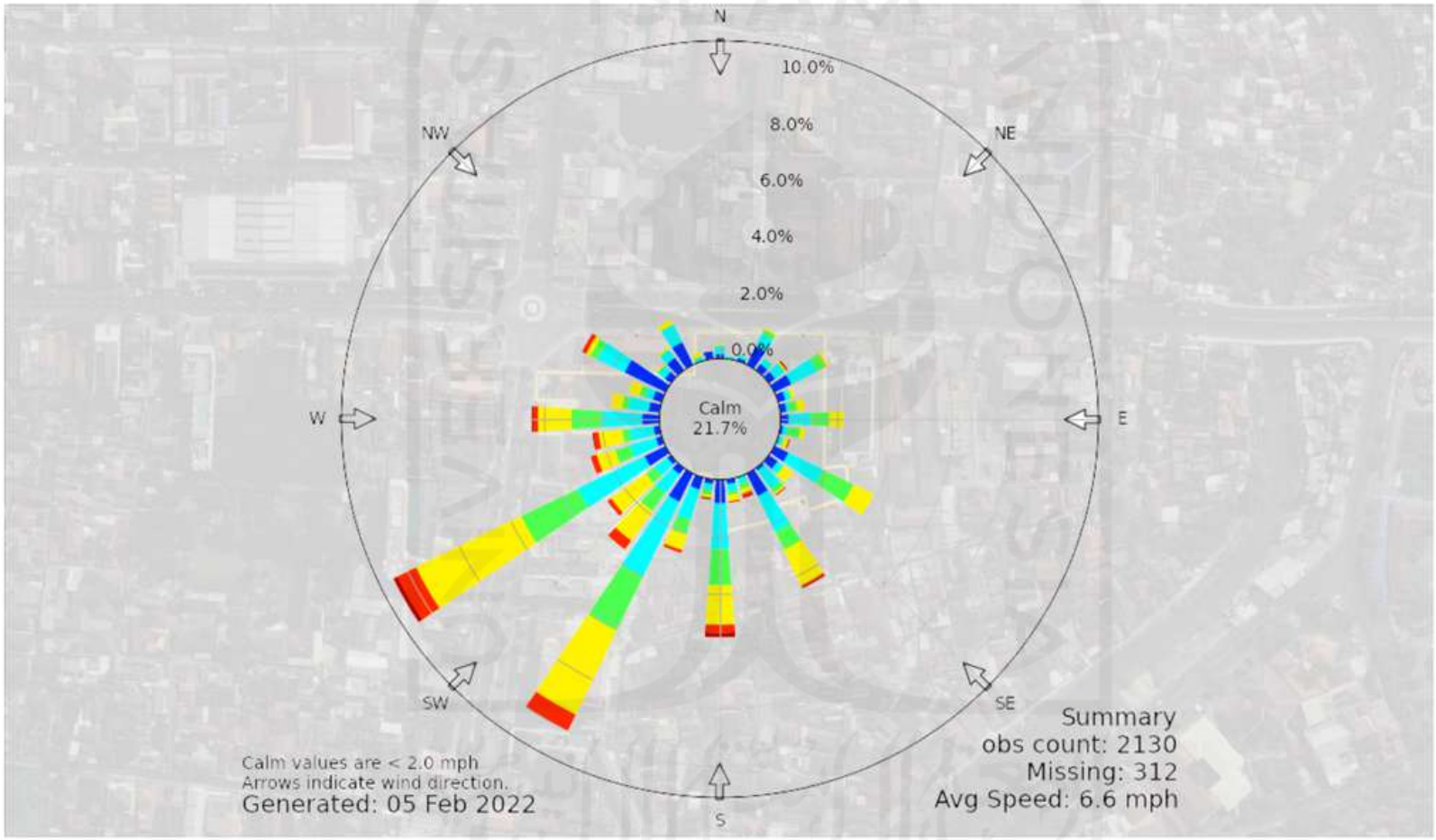
February is the month with the greatest relative humidity (88.97 percent). August is the month with the lowest relative humidity (77.68 percent).

The month with the most rainy days is January (27.53 days). August is the month with the fewest rainy days (8.17 days).

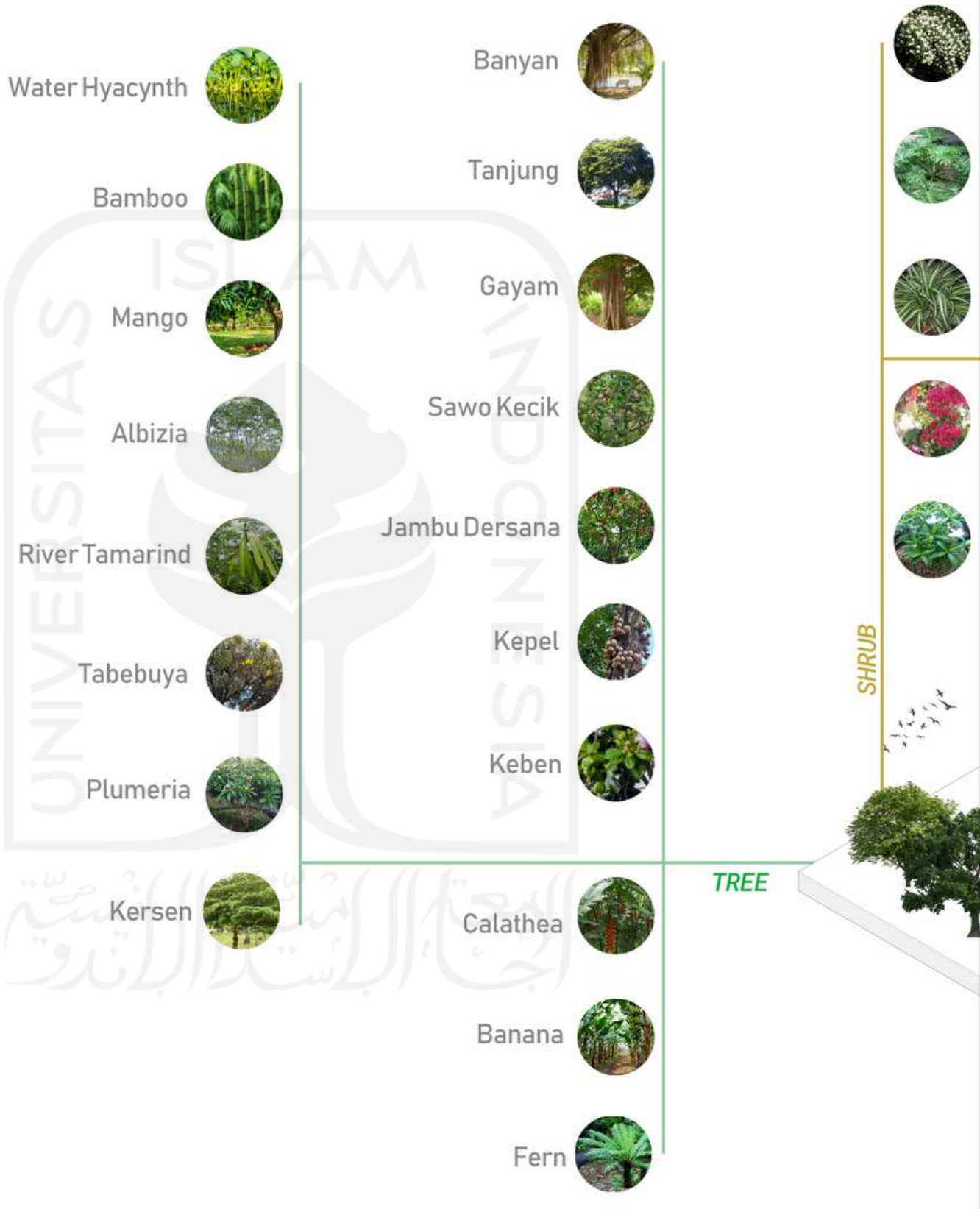
Yogyakarta is located near the equator, and therefore the summers are easily defined.

The months of April, May, June, July, August, September, and October are ideal for a visit.

Wind Rose


N
NE
E
SE
S
SW
W
NW
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
Calm
21.7%
Calm values are < 2.0 mph
Arrows indicate wind direction.
Generated: 05 Feb 2022
Summary
obs count: 2130
Missing: 312
Avg Speed: 6.6 mph
Wind Speed [mph]
2 - 5
5 - 7
7 - 10
10 - 15
15 - 20
20+

Vegetation and Animal Data



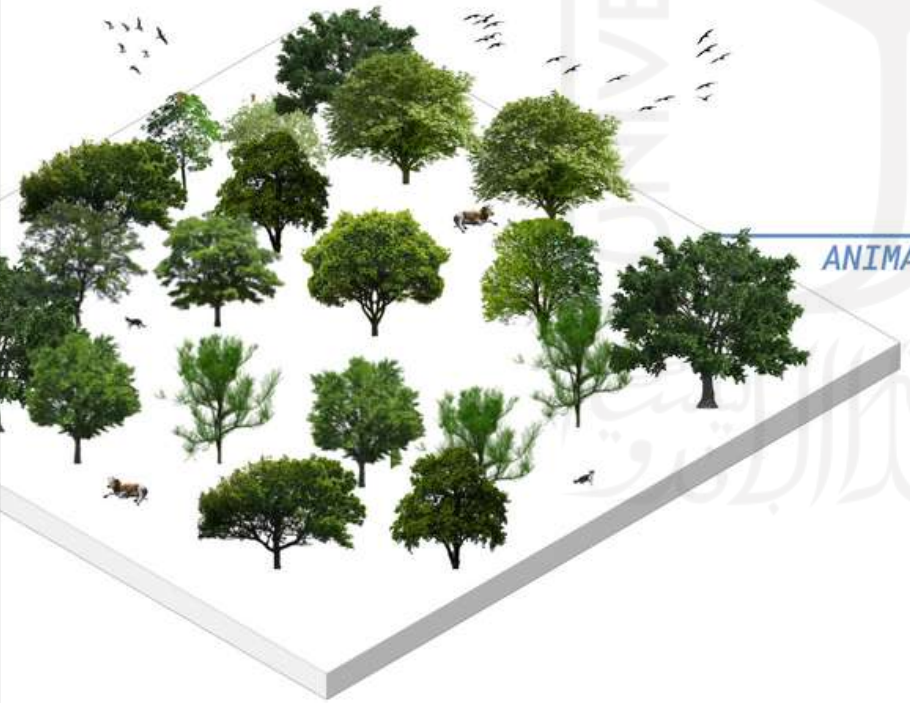
Jasmine

Philodendron

Lili Paris

Bougenville

Rembosa



Likwanyu

Bromelia

Amarilis

Sansevieria

ANIMAL

Rabbit

Squirrel

Cat

Chicken

Duck

Pigeon

Zebra Dove

Grasshopper

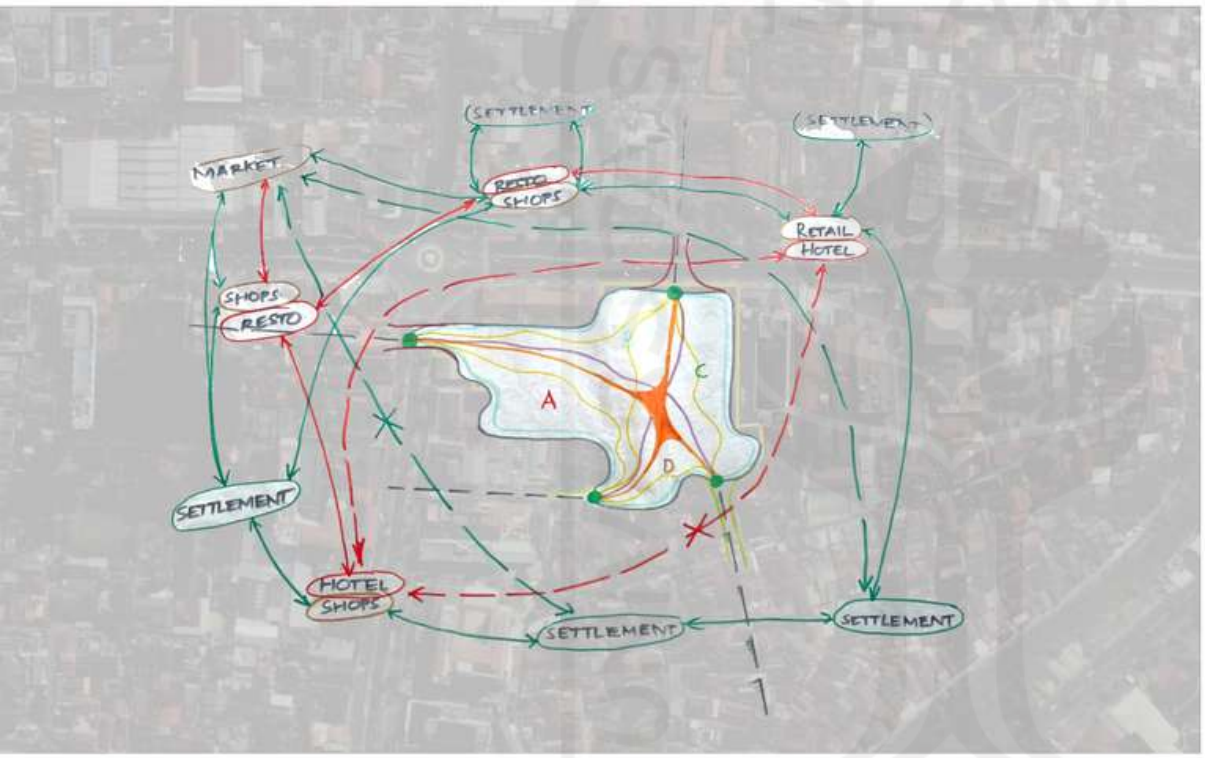
Carp

Louhan

Dragonfly

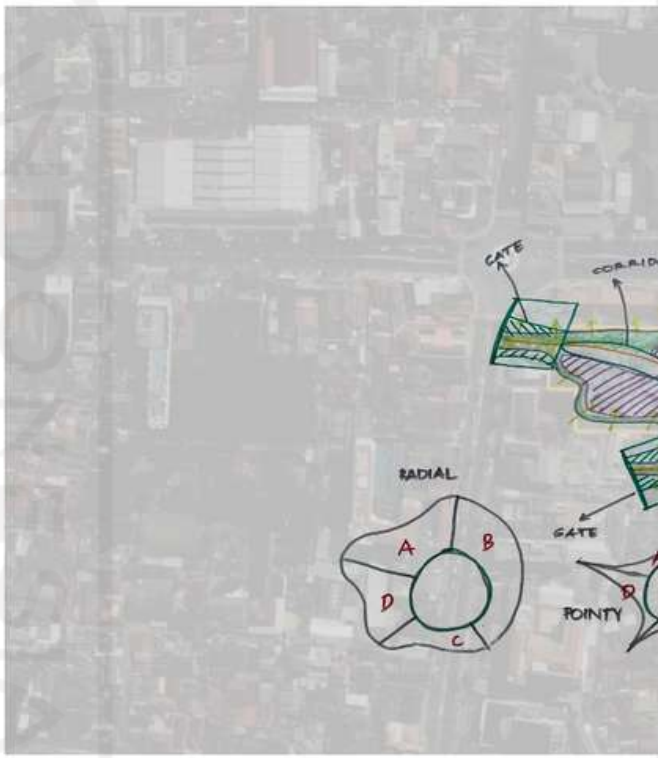
PRELIMINARY PRODUCTION

Area Identification and Connectivity



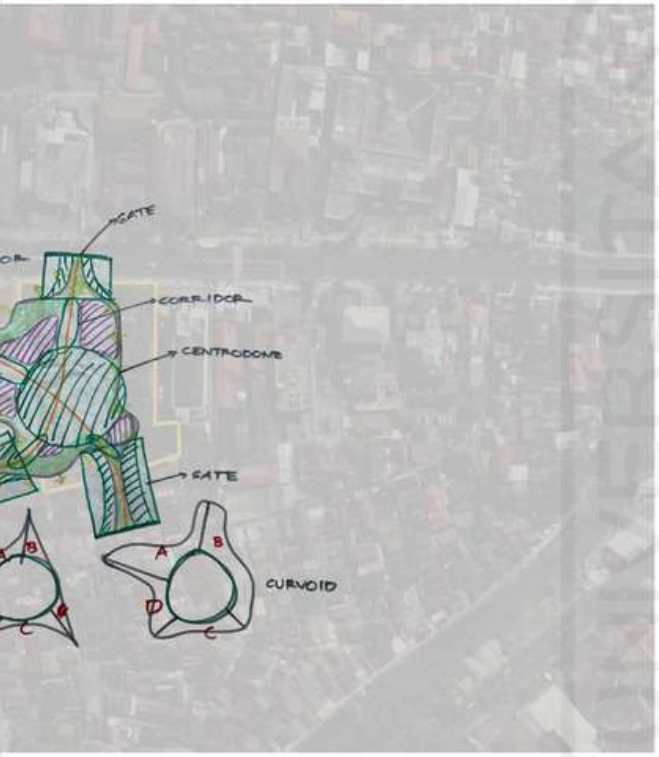
In the process of analyzing the site in order to determine the design form that will be lifted on the available site, it is necessary to identify the surrounding conditions. Here, certain areas are identified where a particular type of activity is concentrated. From that, it is known how each activity concentration can be connected through the development of the site to be proposed.

Identifying Des



In this section, the identification
the existing parts on the site. S
determining site access, severa
support circulation, and also obt
new building that will be propo
some site forms are generated
general conceptu

sign Potentials



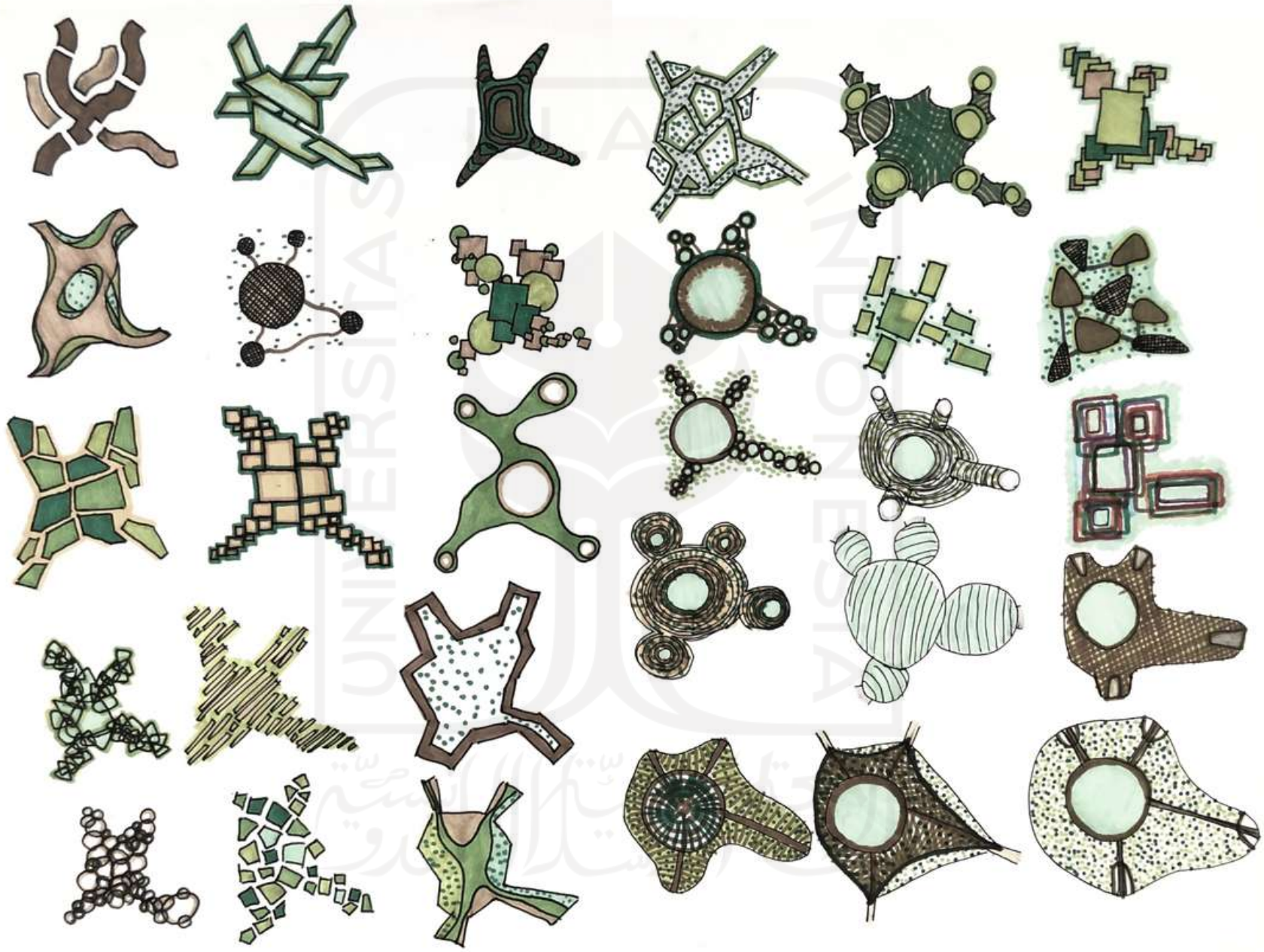
process has been carried out on
Some are determined such as
al divisions of space or areas to
aining the placement of the main
osed in this project. In addition,
d as an alternative towards the
ual development.

Identifying Circulation and Area to be Developed

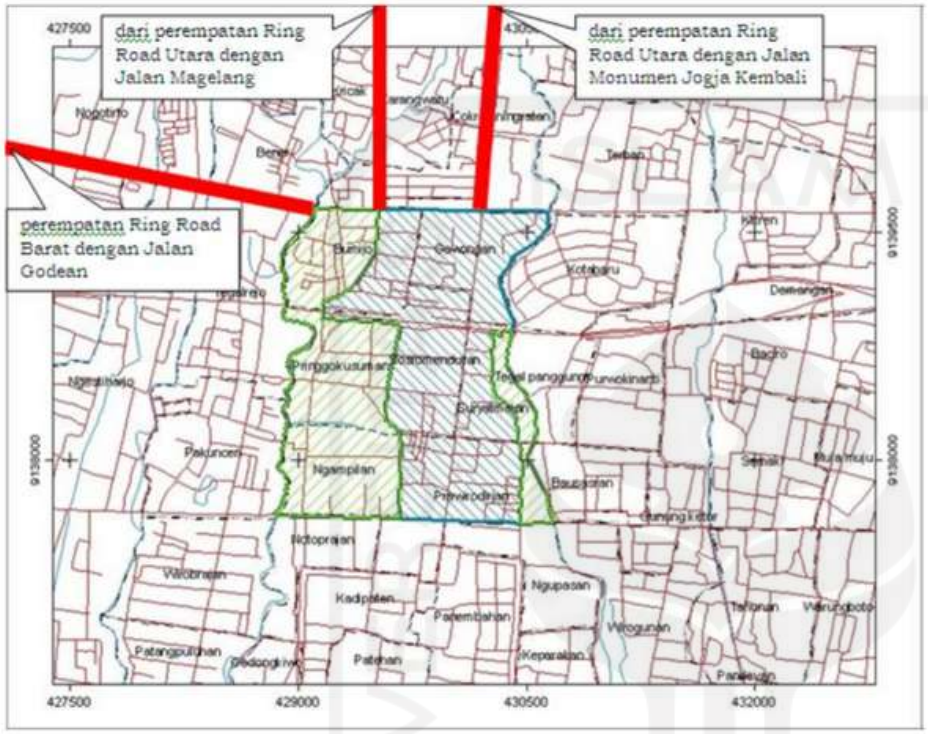


From the selected site conditions, it is found that there are several probabilities for determining the existing circulation at the site through outlines and finding common ground as a breathing space, so that the design of the circulation space can be more specified according to location and use. From the spaces that have been used for circulation, several lands have the potential to be developed as new building designs.

Parti Sketch: Form



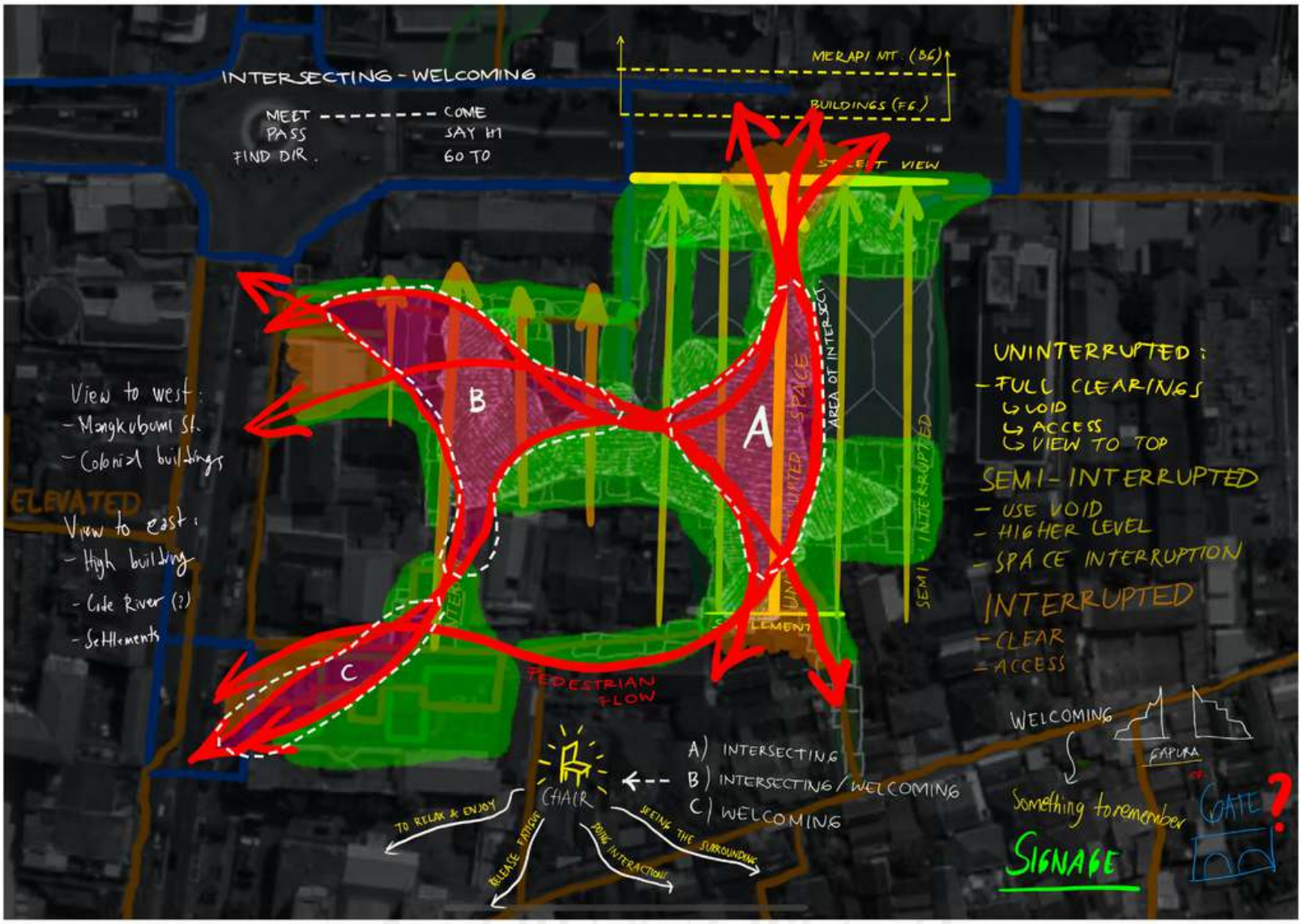
Architectural Guide for New Buildings with Regional Culture



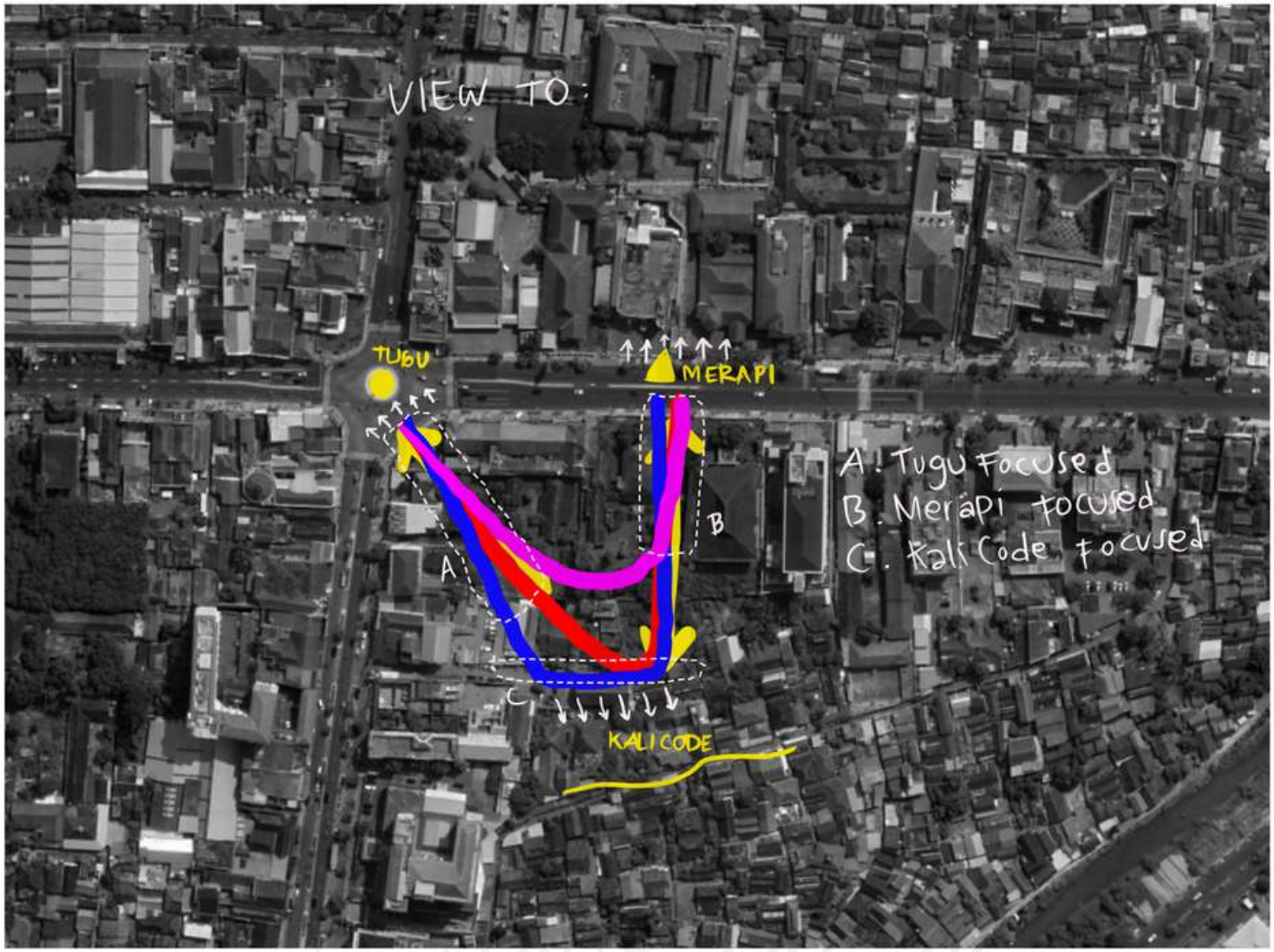
Picture: Heritage Areas of Yogyakarta City Mapping
Source: peraturan.bpk.go.id

As referred to in the governor's regulation paragraph, Tugu Jogja Area is included in primary area, therefore any development uses the following directions:

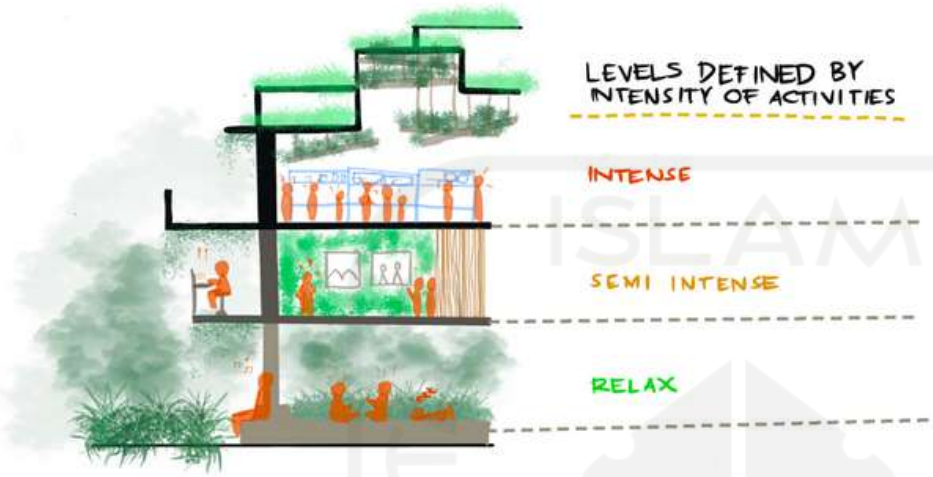
1. The shape of the building is in accordance with the types of Cultural Conservation Buildings in the Heritage Area, while the building that is not visible from the outside can be adapted to technological developments.
2. Decorative variety in accordance with the types of decoration of Cultural Conservation Buildings in the Heritage Area.
3. The materials used can use new materials resulting from technological developments but visually must still show similarities to the materials used in the Cultural Conservation Building in its Heritage Area.
4. The vegetation is adapted to the original vegetation in the Heritage Area.
5. The outdoor furniture is designed in harmony with the types of decoration in the Heritage Area and does not obstruct the view of the Cultural Heritage Building.



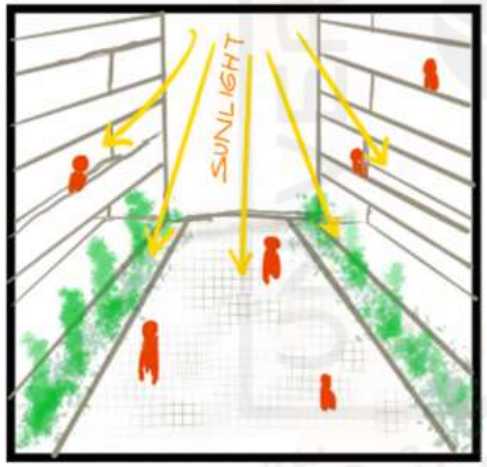
Here, based on how the condition of the site, some intersecting areas are generated. Here as well, by the formation of circulation, it is also taken to consideration that view outward is noted so that any interruption can transform how the particular space being shaped and its quality being built.



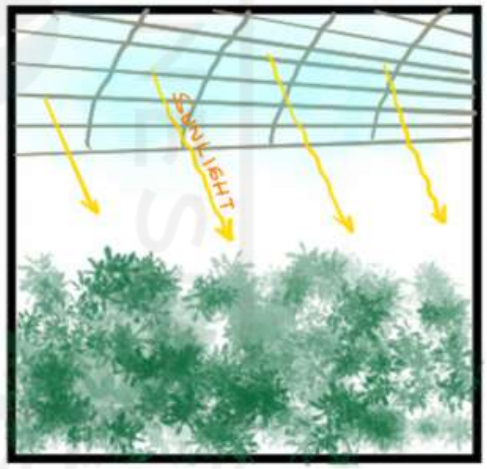
Based on how views outward are being captured, by using lines that repeating and stacking, will generate fixed circulation area. This as well with taking consideration on how some specific circulation area can have its distinct view which every on of them are having its own characteristics.



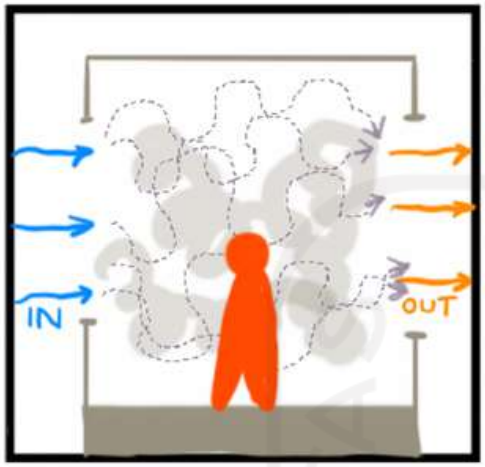
How levels are being defined by its levels can affect the quality on each level, eventually will create specific zonings that one another does not mixed all together with other non-relating uses/activities.



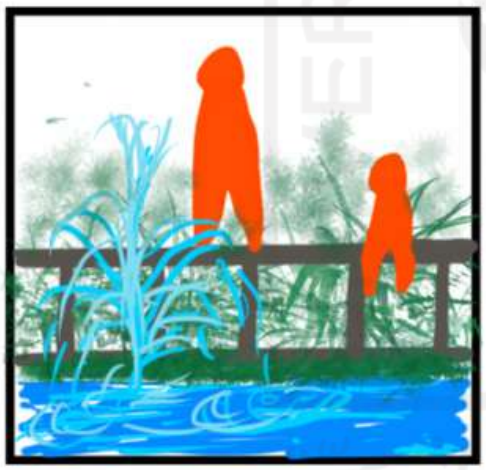
Atrium is one of solution towards bringing more sunlight in, and will eventually helps to grow more greenery indoors, optimum lighting, as well as more embracing the nature.



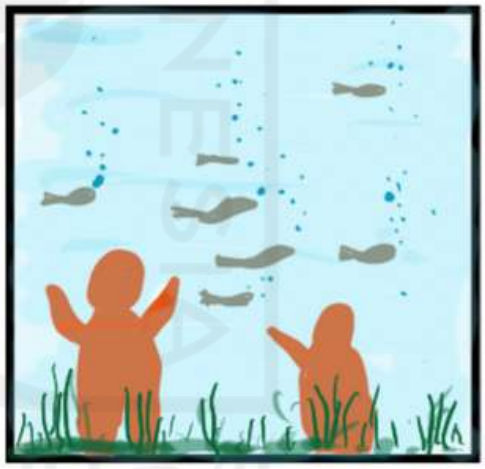
The use of transparent material for shading purposes such as glass or other alternatives, this will not only brings more natural lighting, creating unique configuration would be aesthetically pleasing as they will create shadow patterns.



In order to achieve a comfortable indoor spaces, the use of passive cooling is crucially needed. Not only it will consume less energy, means it will as well maintaining a healthy room condition from the use of artificial cooling system, and fresh air is available at all time.



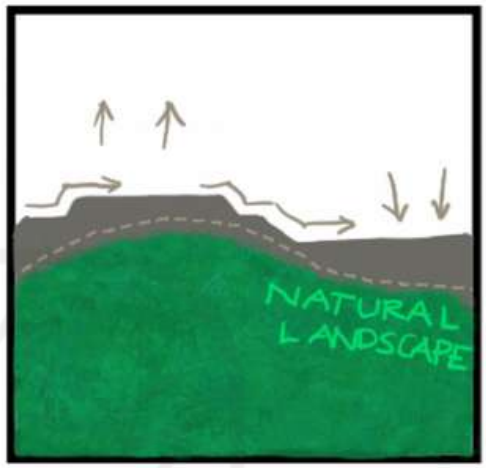
Water is one of the elements that could play role on defining a great green space as well as a great architecture. Senses also play roles here. Eye looking at water as visual, water splash as sound appealing. Water can also contribute to air cooling which heat diminished by it.



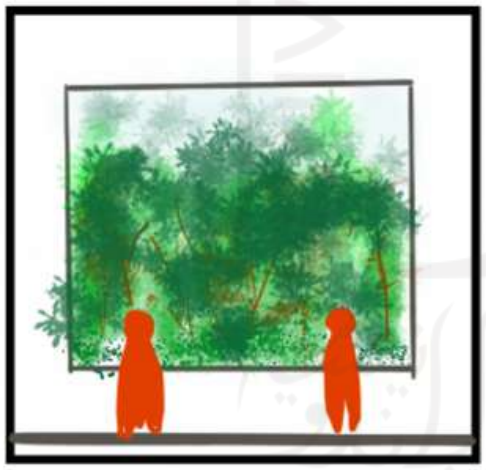
Water always been attracting to many people. When it contains living creatures such as fish, frogs, etc., it will create a space to be more alive. When water features exist, they give a stronger relationship to the nature in the specific space.



One application in maximizing the provision of green space is to use wall that can become a medium for plants to grow. The act as a medium will make the building to have a bond with the surrounding nature, rather than avoiding them.



In maximizing the existence of nature on the site, it is needed to do some contour manipulation that sometimes mimic the actual natural setting, Not only that, it also being played o the building elements as well in order to carry out the true natural atmosphere being made.



The window to the woods. Could act as live painting which gives unique sense when looking into it, it gives the sense of nature existence rather than isolation. Open, wide and correct placement based on the view, gives calmness



Landscape designing on natural features is sometimes required to have a better setting and easier accessibility to move around. Increasing the aesthetic atmosphere, allowing for more people to enjoy there.



Fire is one of element that rather difficult to be incorporated into a general design of a place, Making it in existence would be completing the natural atmosphere as a whole with more rich unique compositions.



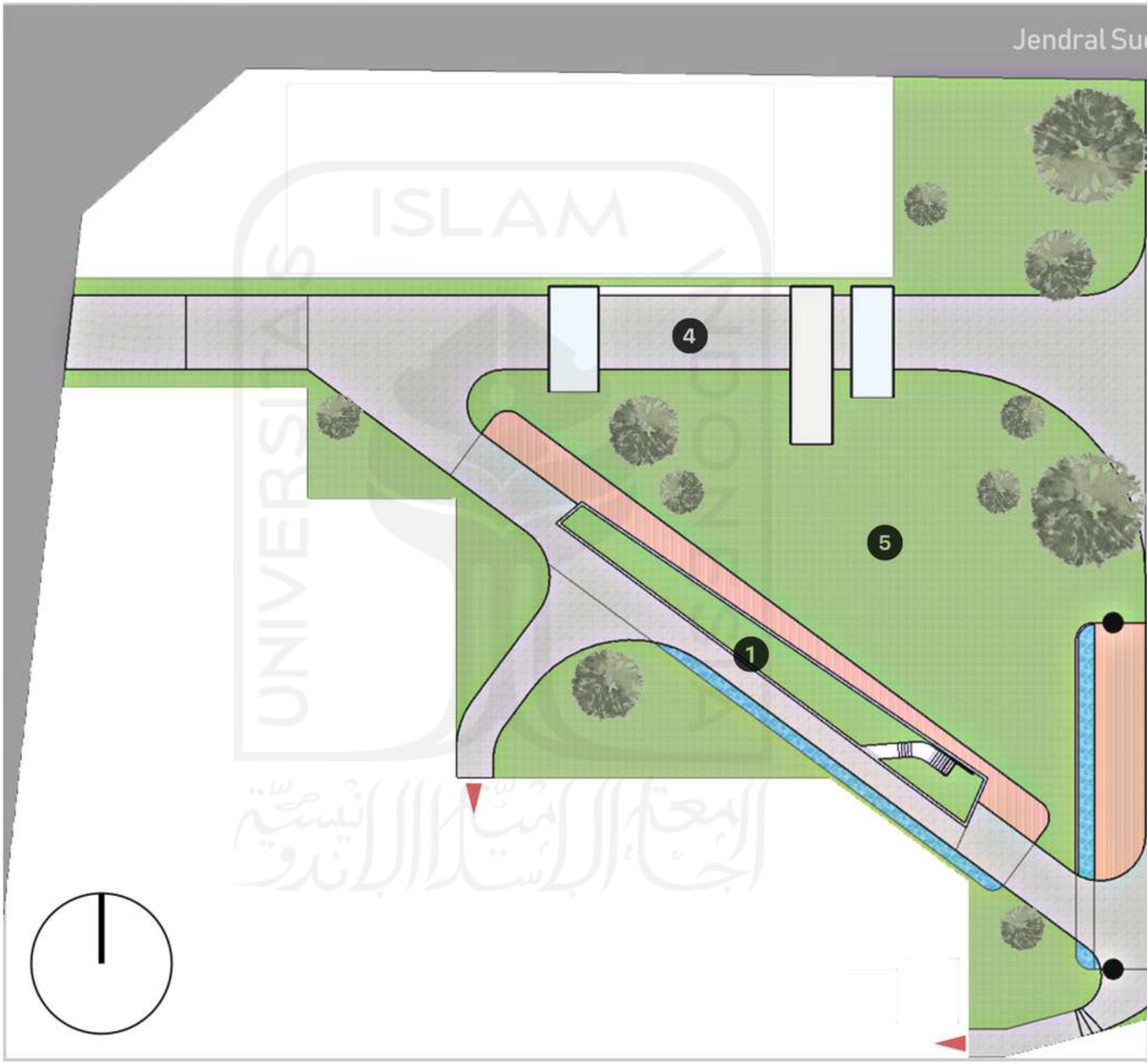
Plays on landscape, different use of areas may be defined by its own textures. Not only will not create monotonous atmosphere which everything looks the same, this will allow for more variaties in terms of how diverse the new ecosystem is being build

CHAPTER 4:

SCHEMATIC DESIGN

ISLAM INDONESIA
STATE ISLAMIC UNIVERSITY

SCHEMATIC DRAWING



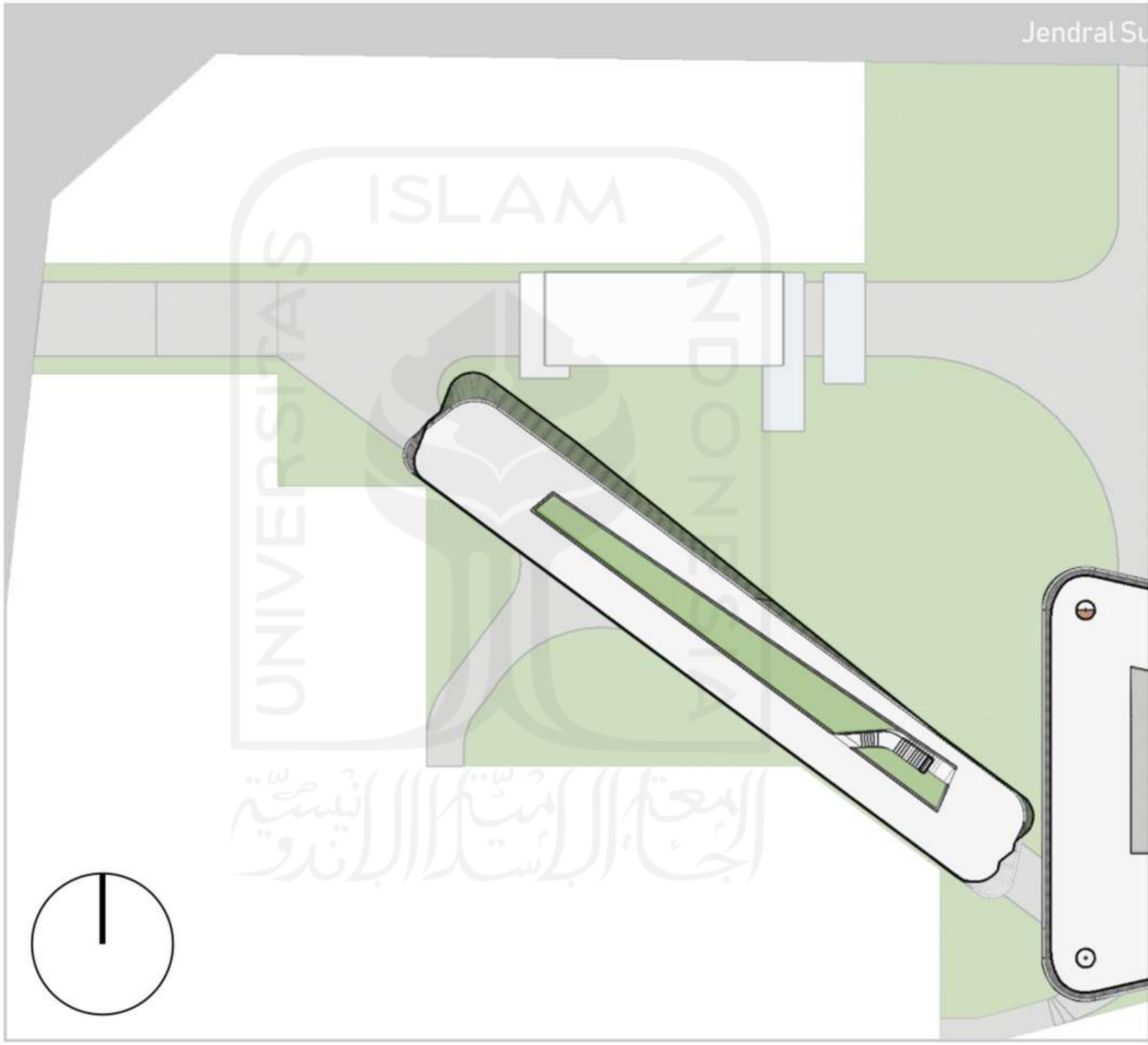


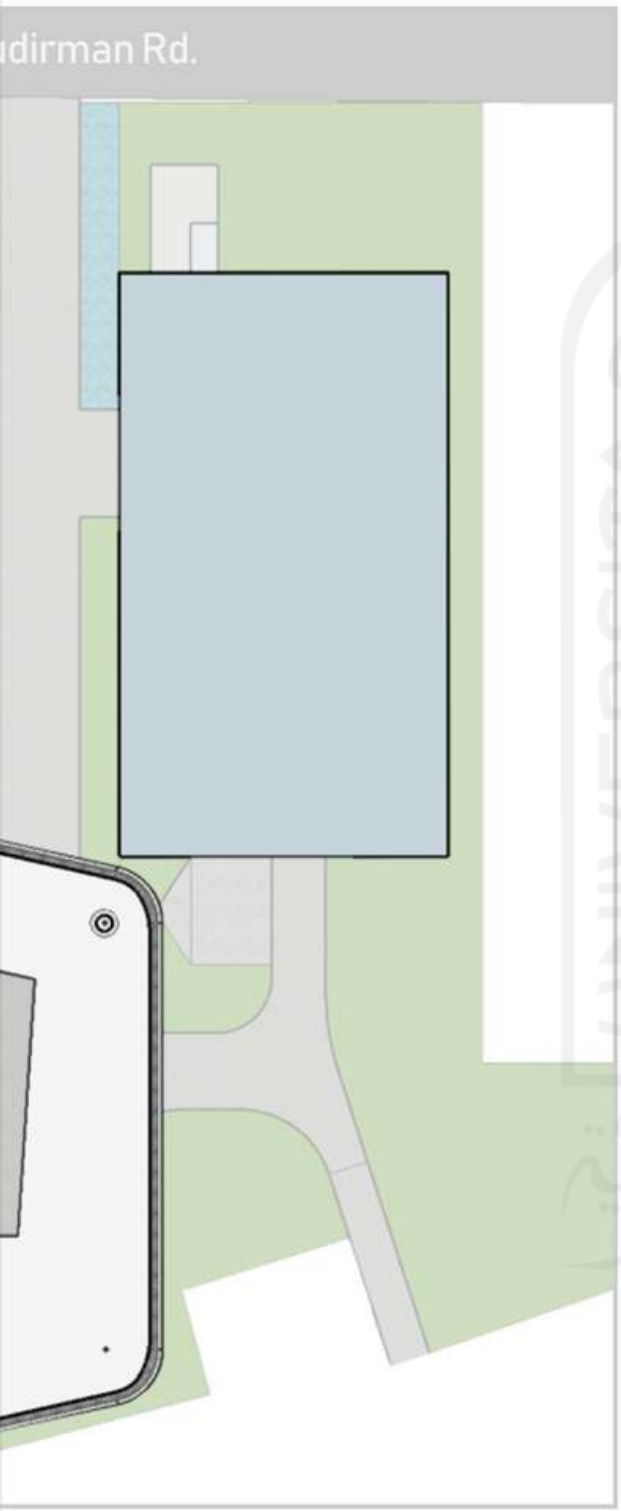
Information:

1. Communal Corridor
2. Breathing Dome
3. The Halls of Creativity
4. Avenue of Nostalgia
5. The Eden Refuge

Site Plan
1:500

SCHEMATIC DRAWING

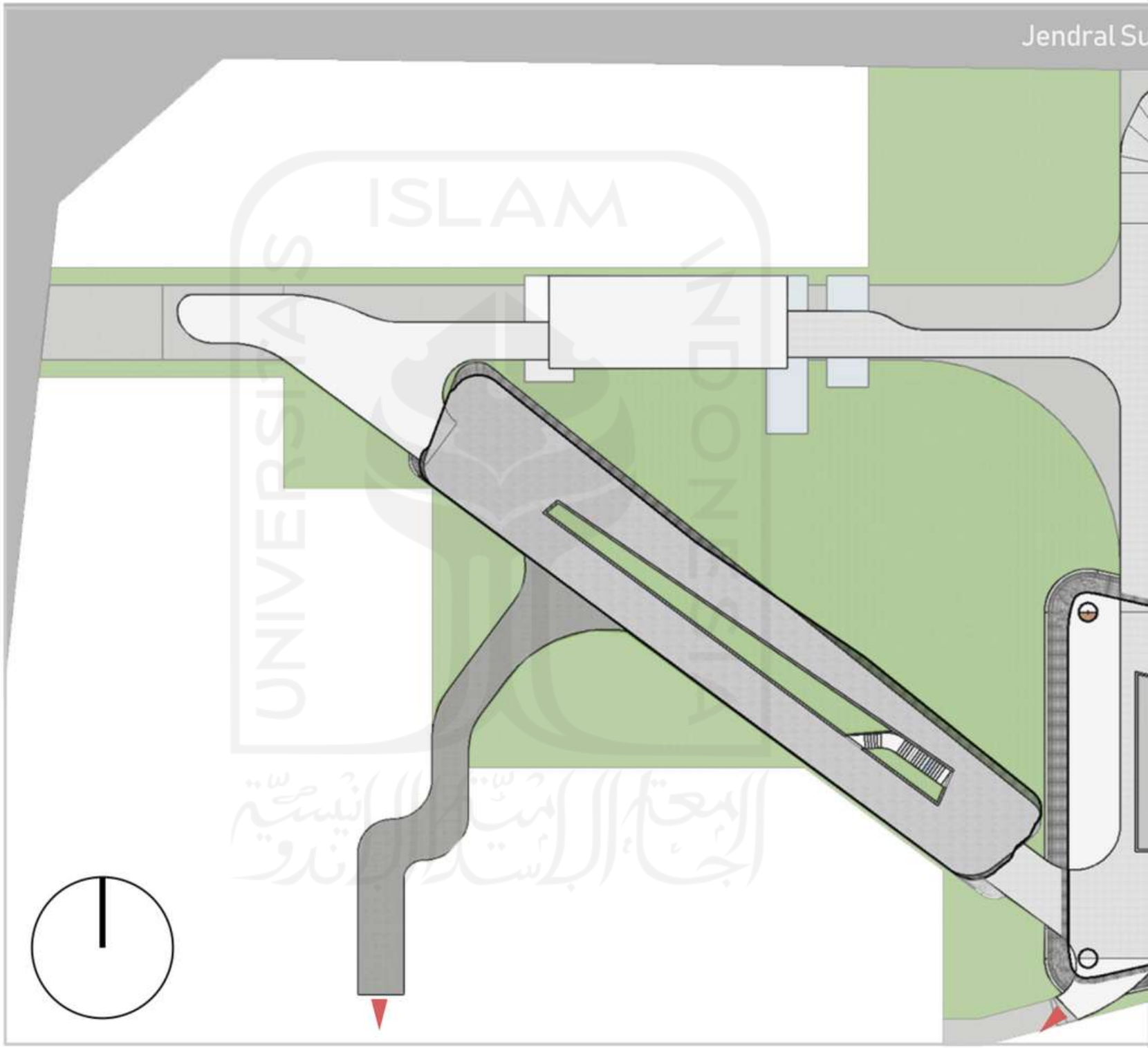


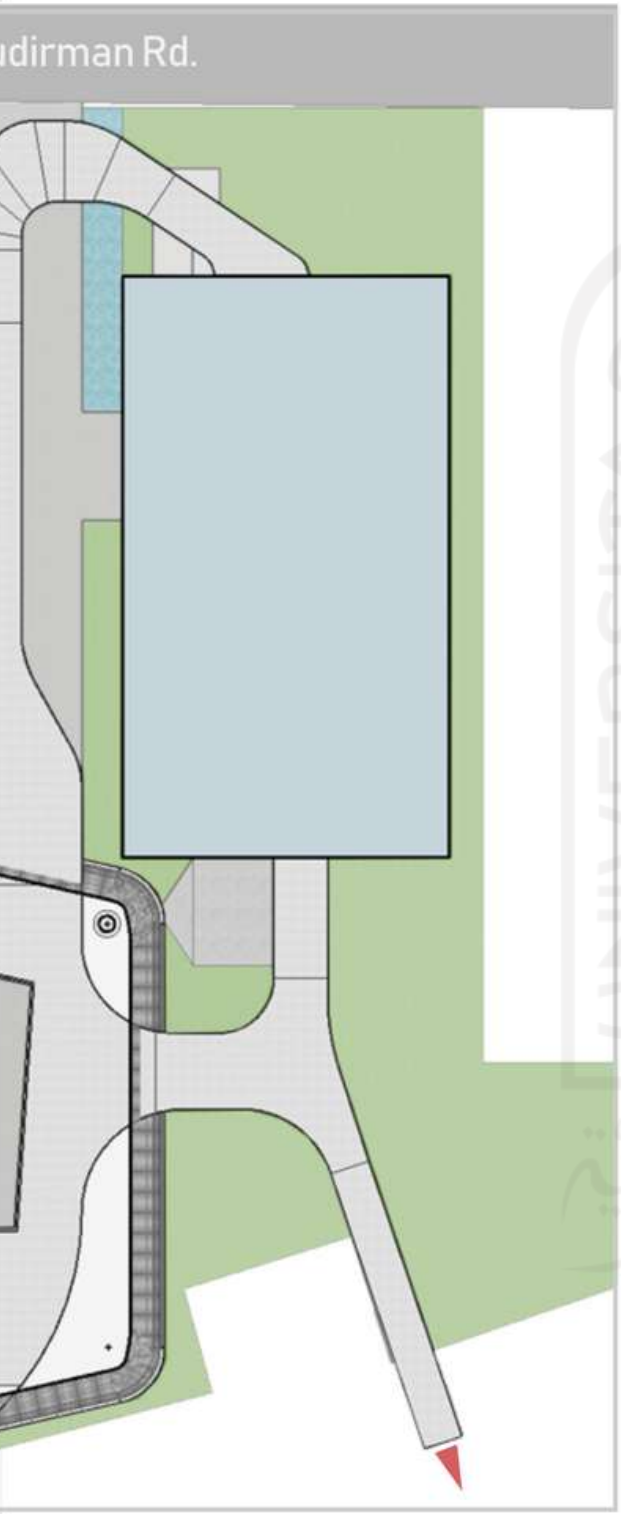


1st Floor Plan

1:500

SCHEMATIC DRAWING





2nd Floor Plan

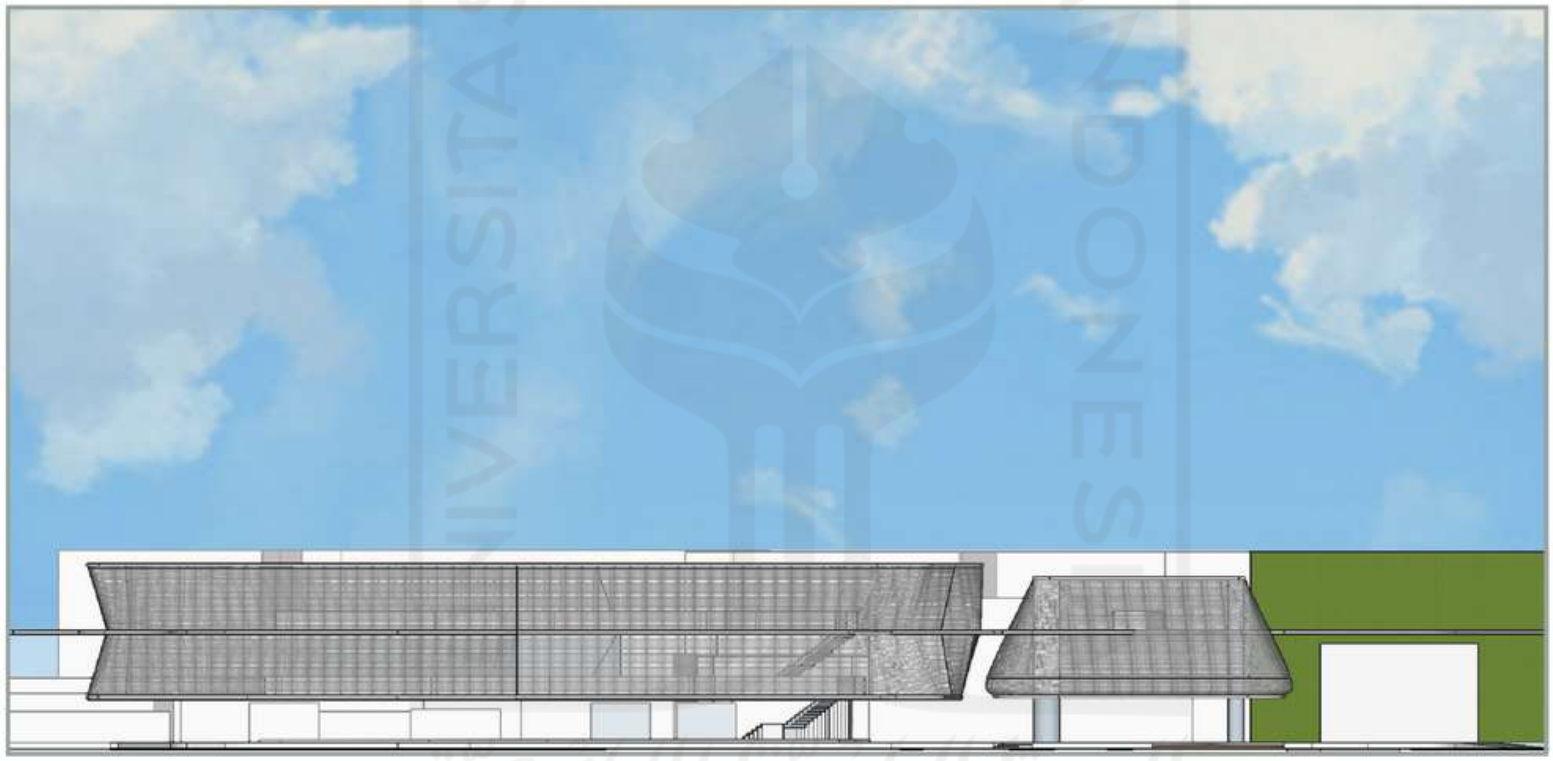
1:500

SCHEMATIC DRAWING



West View

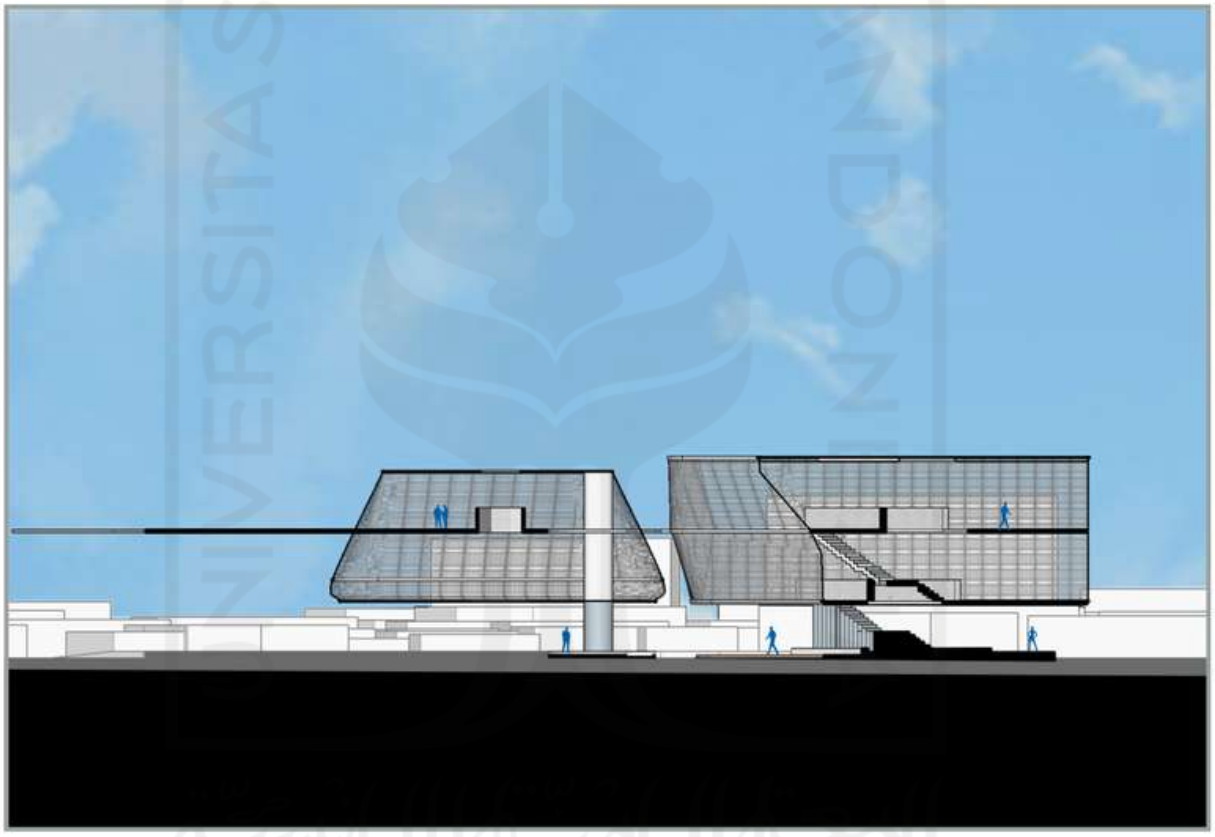
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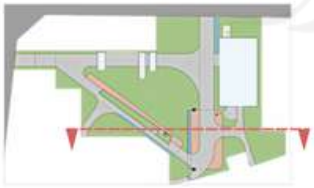


South View

1:500

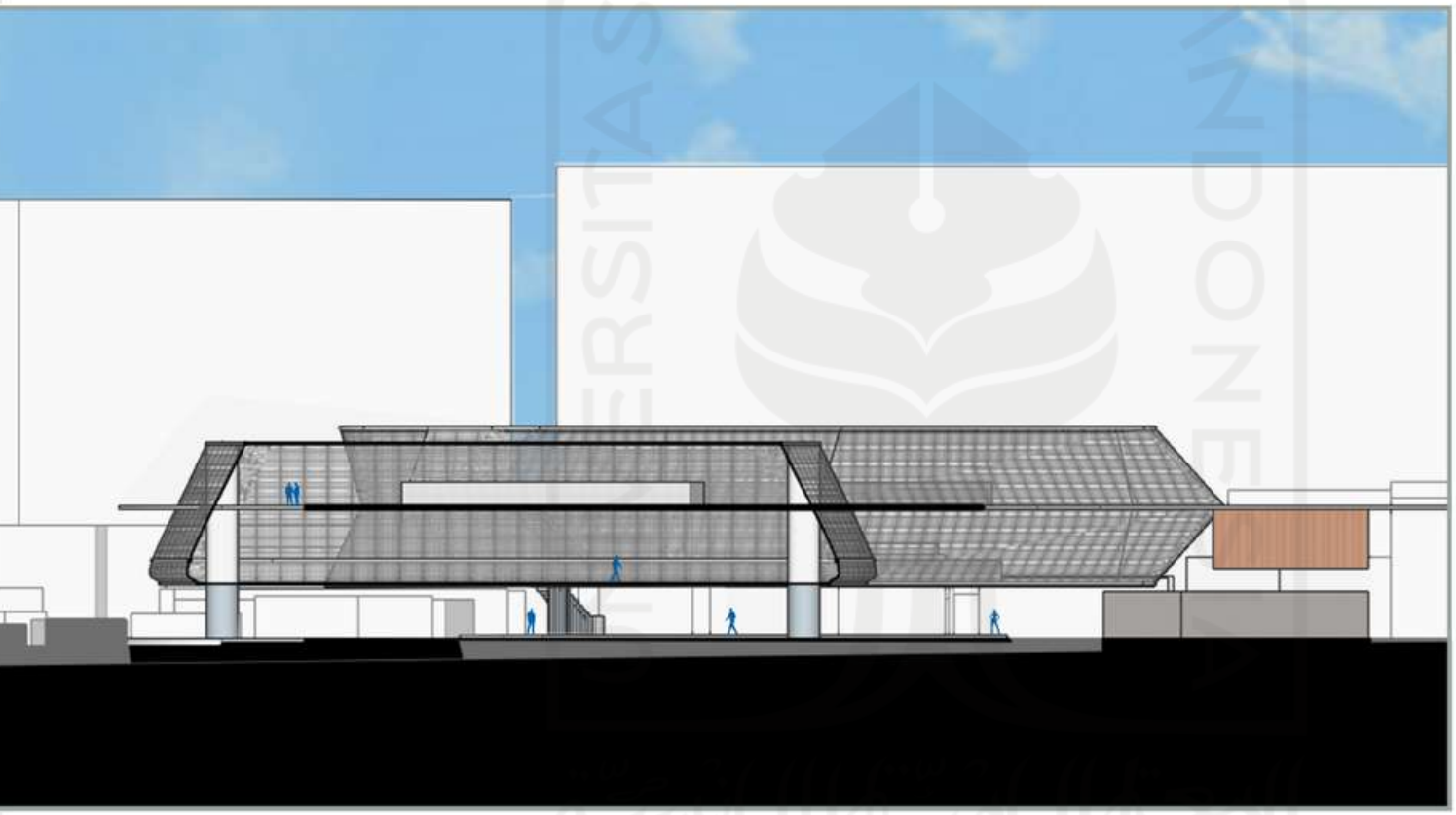
SCHEMATIC DRAWING

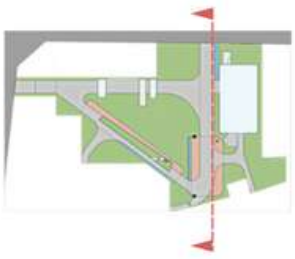




Section A-A

1:500





Section B-B

1:500

SCHEMATIC PERSPECTIVE





city skyline view

SCHEMATIC PERSPECTIVE





SCHEMATIC PERSPECTIVE





SCHEMATIC PERSPECTIVE





SCHEMATIC PERSPECTIVE



UPPER PEDESTRIAN



– – – ➤ LOWER PEDESTRIAN

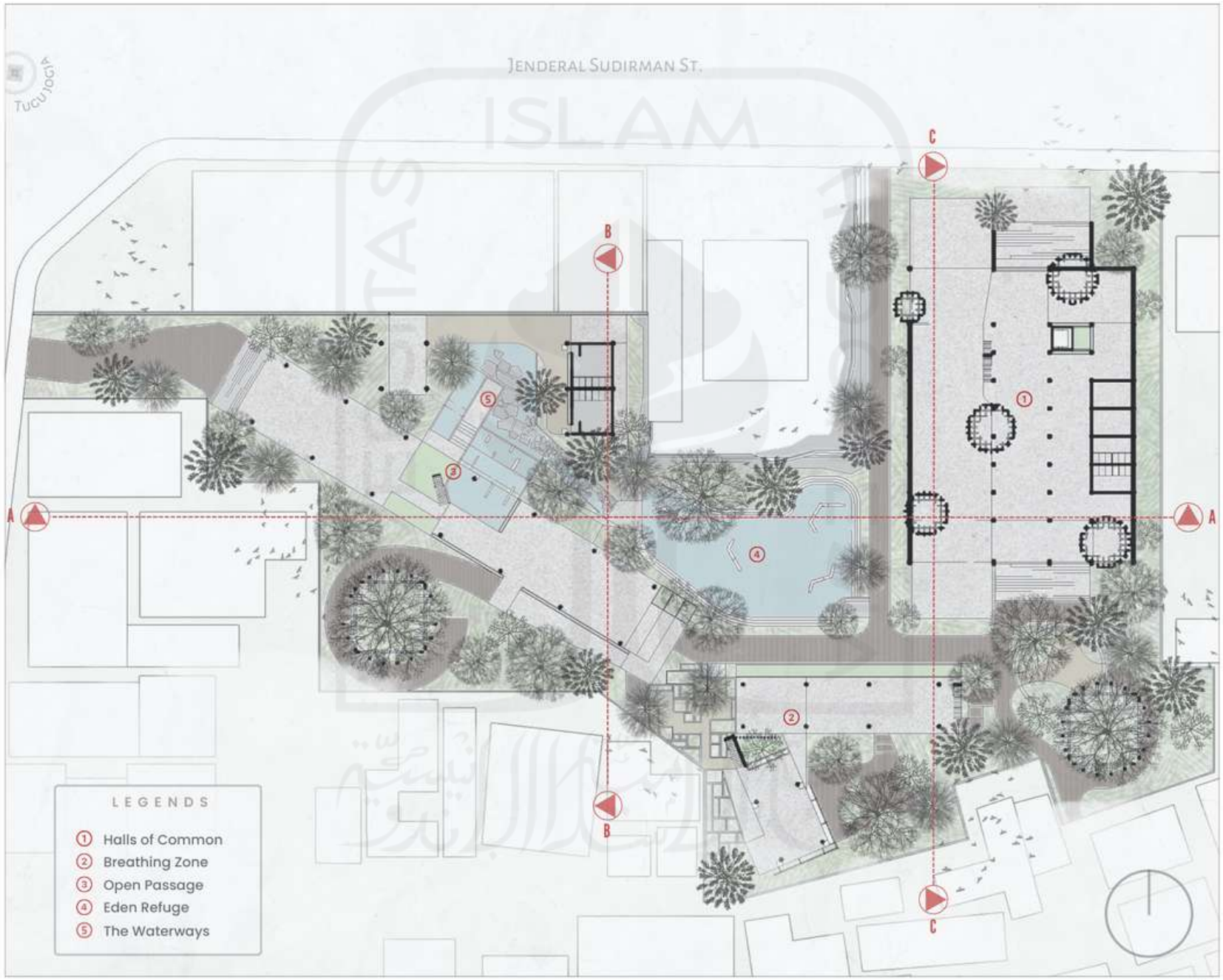
CHAPTER 5:

DESIGN DEVELOPMENT

ISLAM
INDONESIA

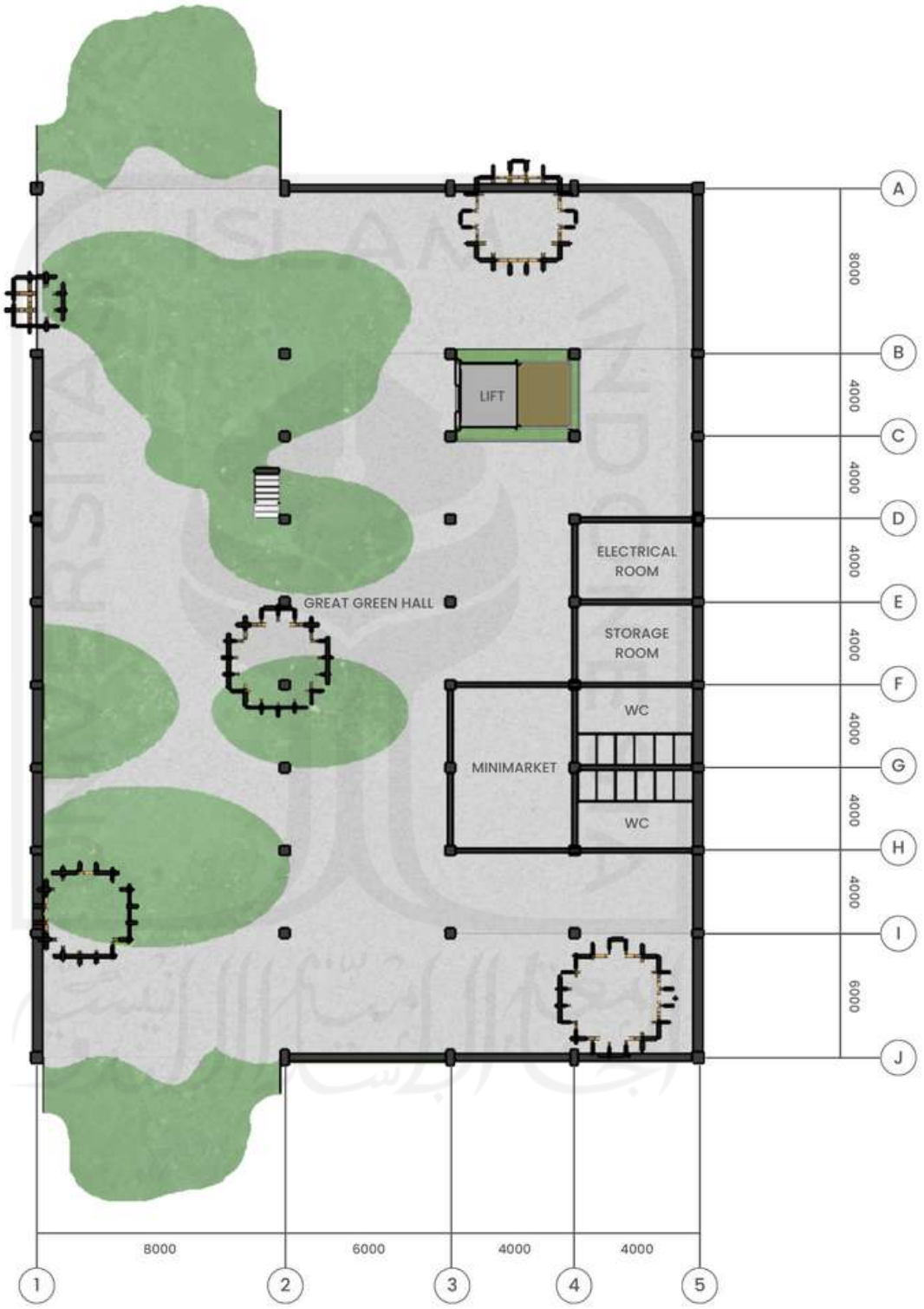
SITUATION

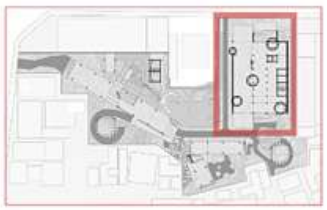


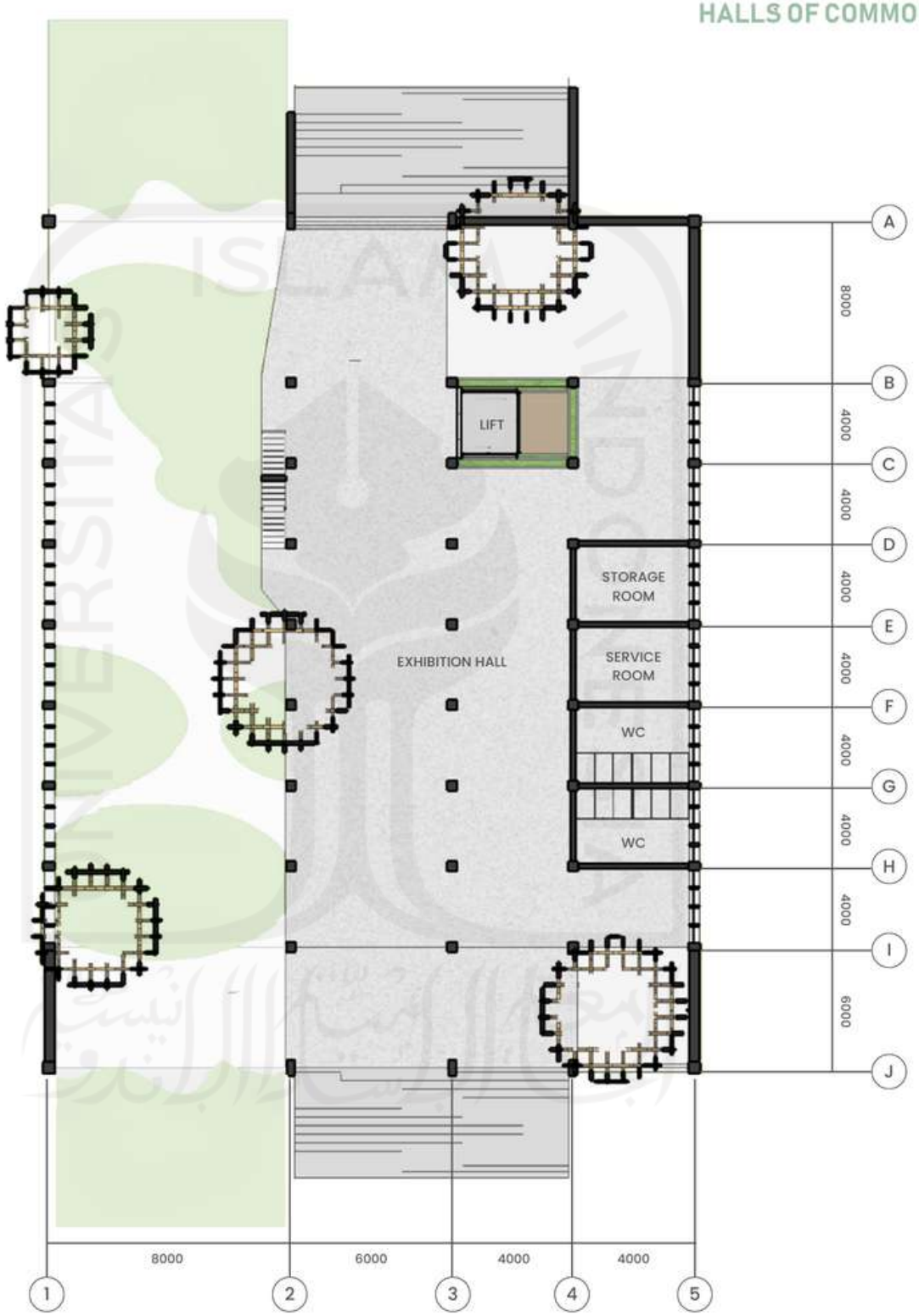

JENDERAL SUDIRMAN ST.
A
A
B
B
C
C
LEGENDS
1 Halls of Common
2 Breathing Zone
3 Open Passage
4 Eden Refuge
5 The Waterways

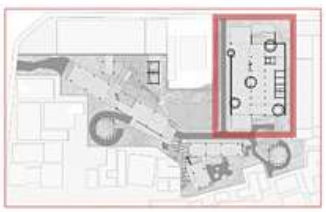
BUILDING PLAN

HALLS OF COMMON - LG



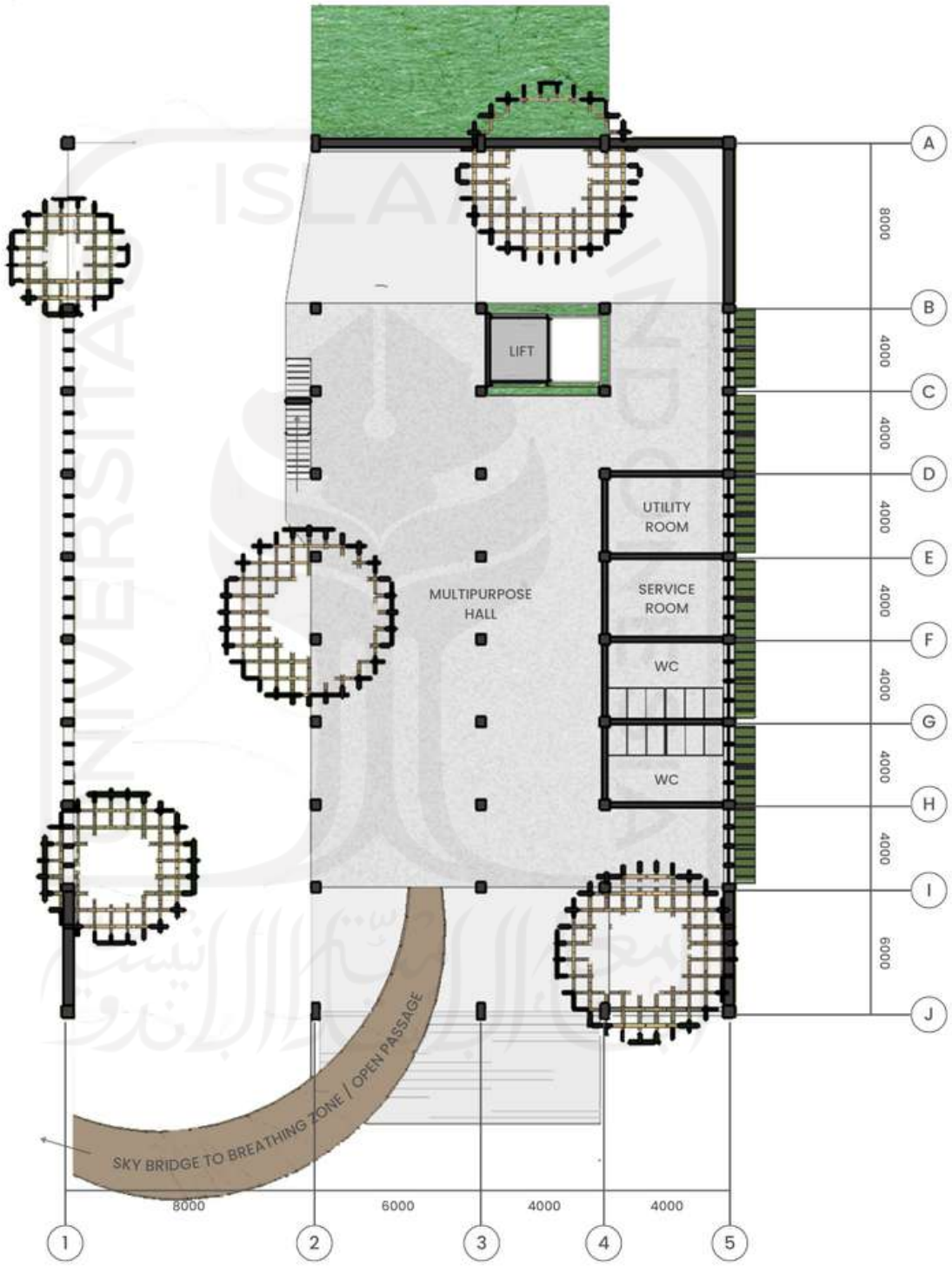



LIFT
STORAGE ROOM
EXHIBITION HALL
SERVICE ROOM
WC
WC
A
B
C
D
E
F
G
H
I
J
8000
4000
4000
4000
4000
4000
4000
4000
6000
1
2
3
4
5
8000
6000
4000
4000

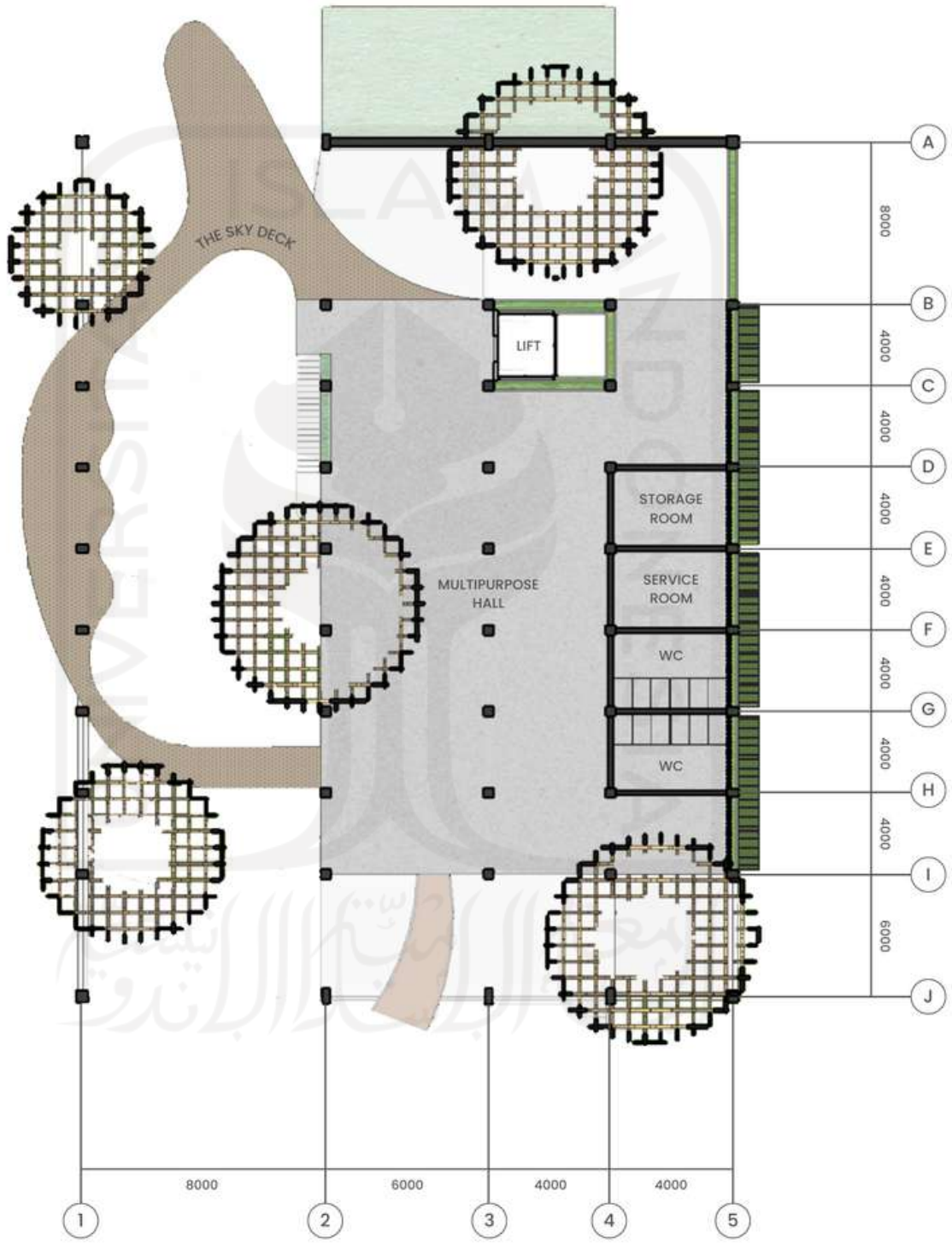


BUILDING PLAN

HALLS OF COMMON - 2ND FL



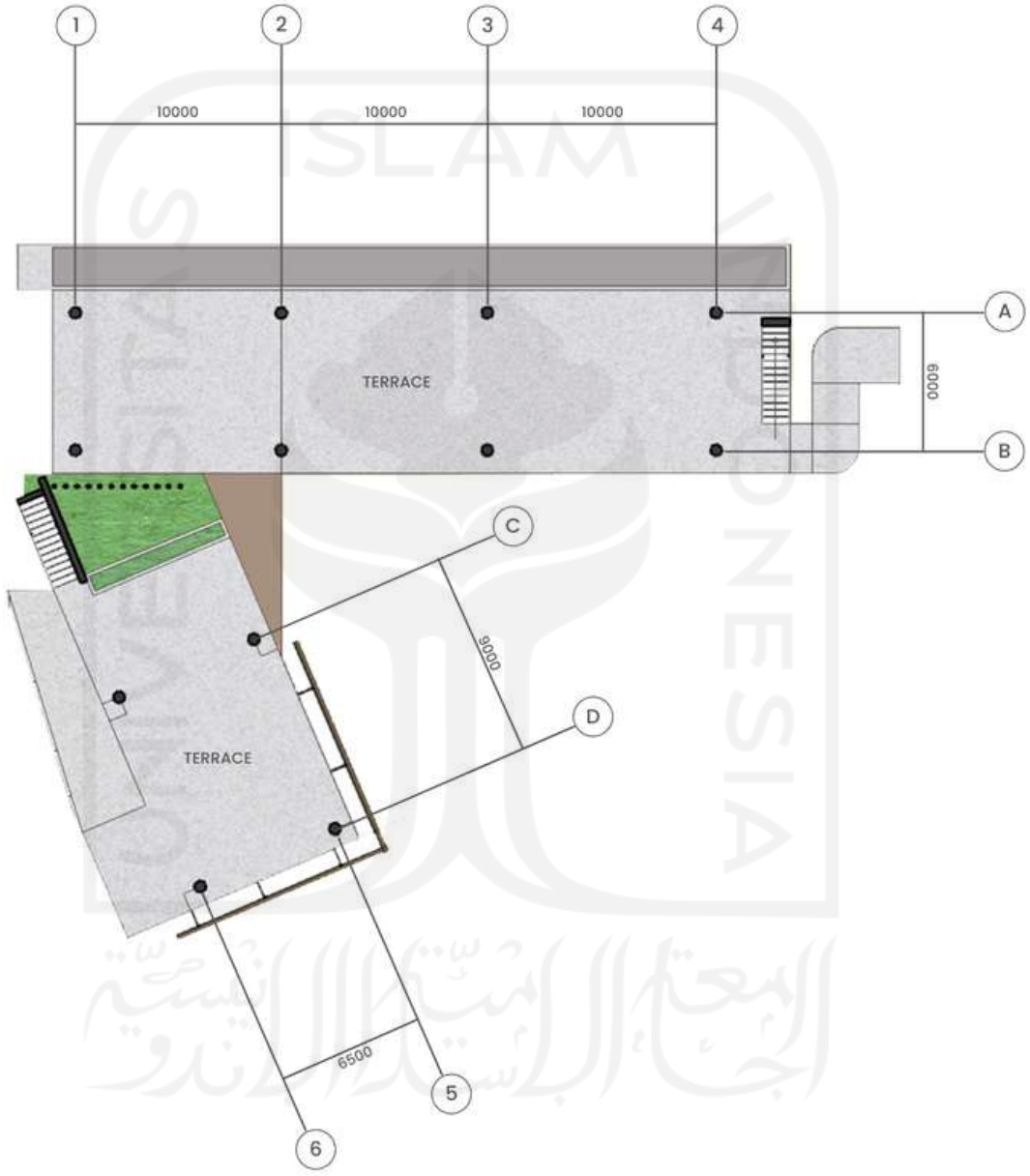



THE SKY DECK
LIFT
MULTIPURPOSE HALL
STORAGE ROOM
SERVICE ROOM
WC
WC
A
B
C
D
E
F
G
H
I
J
8000
4000
4000
4000
4000
4000
4000
4000
6000
1
2
3
4
5
8000
6000
4000
4000

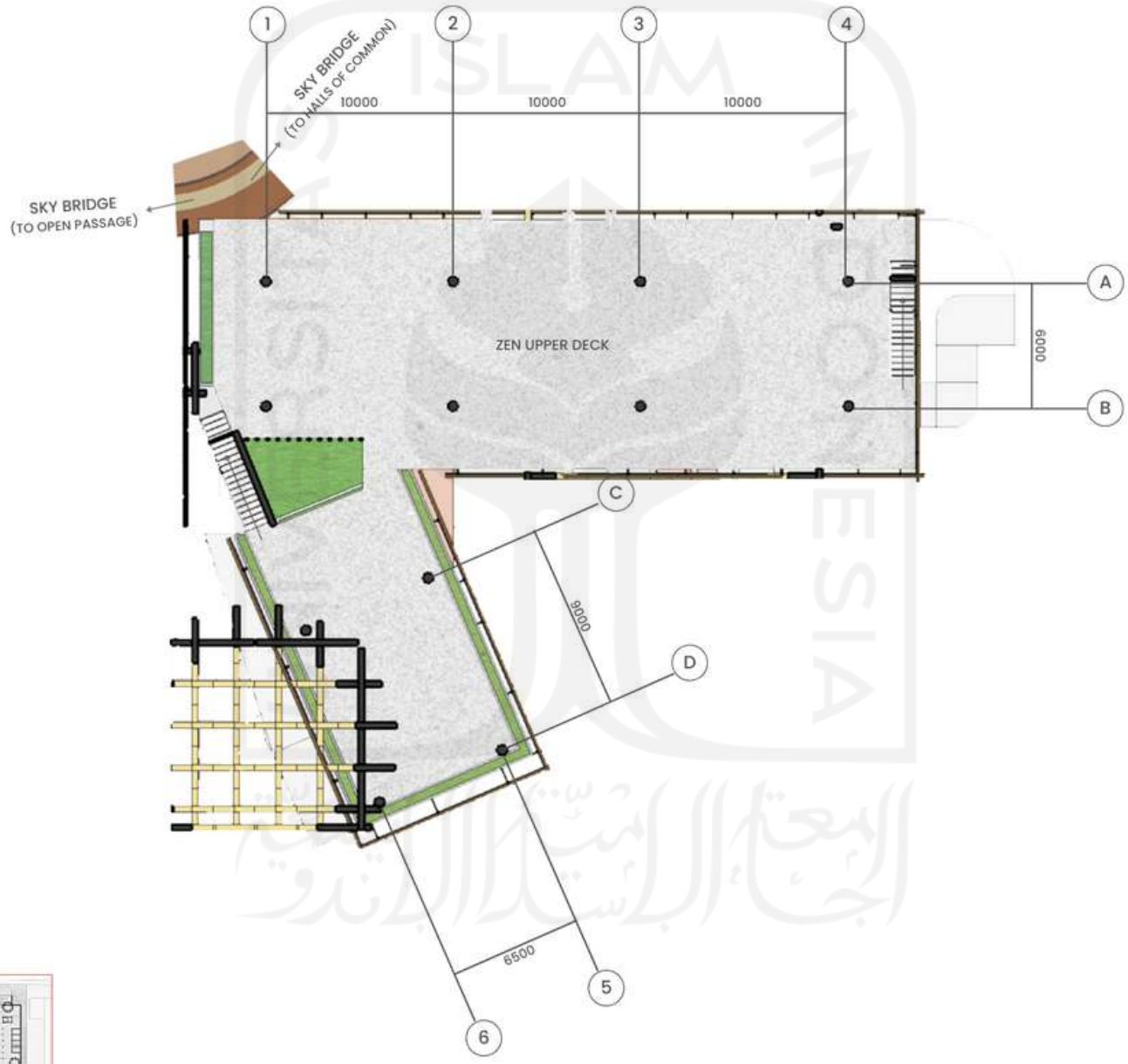


BUILDING PLAN

BREATHING ZONE - 1ST FL



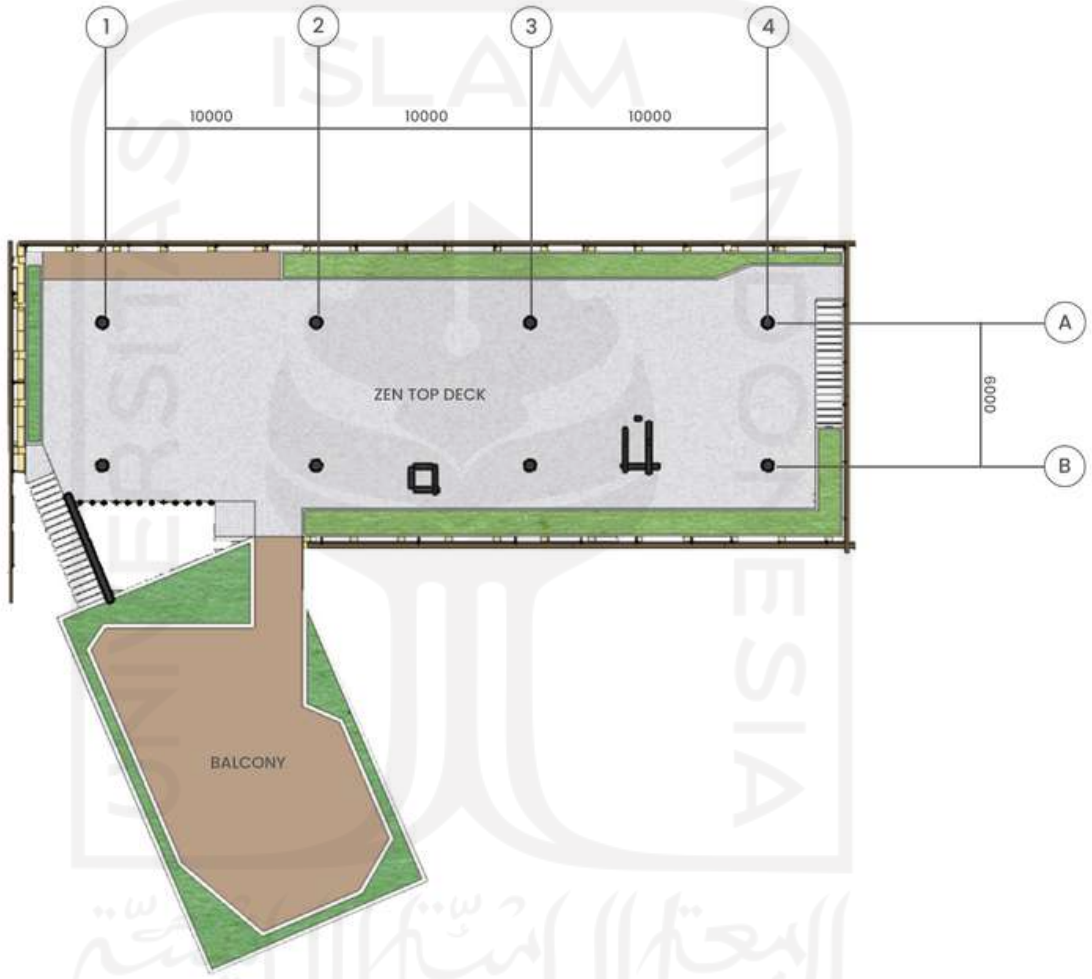



1
2
3
4
SKY BRIDGE
(TO HALLS OF COMMON)
10000
10000
10000
SKY BRIDGE
(TO OPEN PASSAGE)
ZEN UPPER DECK
A
B
6000
C
9000
D
6500
5
6



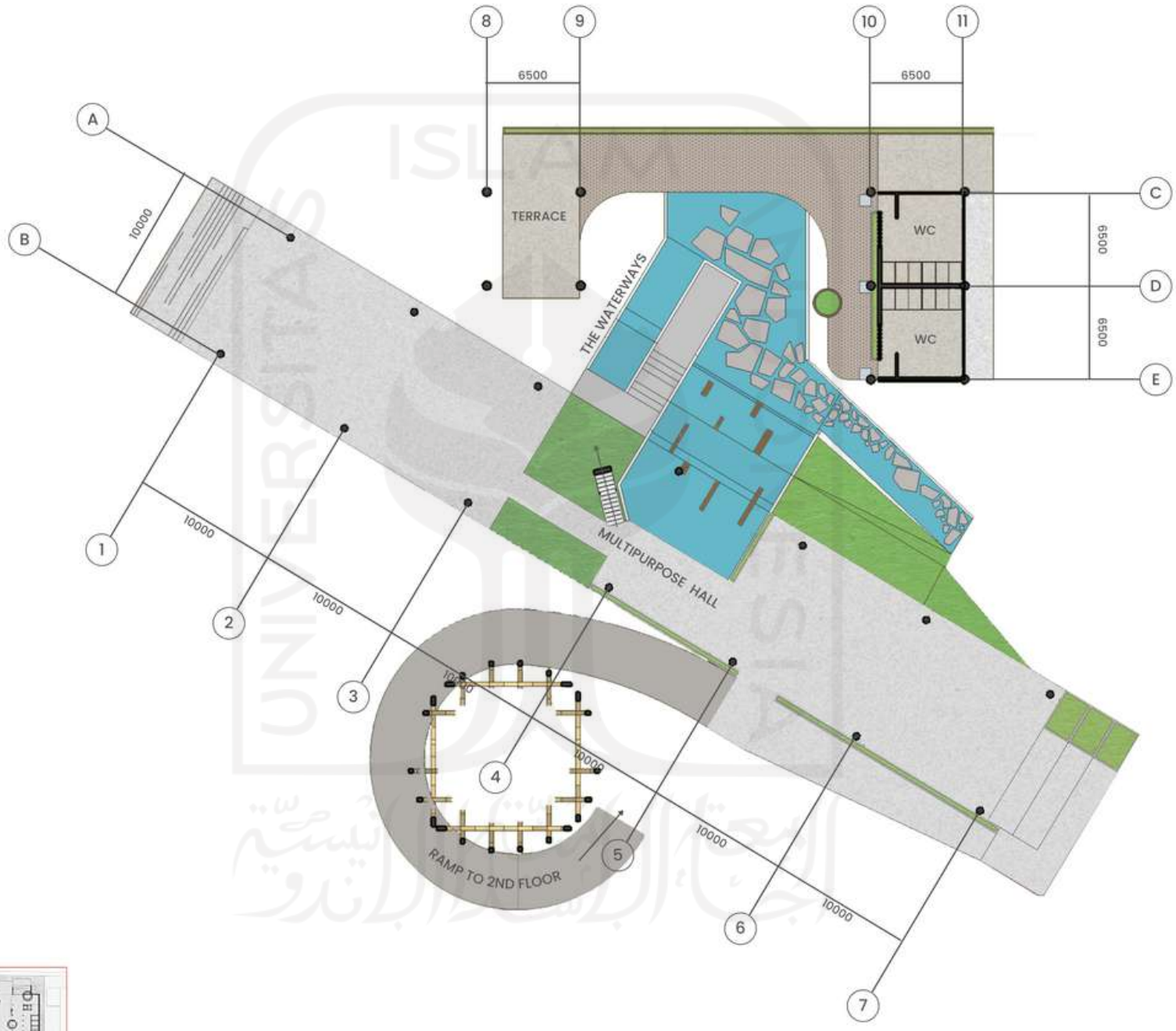
BUILDING PLAN

BREATHING ZONE - 3RD FL





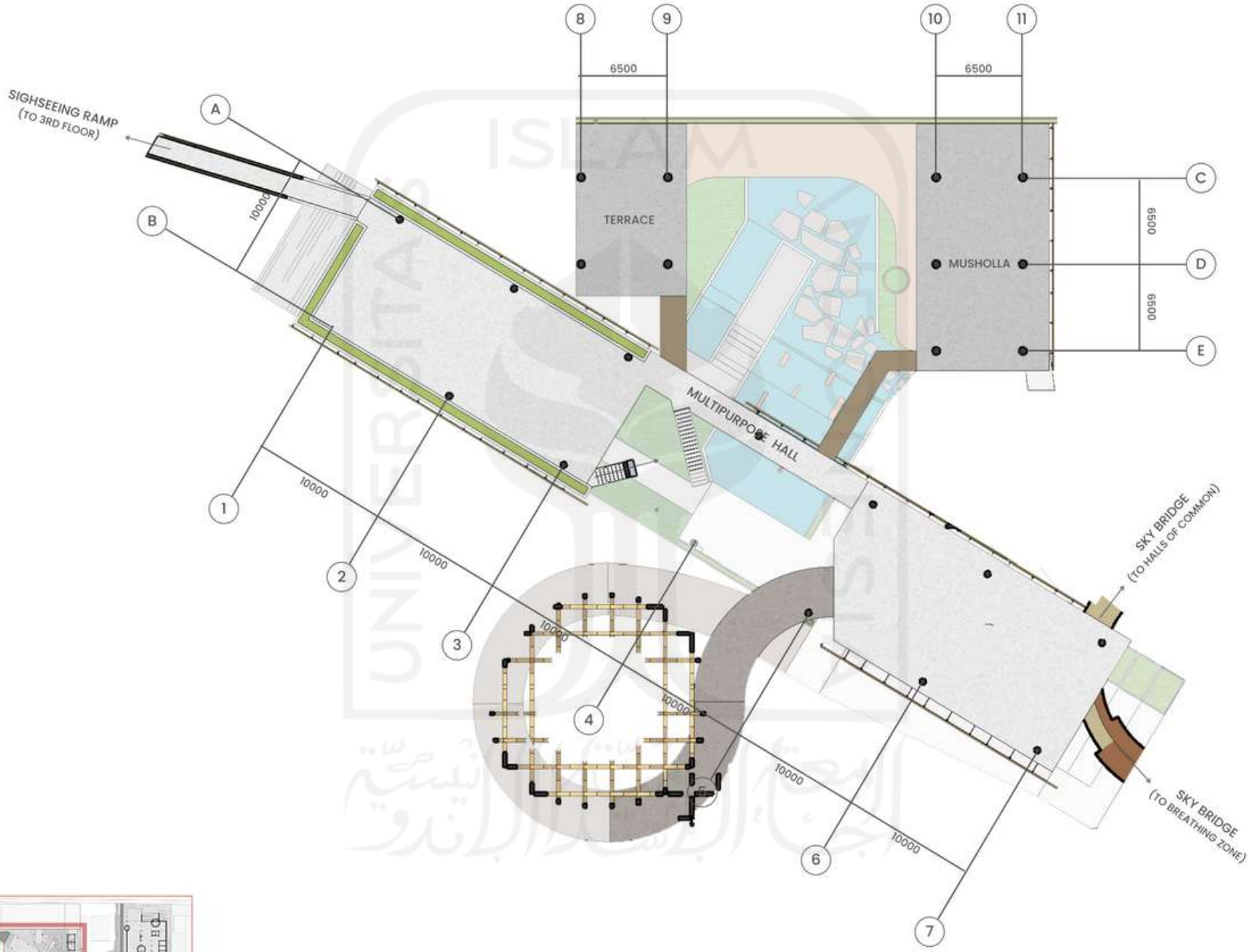
OPEN PASSAGE - 1ST FL



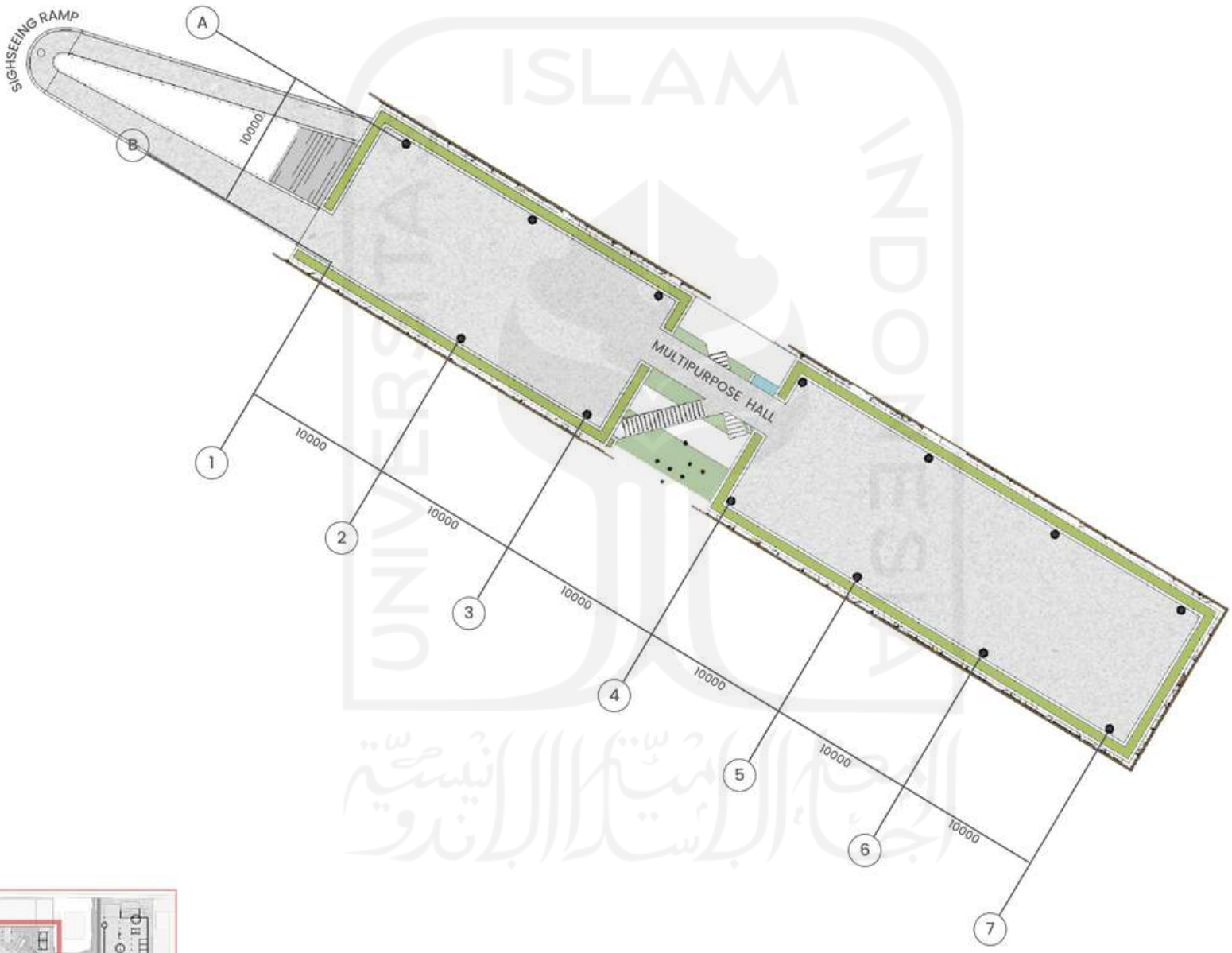


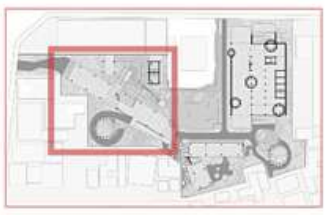
BUILDING PLAN

OPEN PASSAGE - 2ND FL





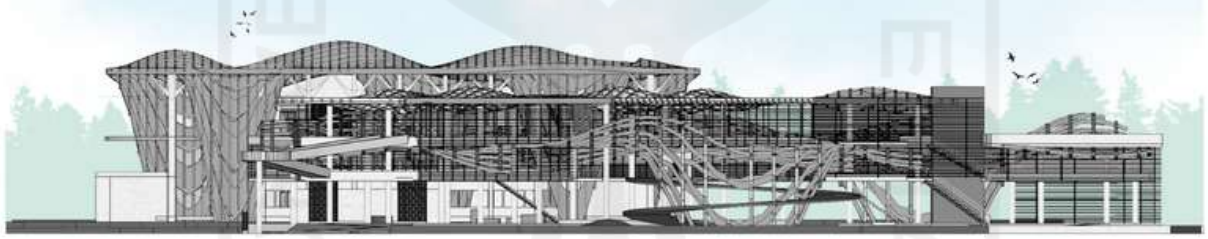

SIGHSEEING RAMP
A
B
10000
MULTIPURPOSE HALL
1
2
3
4
5
6
7
10000
10000
10000
10000
10000
10000



BUILDING ELEVATION

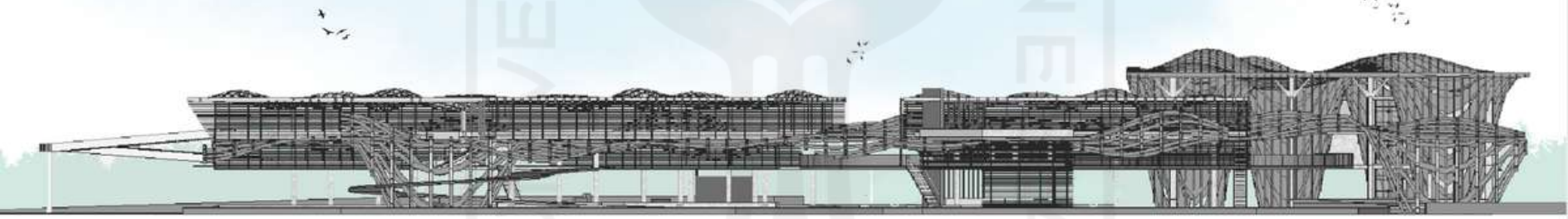
NORTH





BUILDING ELEVATION

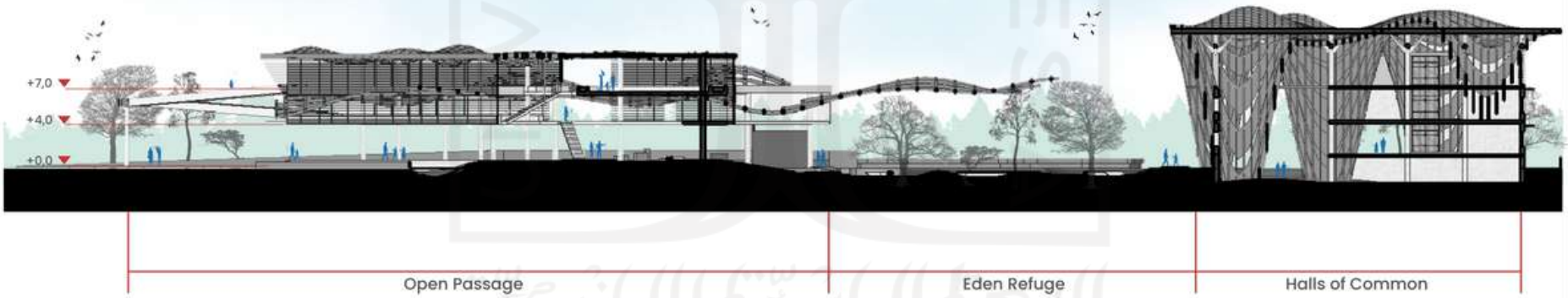
SOUTH



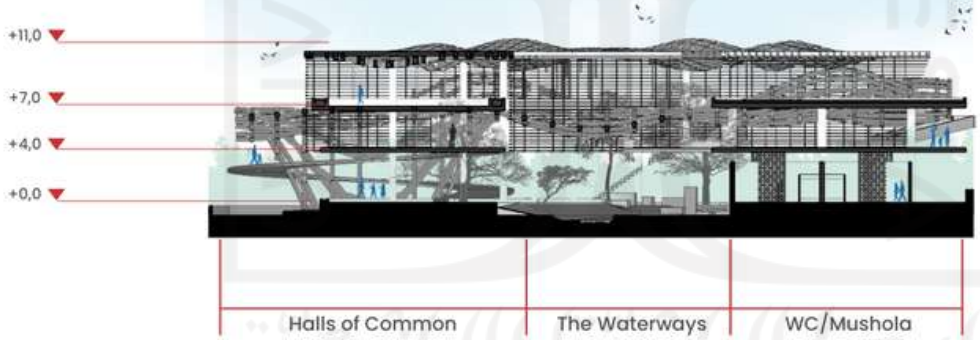


BUILDING SECTION

A-A



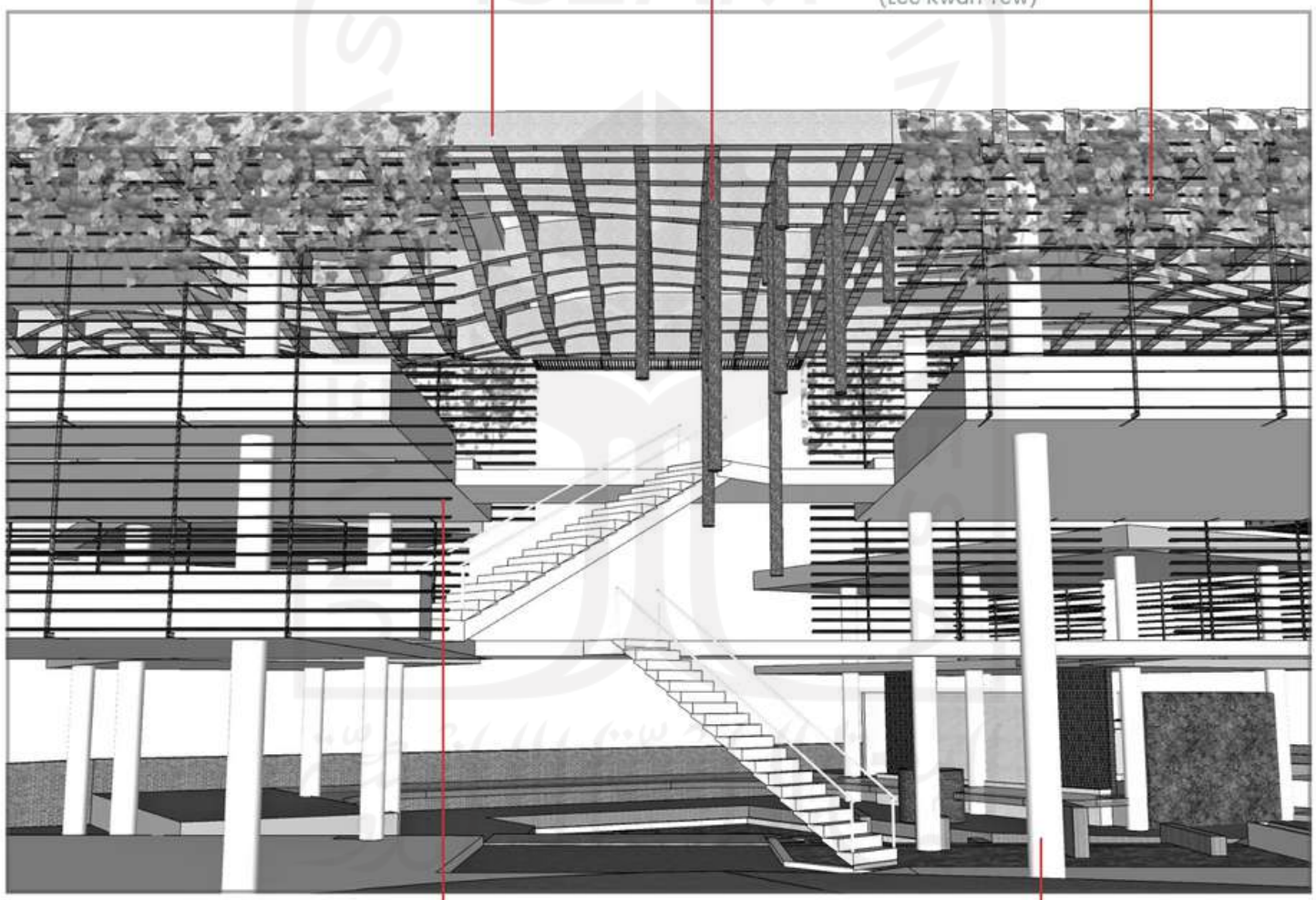
Open Passage | Eden Refuge | Halls of Common


+11,0
+7,0
+4,0
+0,0
Halls of Common
The Waterways
WC/Mushola

BUILDING SECTION

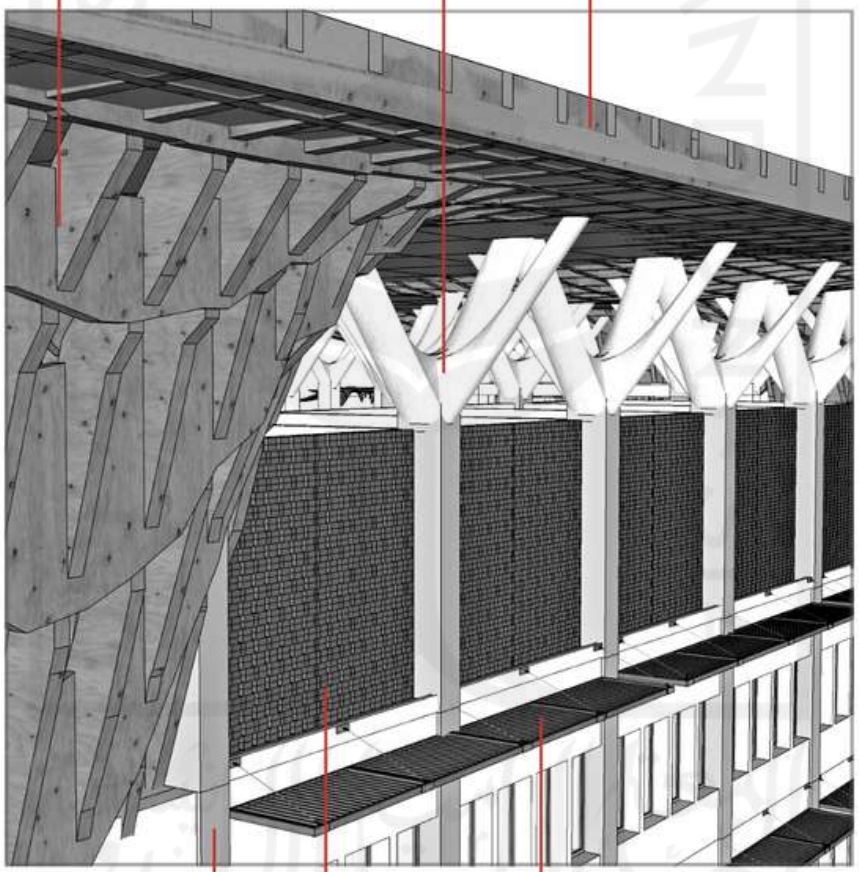
C-C




Hanged Medium for Vertical Greenery
(Lee Kwan Yew)
Wooden Parametric Structure
Hanging Plant
(Lee Kwan Yew)
Shade Covering as Perforated Facade
(Wooden Plank with Truss Framing)
Column Structure
(Reinforced Concrete)

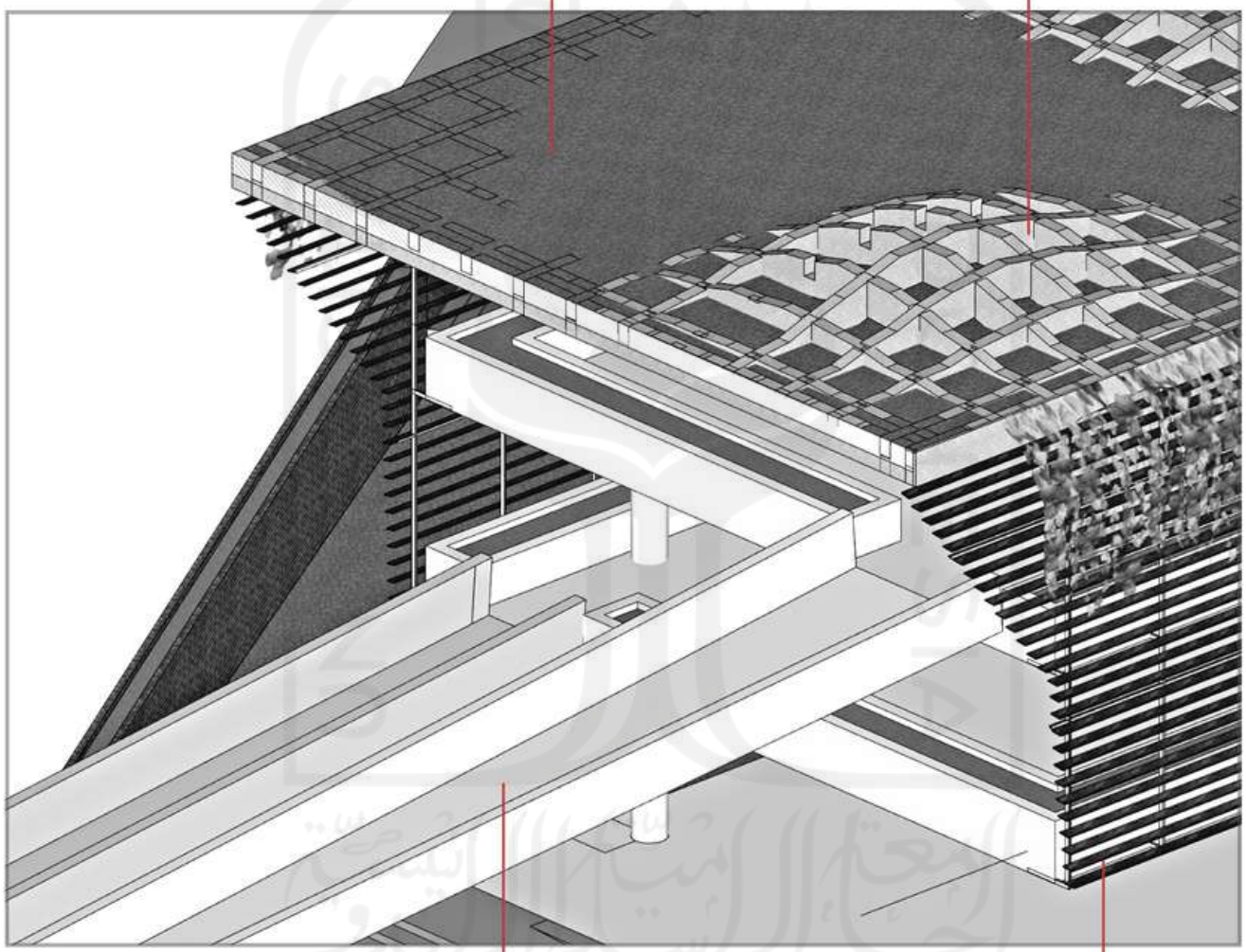
DETAILED PERSPECTIVE

HALLS OF COMMON- BUILDING ENVELOPE



Wooden Parametric Structure
(Joined with Concrete Structure)

Green Roof

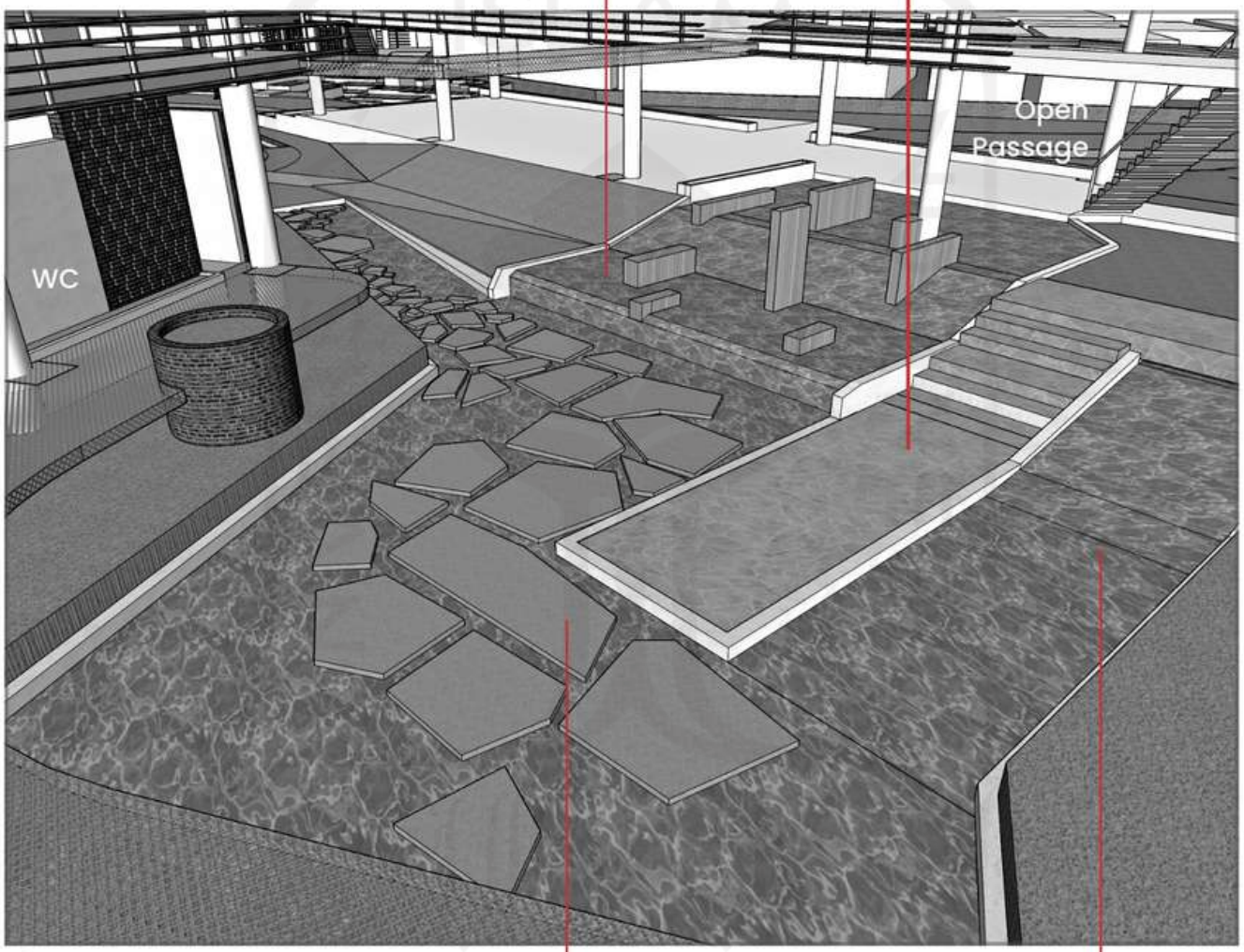


Sightseeing Ramp
CVonnecting 2nd Floor and 3rd Floor
Having View to Tugu Jogja

Shade Covering
as Perforated Facade
(Wooden Plank with Truss Framing)

Decking
(Enable Access to the Mid of Waterscape

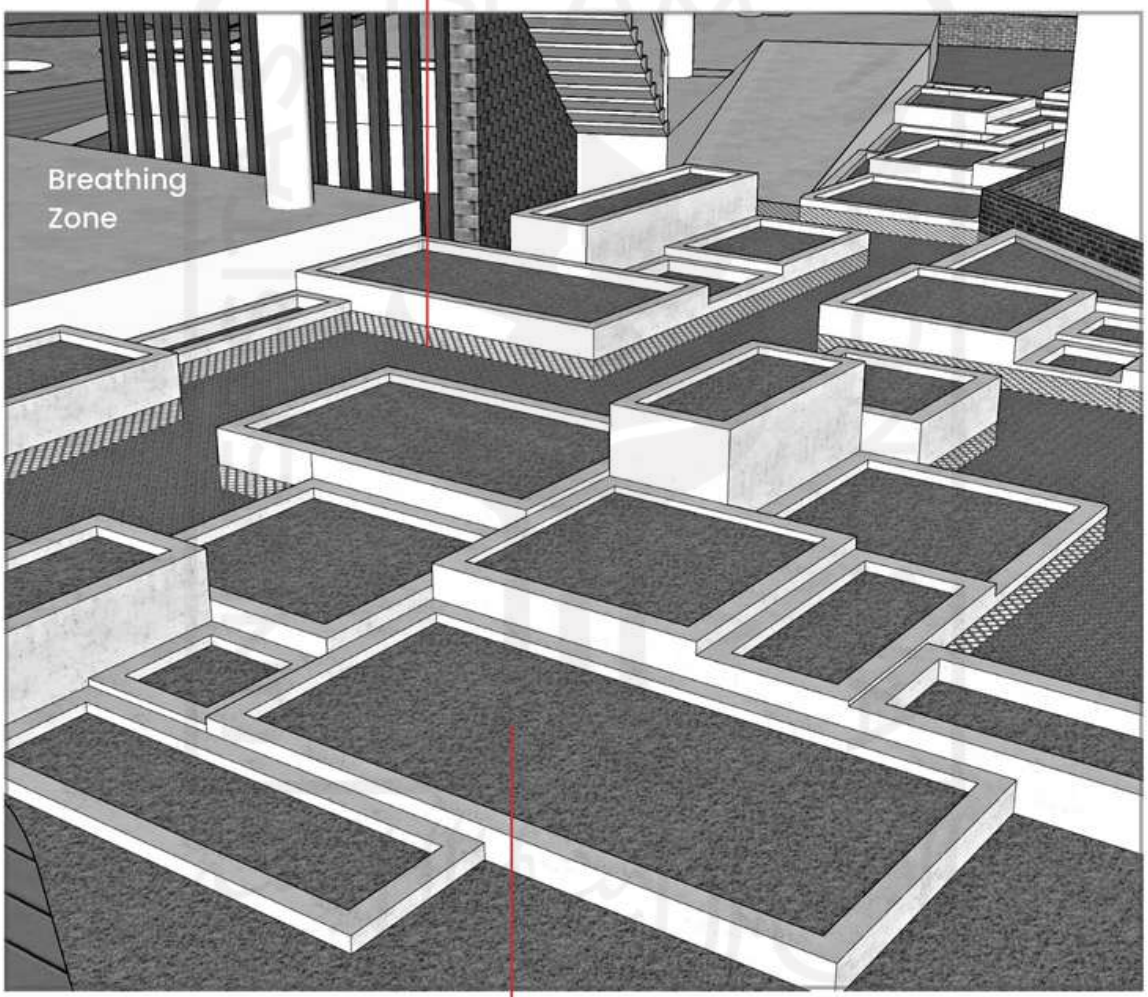
The Waterfalll
(A Style of Waterscape)



The Waterways

Water Stream
(Creating a Style of Waterscape)

Natrual Pathway
(Natural Stone Formation)

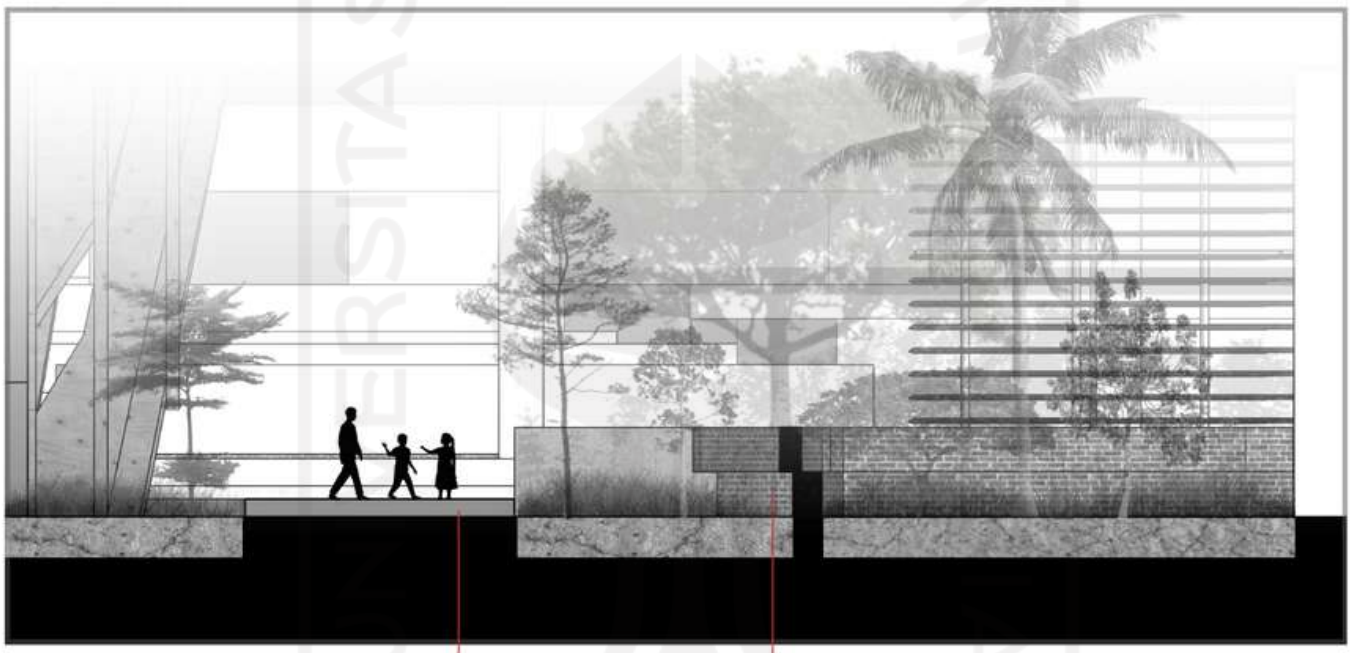

Perforated Steel Decking
(Allowing Vegetation Underneath to Grow While Being a Pathway)
Breathing Zone
Random Gridded Mediums
(A Variation of Greenscapes)



Water Body
(Allow Interaction With Water)

Sloping Ground
(Base for New Structures)

Seating Area
(As Access and Seating Place)



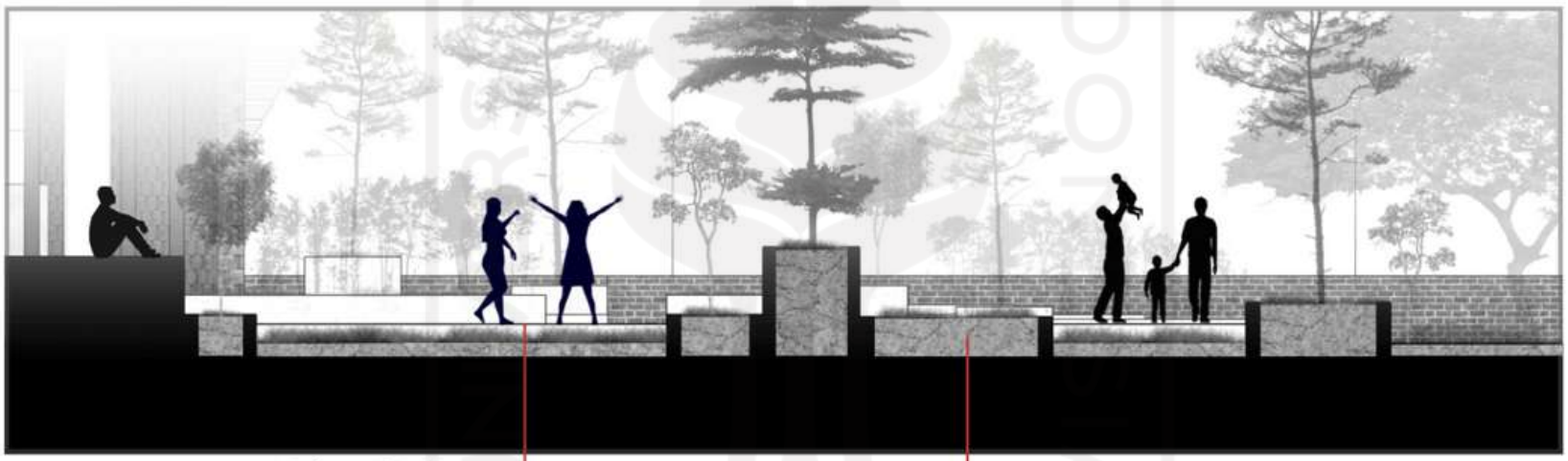
Wooden Deck
(Access From North)

Brick Fencing
(Phoenix House Boundary)

LANDSCAPE DETAIL

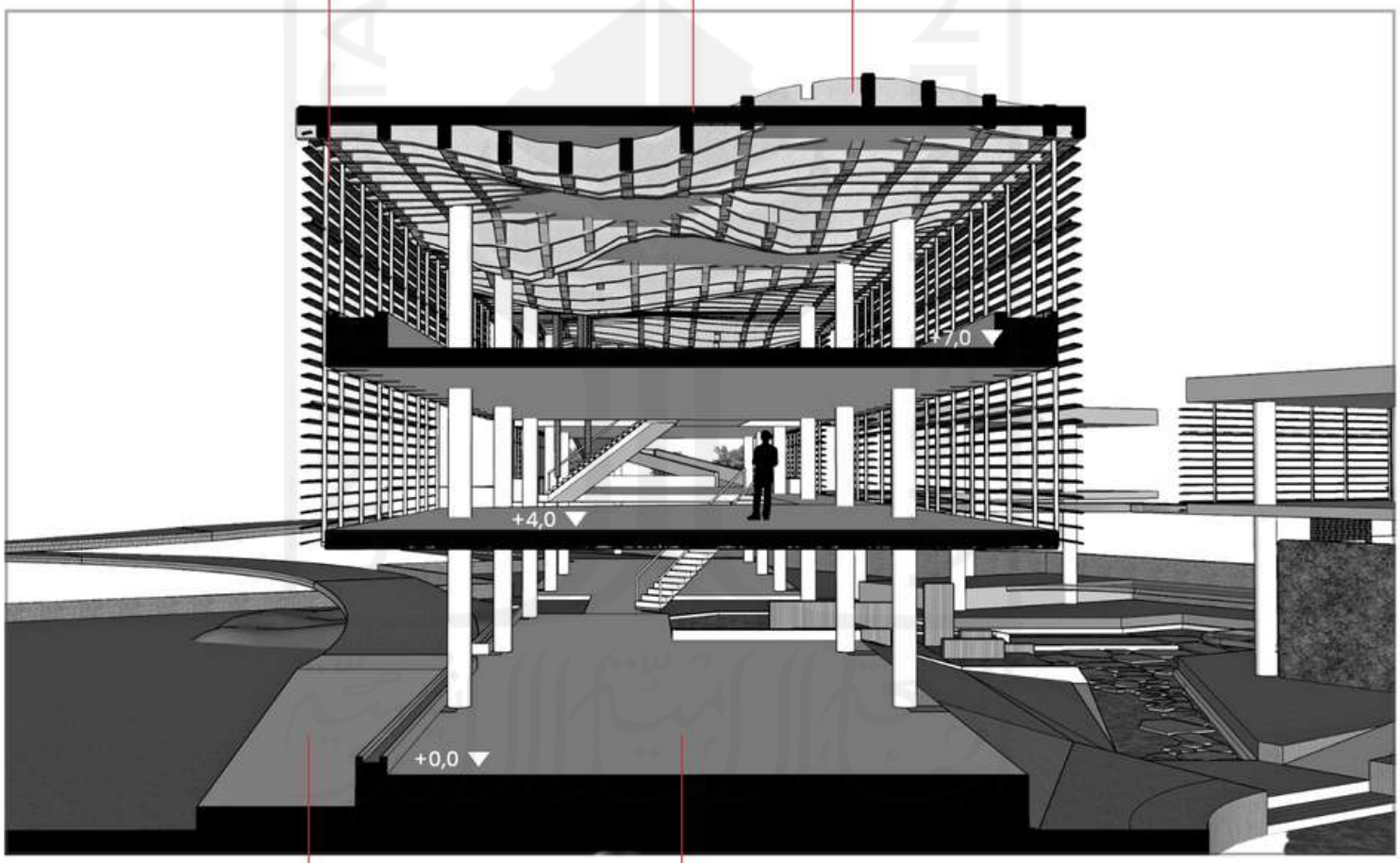
ELEVATING GARDEN

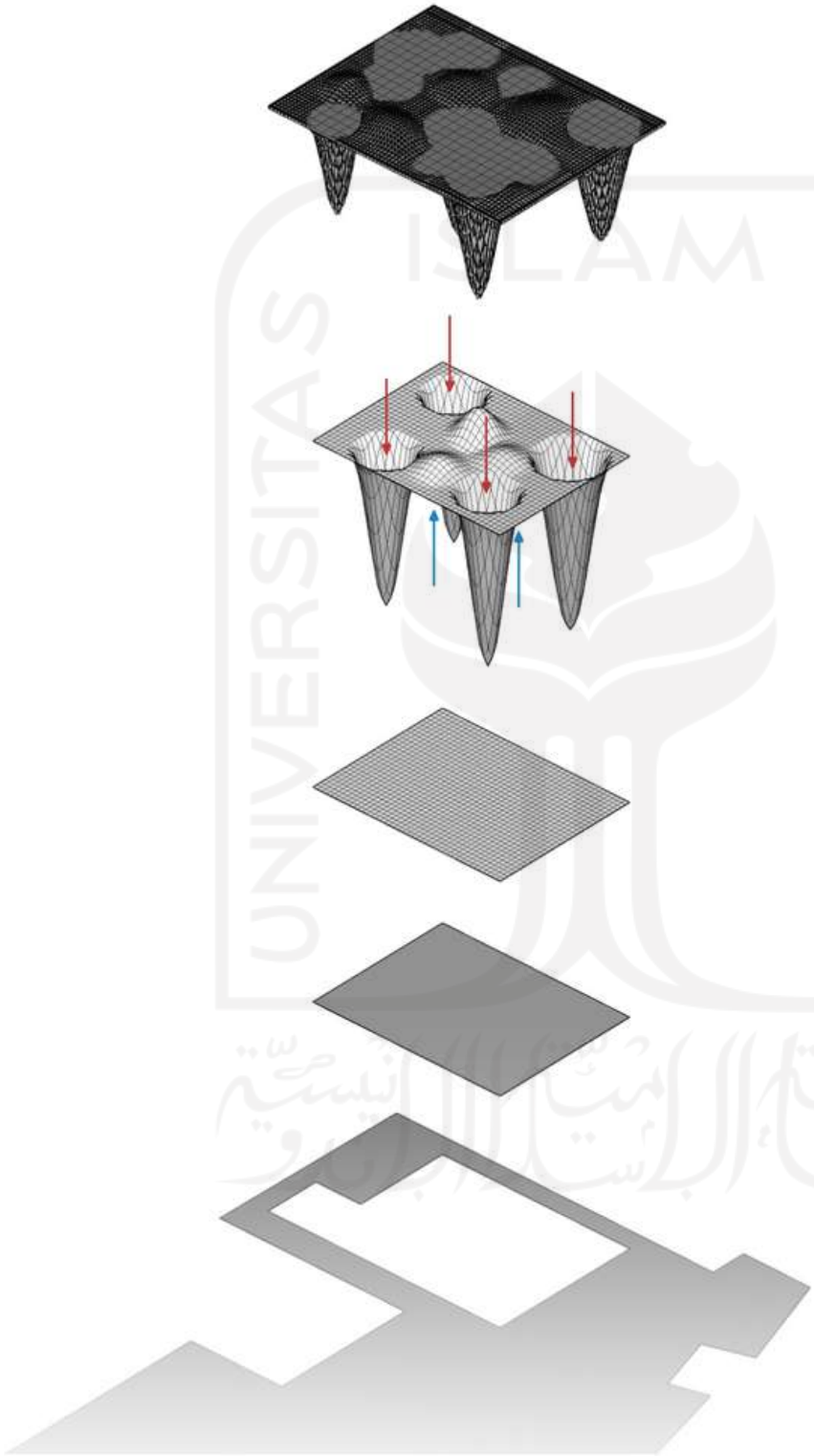



Perforated Deck
(Allow Plant Gtrowth Below)
Planter
(Concrete Base)

DETAILED PERSPECTIVE

OPEN PASSAGE





Forming the Frame Structure

X, Y

1 x 1 M

0,3 M

Wood

Extrusion and Filling

0,5 M

8 M 6 M

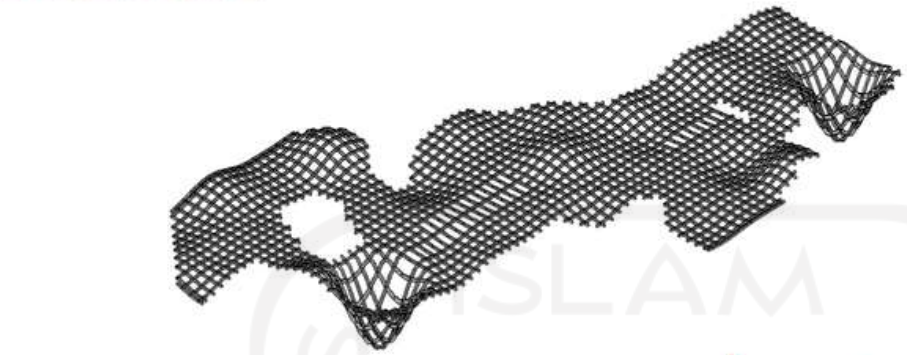
Initial Gridding

1x1

Taking the Shape

The Site

SITE PARAMETRIC STRUCTURE



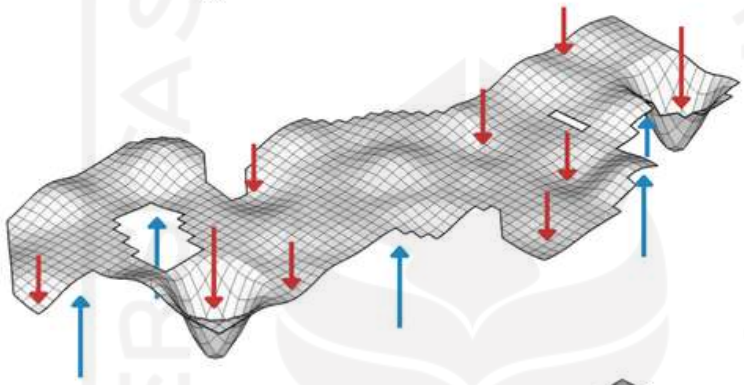
Forming the Frame Structure

X, Y

2 x 2 M

0,25 M

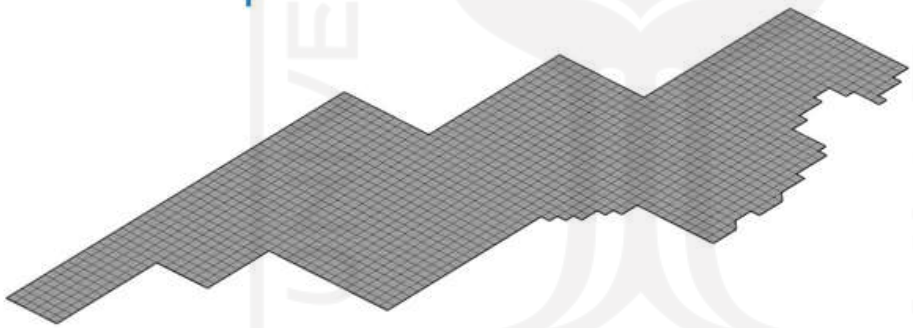
Wood



Extrusion and Filling

0,4 M

10 M 8 M 5 M

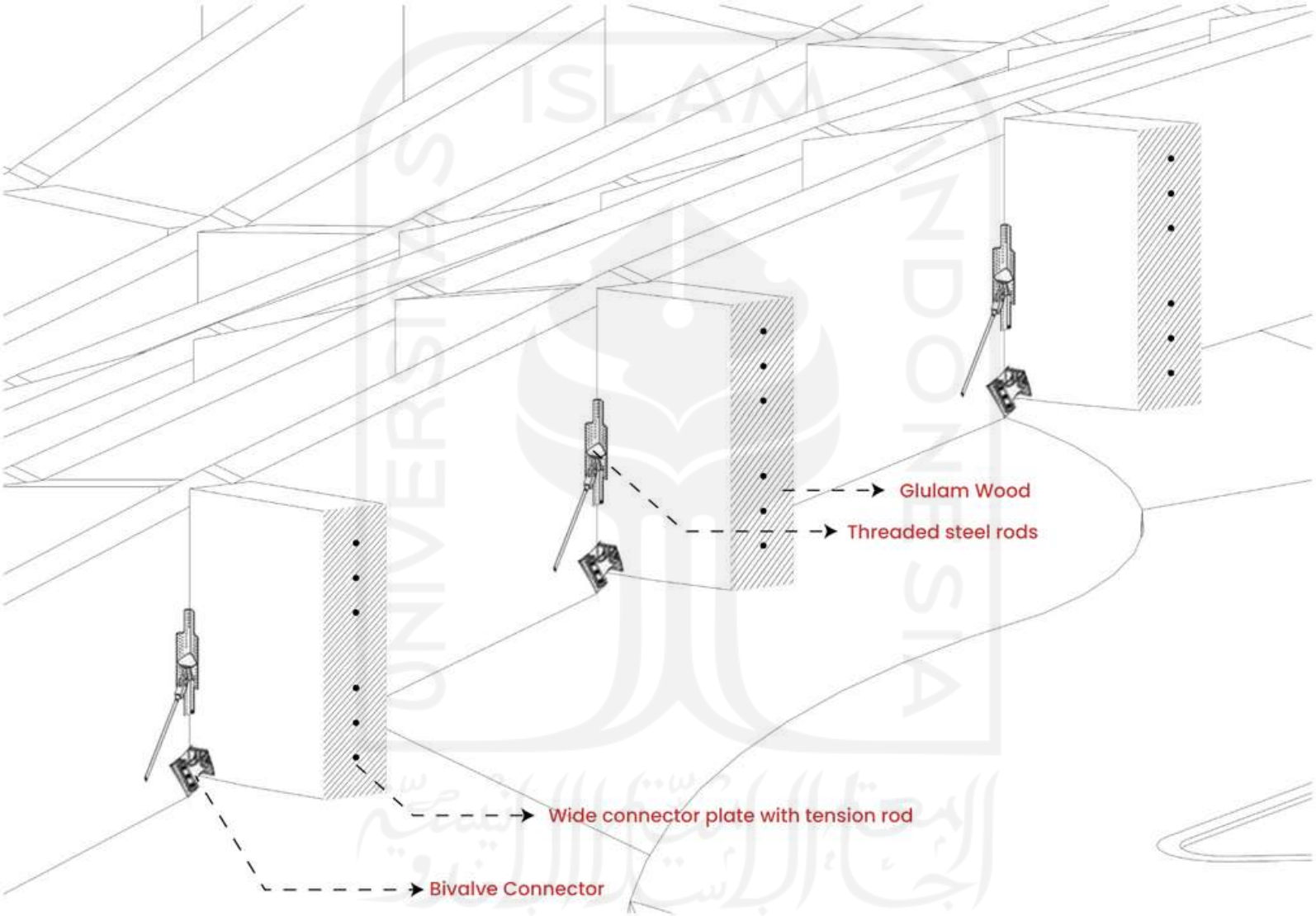


Initial Gridding

2x2

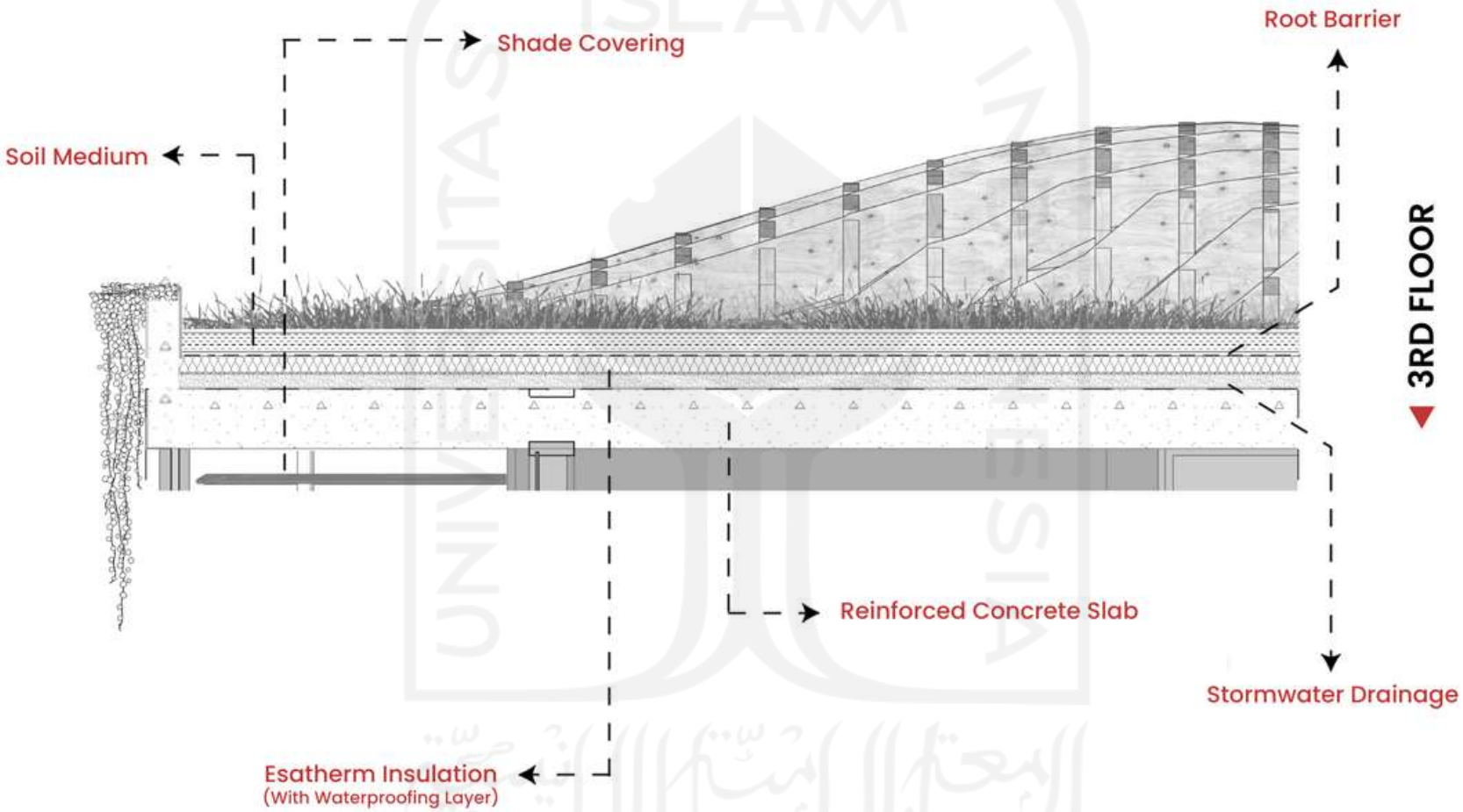


The Site


Glulam Wood
Threaded steel rods
Wide connector plate with tension rod
Bivalve Connector

BUILDING SECTION

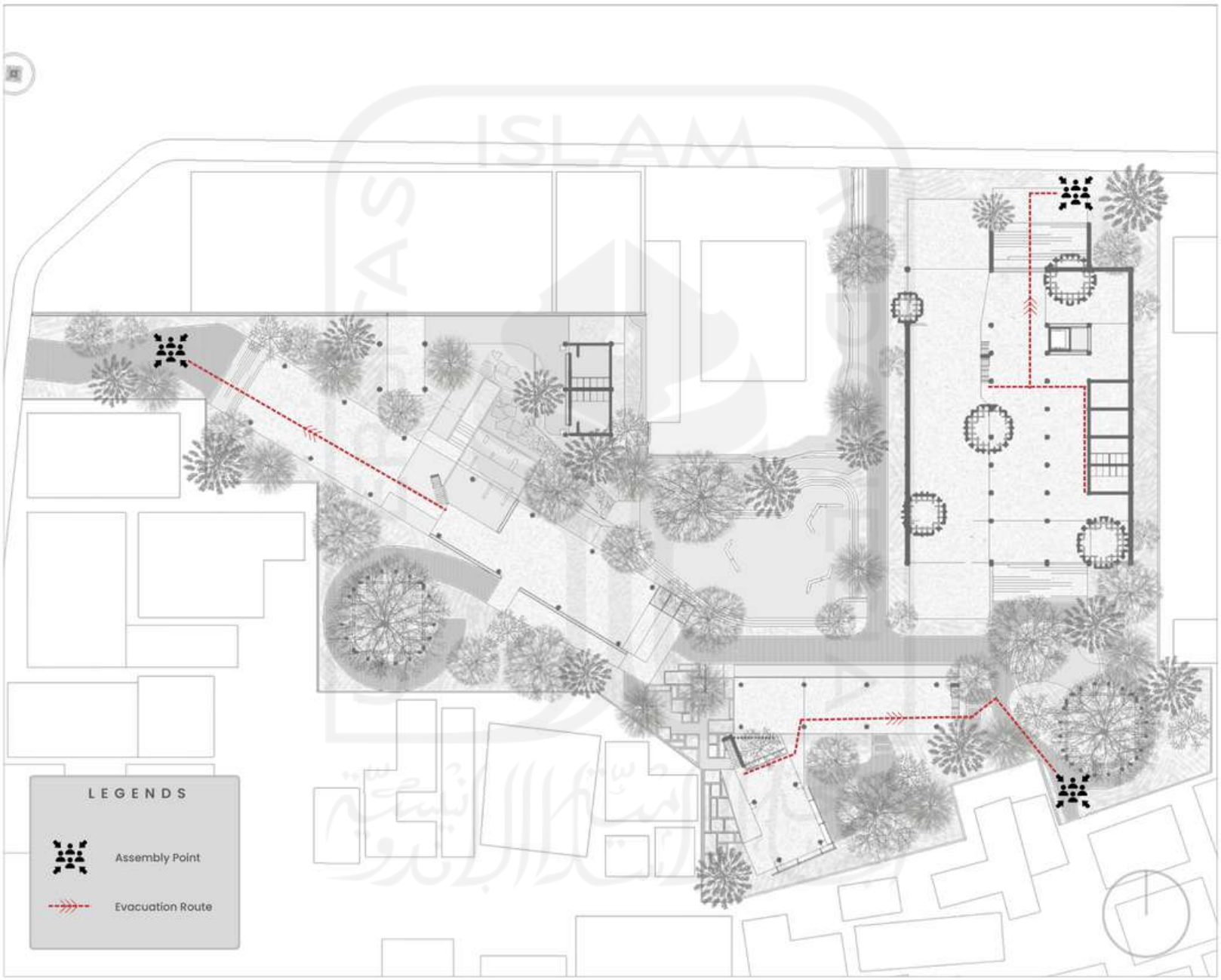
GREEN ROOFING

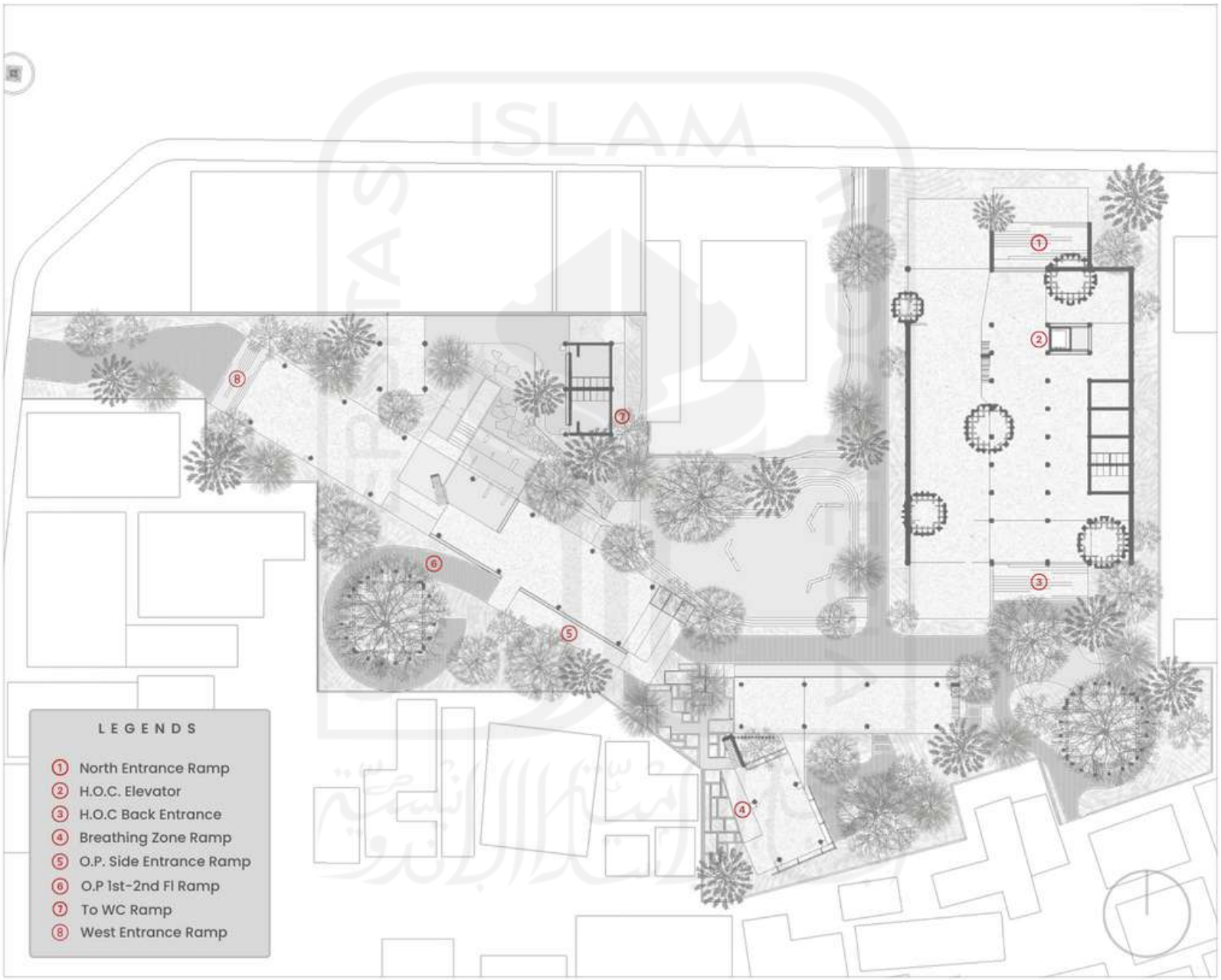



LEGENDS
Blackwater
Greywater
Cleanwater
Infiltration Well
Septic Tank
Clean Water Tank

SCHEME DRAWING

EVCUATION SCHEME




LEGENDS
1 North Entrance Ramp
2 H.O.C. Elevator
3 H.O.C Back Entrance
4 Breathing Zone Ramp
5 O.P. Side Entrance Ramp
6 O.P 1st-2nd Fl Ramp
7 To WC Ramp
8 West Entrance Ramp

3D PERSPECTIVE





Halls of Common

3D PERSPECTIVE




Halls of Common - Deck

3D PERSPECTIVE



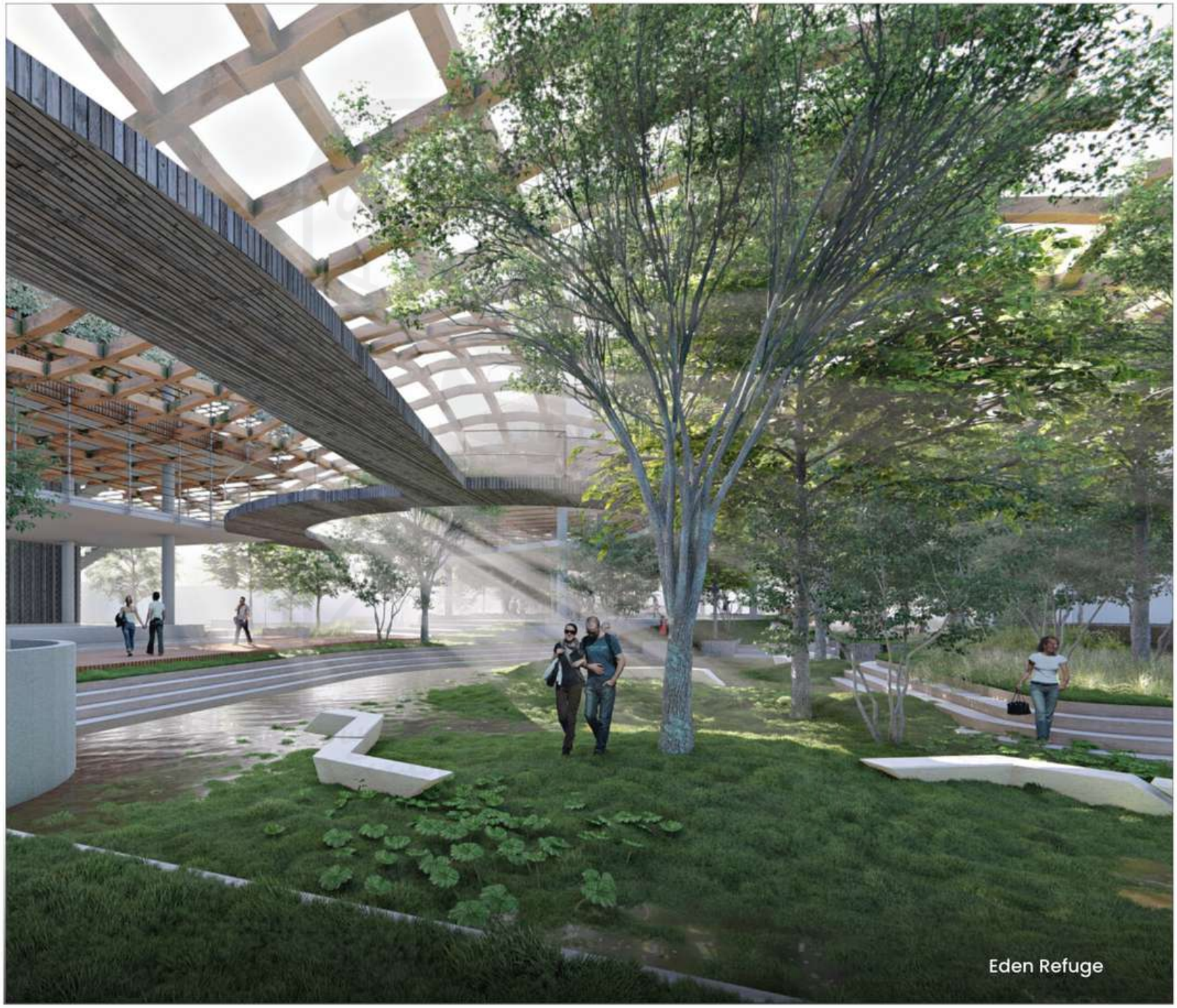

Breathing Zone

3D PERSPECTIVE




Sightseeing Ramp

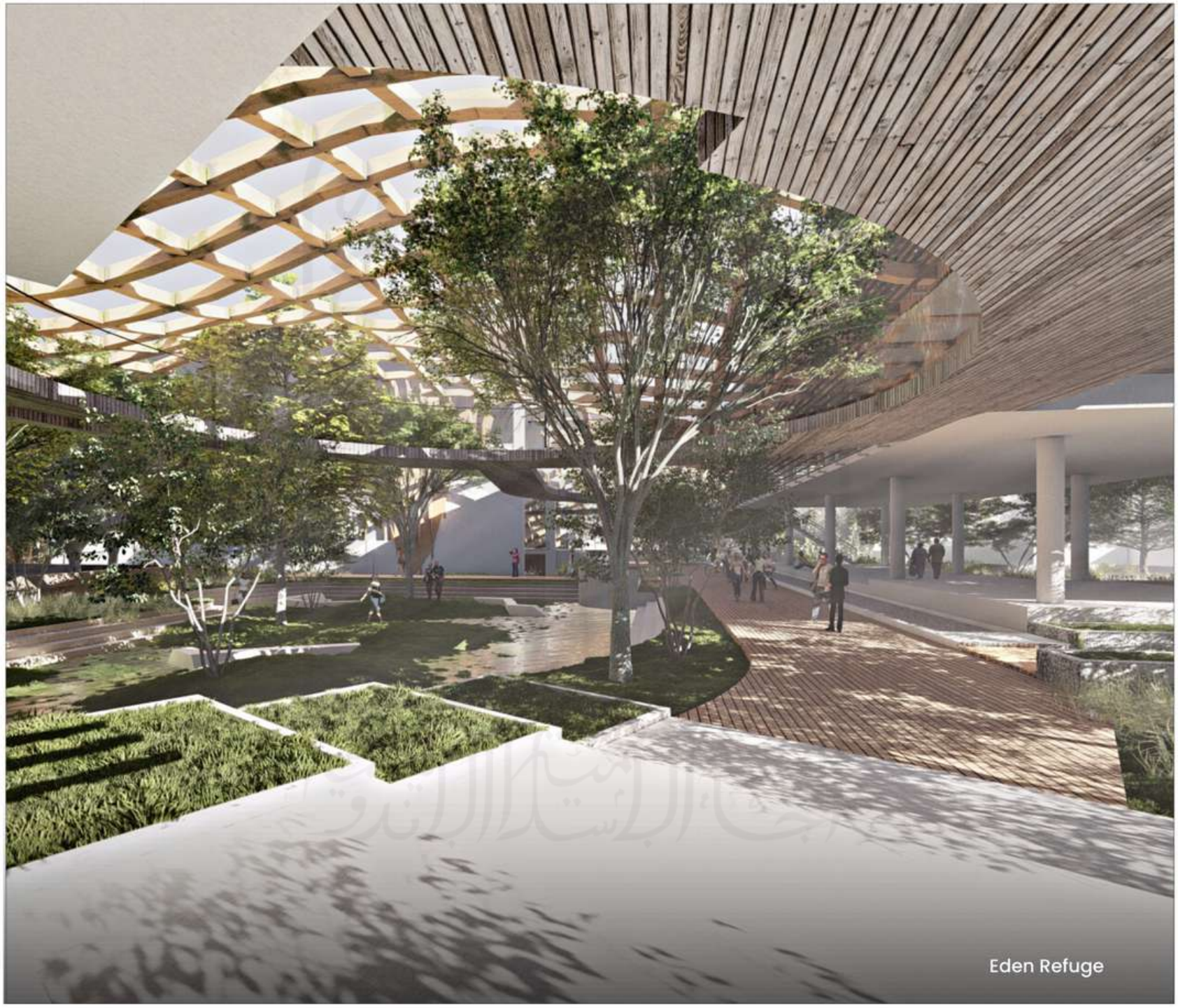
3D PERSPECTIVE





Central Skybridge

3D PERSPECTIVE





The Waterways

3D PERSPECTIVE




Open Passage - Ramp

3D PERSPECTIVE




Open Passage - Ramp

3D PERSPECTIVE





Open Passage - Ramp

3D PERSPECTIVE




Orthographic View - Sky

CHAPTER 6:

REFLECTIONS

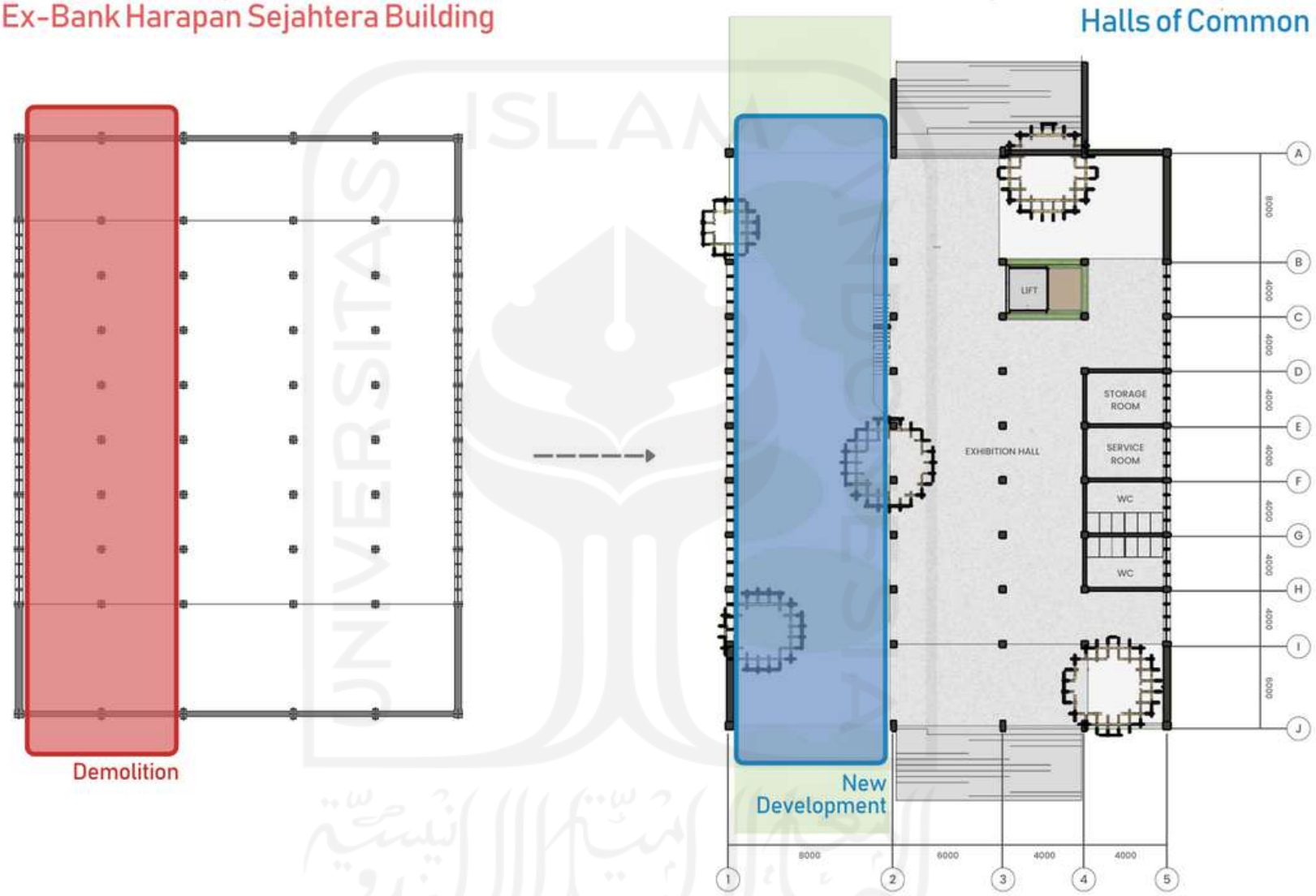
ISLAM
INDONESIA

“Existing BHS Building Structure to New Developemnt. Not sure if it will withstand with such demolition of some main structures”

Revianto Budi Santosa, Dr., Ir., M.Arch. IAI

Existing Structural System of
Ex-Bank Harapan Sejahtera Building

New Development of Structural System of
Halls of Common



In redesigning the abandoned BHS building, several changes were made to the existing building structure in order to create a more open building space according to the existing overall concept.

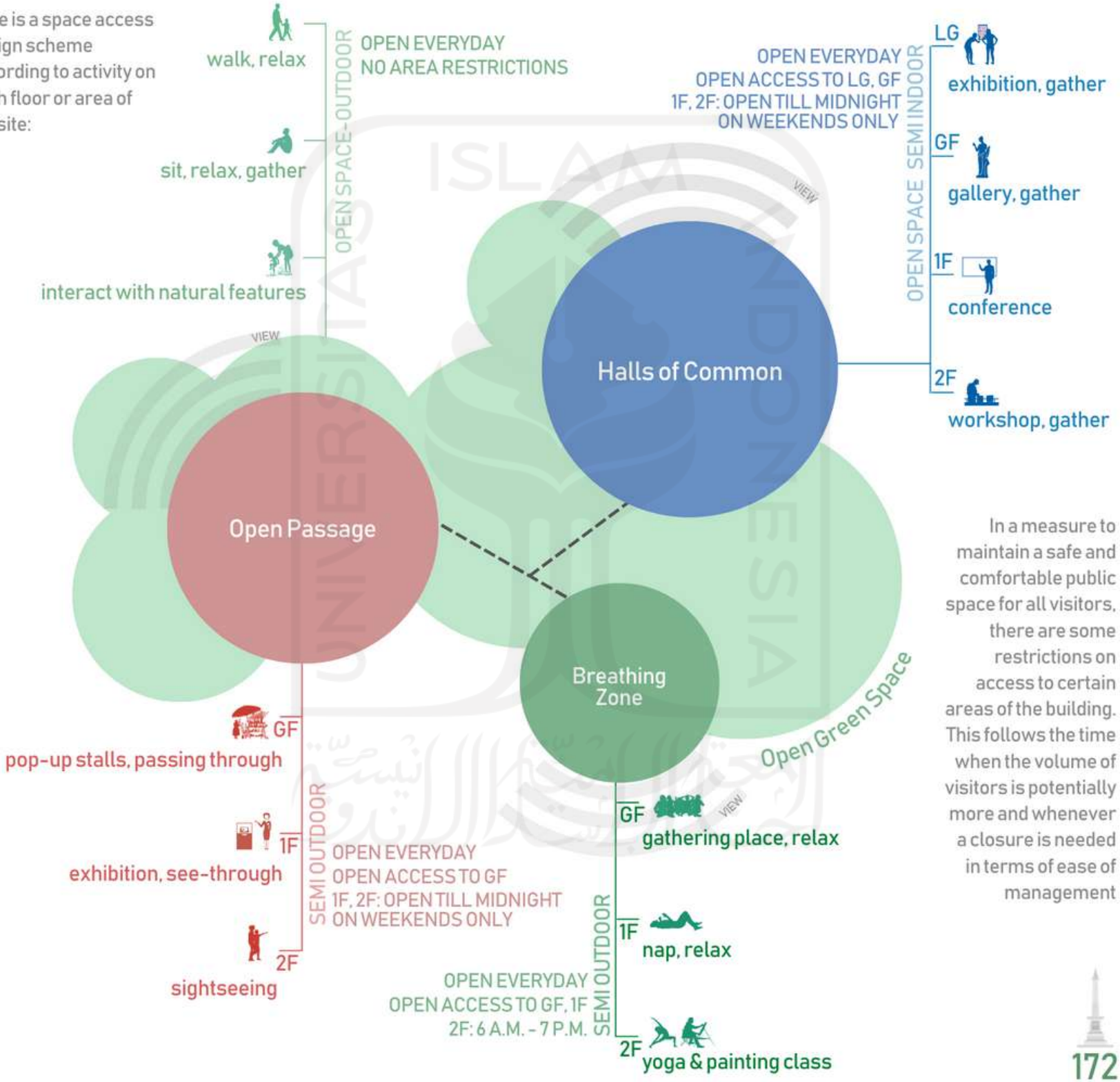
However, the considerations made are necessary to follow up on the reduction of building elements for advanced design where not all core elements, especially columns and beams can be removed. If it is replaced with a new structure, further study is needed regarding the performance of the building later by replacing it with a new building structure after the design.

seen from the first ground floor building plan

“Access, management of a 24/7 open public space”

Revianto Budi Santosa, Dr., Ir., M.Arch. IAI

Here is a space access design scheme according to activity on each floor or area of the site:



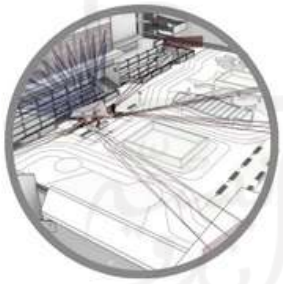
In a measure to maintain a safe and comfortable public space for all visitors, there are some restrictions on access to certain areas of the building. This follows the time when the volume of visitors is potentially more and whenever a closure is needed in terms of ease of management

“Access, management of a 24/7 open public space”

Revianto Budi Santosa, Dr., Ir., M.Arch. IAI



URBAN SPACE SECURITY AND SAFETY MANAGEMENT SYSTEM




A green and public spaces must be secure, welcoming, and easily accessible to all. A crucial aim of Sustainable Development Goal 11 is universal access to secure and inclusive public places. A varied spectrum of people must actively use a public area for it to be perceived as secure, comfortable, and successful. Inclusive environments can only thrive if they are open, free, and accessible. The facility should be adaptable in order to meet shifting needs. When streets and plazas can accommodate diverse activities, they are always active, even if they are used differently at different times. Public space is an essential component of livable cities. It is also recognized as critical for long-term urban development.



Designers, operators, recreation staff, and citizens all play an important part in making an urban communal space safer. The following are the essential aspects to consider when dealing with urban space safety issues which perceptions of a communal space's safety are just as essential as actual safety:

- Involve visitors in the creation or redevelopment of an urban space areas.
- Clear and intelligible signage contributes to a sense of safety by allowing individuals to orient themselves.
- Formal/informal surveillance, or the amount to which activities inside can be viewed by others, is critical for reducing vandalism, improper behavior, and feelings of solitude.
- Lighting to increase safety perceptions, yet this may not reduce real crime rates. Increased night time surveillance is possible because to improved lighting and increased legitimate activity.
- Persons perceive true safety when they have clear sightlines since they can see what is ahead and around them, as well as if other people are visible.
- Physical access should be improved by offering users a variety of legible paths to and from the areas inside.
- Vandalism can add to terror perceptions because litter, graffiti, and broken furniture all imply that a location is neglected and possibly unsafe.
- Diversity can entice more intense use on an urban space.
- The variety of landscape features in form, color, and texture, as well as a variety of activities, contribute to an intriguing setting that draws consumers.
- People feel safer when they know where they are and how to get to where they want to go, therefore signage in the form of maps and descriptive text fosters a stronger sense of safety.
- Access to telephones and urban space management personnel can contribute to a stronger sense of well-being and safety.
- Citizen participation provides a sense of ownership and pride, as well as a constituency of users interested in maintaining an urban space safe.
- The enforcement of rules governing unsuitable behaviors must be maintained in order to avoid a cycle of withdrawal and, as a result, a decrease in positive use.

“How trees being planted (location), and how will it grow then?”

Wiryono Raharjo, Ir.,M.Arch., Ph.D.

VEGETATION PLAN (TREE)



In order to create a green space that is more lush and beautiful, it is necessary to determine several suitable plants according to the type of local climate and their growth.

SYMBOL	NAME	POTENTIAL GROWTH
	TANJUNG *Mimusops elengi*	15-25 meters
	JAMBU DERSANA *Syzygium malaccense*	12-18 meters
	KERSEN *Muntingia calabura*	3-13 meters
	KEPEL *Stelechocarpus burahol*	20-25 meters
	COCONUT TREE *Cocos nucifera*	12-30 meters
	BANYAN *Ficus benjamina*	15-25 meters
	TABEBUYA *Handroanthus chrysotrichus*	5-50 meters

From the analysis and consideration of designing public spaces with the concept of re-naturalization, several endemic plants from the Yogyakarta area were chosen, where these plants are usually found only in this area. Not only endemic plants, there are also several trees scattered locally so that it emphasizes the local green nuance. The rest, plants that are like shrubs and vines are fully planted based on the characteristics of the space to be planted either in a certain medium or living in wet areas.

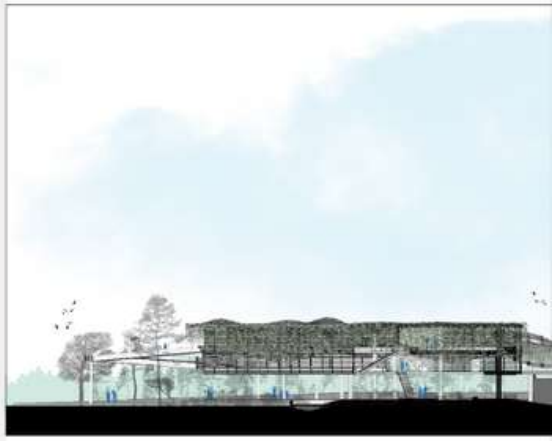
“How trees being planted (location), and how will it grow then?”

Wiryono Raharjo, Ir.,M.Arch., Ph.D.

ECOSYSTEM GROWTH BY TIMELINE

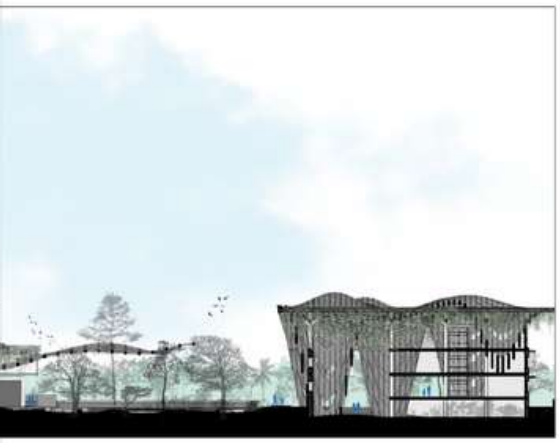


first year



2-5 y

From the beginning of the design phase of the Eco Hub, in line with its development to the stage of completion, there was also a process of replanting the selected plants in designing green and beautiful public spaces. This is intended so that the plant growth process can go hand in hand with development so that when the place can be opened to the public it can provide an atmosphere of re-naturalization which is expected but over time it can grow faster where the reforestation process has been carried out since the beginning of the project implementation later.



ears



6 - 10 years

Over time, it can be seen above where the reforestation process is carried out and continues every year where the plants that were originally still small, short, or still in the form of seeds, gradually continue to grow, creating green spaces that are increasingly fertile and shady every year. It can be seen that the elements of the building or site that initially looked vacant in the following years are growing and creating a more visible feel of re-naturalization. The creation of a public space that seems to live in harmony with nature and other residents.

ATTACHMENT

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SURAT KETERANGAN HASIL CEK PLAGIASI

Nomor: 1866420829/Perpus./10/Dir.Perpus/IV/2022

Bismillaahirrahmaanirrahiim

Assalamualaikum Wr. Wb.

Dengan ini, menerangkan Bahwa:

Nama	: Sultan Arya Manarul Hidayat
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Pembimbing	: Dr.-Ing. Ir. Ilya Fadjar Maharika, MA., IAI.
Fakultas / Prodi	: Teknik Sipil dan Perencanaan/ Arsitektur
Judul Karya Ilmiah	: Urban Spatial Arrangement of Tugu Jogja Area with re-naturalization approach

Karya ilmiah yang bersangkutan di atas telah melalui proses cek plagiasi menggunakan **Turnitin** dengan hasil kemiripan (*similarity*) sebesar **3 (Tiga) %.**

Demikian Surat Keterangan ini dibuat untuk dapat dipergunakan sebagaimana mestinya.

Wassalamualaikum Wr. Wb.

Yogyakarta, 7/4/2022
Direktur

UNIVERSITAS ISLAM INDONESIA
DIREKTORAT PERPUSTAKAAN
YOGYAKARTA

Joko S. Prianto, SIP., M.Hum

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Pemodelan Arsitektur dan Perkotaan

1

PAGE

DESIGN OF

ECO HUB:

URBAN SPATIAL ARRANCEMENT OF TUGU JOGJA AREA
WITH RE-NATURALIZATION APPROACH

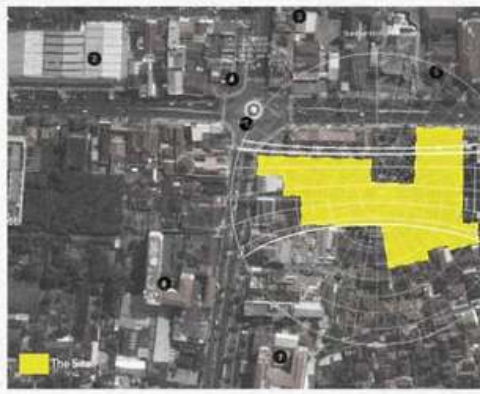
Urban development is unavoidable, and one of the most important factors influencing it is accessibility. Making it easier to get to and from cities encourages individuals to move in quest of a better living. The worse the environmental quality, the more heavily populated the city is, or when the city's population increase has surpassed the carrying capacity of its environment. The expansion of urban infrastructure to meet the requirements of its residents frequently consumes green space, lowering the amount of green open space in cities. Landowners may also readily sell their land because it is more cost effective than only being utilized for agriculture.

Tugu Jogja is a monument that is often used as a symbol of the city of Yogyakarta. Located at the intersection of Jalan Jenderal Sudirman and Jalan Margo Utomo, Tugu Jogja has a symbolic value which is a magical line that connects Parangtritis Beach and Panggung Krapyak in Bantul Regency, Yogyakarta Palace in Yogyakarta City and Mount Merapi in Sleman Regency. Being a widely known landmark throughout the country, Tugu Jogja is no wonder it has always been the primary destination for tourists to visit this area. Tugu Jogja, a symbol of Yogyakarta, is more packed with visitors, which motivates the region to develop to create a more attractive, local feeling. The development prioritizes several things, including creating a serene green space.

Regarding the arrangement of the monument area itself, it is increasingly possible to develop improvements in various aspects, not least in terms of re-greening the area and beyond. Along with the continued development in the area, the balance between the existence of nature, which has also been present in the life of the Javanese community since ancient times, has turned their attention to culture in learning from nature and living sustainably with nature. This is also in line with the main goals of the 2030 SDGs, mainly to preserve the environment. Creating a more modern Tugu Jogja area is also considered rich in all its uniqueness but still in line with the principles of environmental conservation in real terms.



FINAL ARCHITECTURAL DESIGN STUDIO



About The Site and It's Surroundings

The Tugu Jogja Area is one of the busiest area in Yogyakarta City. Businesses, Hotels, Culinaries, even Tourism pou
really develop so rapidly, becoming more vibrant and rich with its many uniqueness. Situated southwest and the so
Tugu Jogja consists of many houses which are heavily packed and having less place for circulation, eventually less p
owned by the Kesultanan of Yogyakarta. Going around the Tugu Jogja Area, the streets are the place where people
uniqueness of the city's distinct atmosphere, using car, bike, motorcycle, or even by walking.





As one of the cities that swiftly emergin, this city's population grows significantly each year, making it a congested city. Because of the rising
population, the development demands for commerce and services are increasing. Many people also come here to study to this city since it is
the centre of education. These development is the primary reason why many visit or move to Yogyakarta. Glancing at the development that
continues to grow, there is an imbalance in the existing space, as it is built without considering the need for non-functional spaces usually
used for commercial or tourism.

Lawson's Design Problem Thinking Matrix

	Formal Problem	Practical Problem	Symbolic Problem	Radical Problem
Regulation Yogyakarta Special Region Regional Regulation No.5 Year 2020 Governor of Yogyakarta Special Region Regulation No.46 Year 2014	Realization of Sustainable Cultural Conservation Area	Urban Area Arrangement	Plot Area Development	Balanced Development
Visit Locals and Tourists	Progressive Atmosphere	Sustainable Community	An Overview of the Future Living	Rejuvenation of Historical Area
Client Tourism and Culture Office of Yogyakarta Public works, Housing and Housing Office of Yogyakarta	Regional Management	Spatial Arrangement of Tugu Jogja Area	Urban Area Arrangement	Realization of the Ideal Regional Society
Designer the Architect	Refined Cultural Typology	Sustainable Area Development	Progressive Urban Environment	Harmony of past and future



Site Info

Site Area
± 1000 m²

Land Type
Primary Area
(Heritage Land)

Building Coverage Ratio (BCR)
⩽ 70%

Floor Area Ratio (FAR)
⩽ 0,7

Minimum Green Coverage Area
⩾ 10%

Building Boundary Line
4 meters
(3 meters minimum)
Yogyakarta City Regulation

s heavily in this area, creating the sense of city that uthward of Tugu Jogja Area, the villages neighboring lace for green area. A great part of this area are still tend to enjoy and look for zen while embracing the

1. Tugu Jogja
2. Aranggan Market
3. Lar Tugu Foodmart
4. Kebon Nilalorm Coffee Eatery
5. Phoenix Hotel
6. Santika Hotel
7. Harper Hotel
8. 101 Hotel





The following is a map of the distribution of green space throughout Yogyakarta City. Visually, the green part appears to be quite dominating, but numerically, this amount is still not enough to meet the need for the required green space. Given the continued development in the area, the land will continue to be converted gradually.

Several problems have been noted and resolved of the green space development projects that will be carried out or have been running, but several of the issues have also been noted.

> "RTH in the city of Jogja has not yet reached 20 percent, only 8.11 percent. For more private green open space, around 15 percent has been achieved."



Head of the Parks and Road Protection Section of the Yogyakarta City Environment Service (DLH) stated that the minimum percentage of green open space is, August 30%. This composition is made up of 20% (ha) green open space and 10% private sector green open space.

Why
Re-Naturalization?



Improving urban resilience and limit the degradation of biodiversity by
Re-Naturalization

Renaturalization, or the restoration of natural ecosystems, is an important aim of contemporary city planning. The goal is to create cities that are more livable, eco-friendly, and aesthetically pleasing, by returning natural areas to their original state.



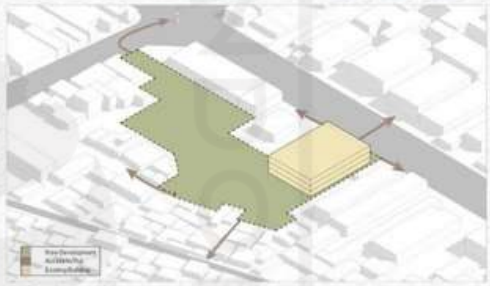
Eco Hub is a center for sustainable urban life that facilitates collaborations among different institutions, companies, and individuals to develop innovative ideas and solutions that promote environmental conservation. The aim of the eco hub is to provide an environment where people can relax, connect with their surroundings, learn new things, enjoy nature and appreciate its beauty while maintaining optimal ecological balance.



Species that hold strong link to ecological systems evokes a relationship to a larger whole, which enriches the experience by providing calm, reminiscence, insight, and returning anticipation. Biophilic design aims to produce optimal environment for humans as living entities, so improving population livelihoods, endurance, and well-being.

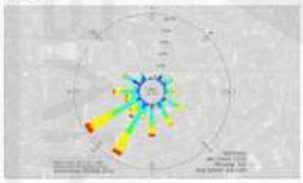
- tangible contact with natural attributes
- contact with images and/or representations of nature
- spatial relationships to enhance well-being

Sustainable Development · Biophilia · Ecology · Improving Life Quality



Site Development Plan

Wind Rose



The difference in precipitation between the wettest and driest months is 203 mm (7.0 inch. Temperatures vary by 1.1 degrees Celsius throughout the year.

February is the month with the greatest relative humidity (68.91 percent). August is the month with the lowest relative humidity (71.66 percent).

The month with the most rainy days is January (17.53 days). August is the month with the fewest rainy days (8.71 days).

Yogyakarta is located near the equator, and therefore the summers are exactly defined.

The months of April, May, June, July, August, September, and October are ideal for a visit.

Annual Climate Data for Yogyakarta City



Governor Regulation No.40 Year 2014
Architectural Guide for New Buildings with Regional Culture



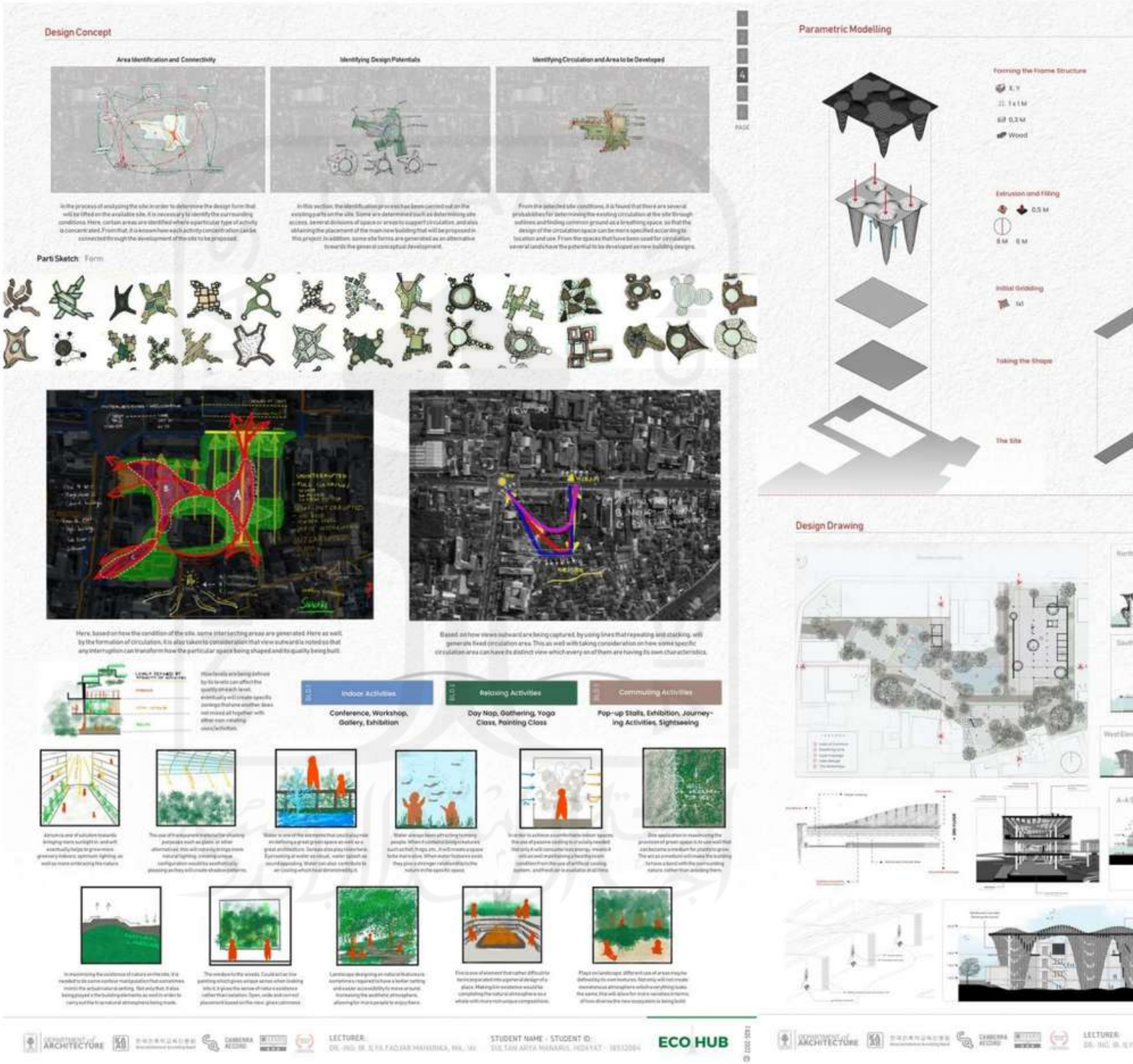
As referred to in the governor's regulation paragraph, Tugu Jogja Area is included in primary area, therefore any development uses the following directions:

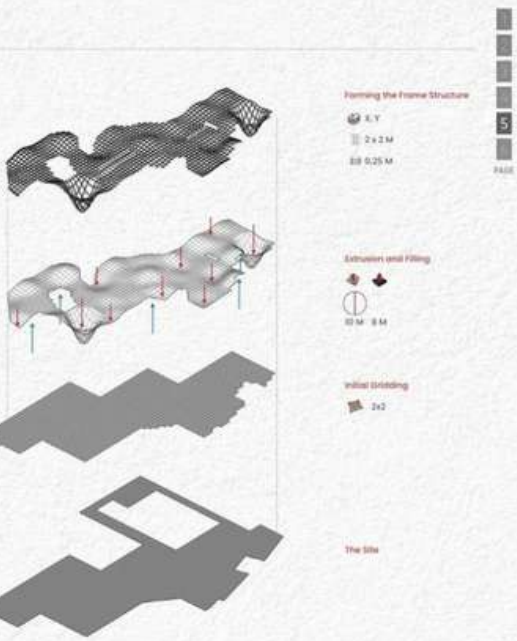
1. The shape of the buildings in accordance with the types of Cultural Conservation Buildings in the Heritage Area, while the building that is not visible from the outside can be adapted to technological developments.
2. Decorative variety in accordance with the types of decoration of Cultural Conservation Buildings in the Heritage Area.
3. The materials used can use new materials resulting from technological developments but visually must still show similarities to the materials used in the Cultural Conservation Buildings in the Heritage Area.
4. The vegetation is adapted to the original vegetation in the Heritage Area.
5. The outdoor furniture is designed in harmony with the types of decoration in the Heritage Area and does not distort the view of the Cultural Heritage Building.



Title:	WHAT	HOW	VALUE
Design of Eco Hub: Urban Spatial Arrangement of Tugu Jogja Area with Re-Naturalization Approach	Alternative 1 **Citadel for Common Unity**		
	Alternative 2 **Blossoming Urban Web**		
	Alternative 3 **Breathing Communal Complex**		
	Alternative (Selected) **Urban Web for Mutual Prosperity**		

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3D Perspectives



















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