FINAL PROJECT - RA.141581

DESIGNING THE CENTRAL MARKETPLACE OF MANOKWARI THROUGH SPATIAL FLEXIBILITY

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UNDERGRADUATE PROGRAM
DEPARTMENT OF ARCHITECTURE
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LAPORAN TUGAS AKHIR - RA.141581

RANCANGAN PASAR PUSAT MANOKWARI MELALUI *SPATIAL FLEXIBILITY*

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2017

APPROVAL

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ABSTRACT

DESIGNING THE CENTRAL MARKETPLACE OF MANOKWARI THROUGH SPATIAL DESIGN

Written by

Asterica Deviana Ardhikawati

NRP : 3212100049

As a coastal city, Manokwari's coastline is where the central development grows, one of which is the Sanggeng Marketplace. This central market area is a vital system in the city yet it lacks the development required to accommodate future growth and respond to future risks. The issue at hand discusses the marketplace's position as a commercial and recreational space and how both can be integrated into a space that caters to the bright, multicultural citizens of the city of Manokwari.

The design proposed in this final project accommodates the merging of both commercial, recreational, and social spaces in a single marketplace through spatial flexibility, and the programming of spatial experiences. By designing a marketplace that not only delivers flexible spatial functions but also reflects the vibrancy and provides a spatial experience that is exclusive to the character of Manokwari, the Sanggeng Market can exist as a central marketplace that can significantly further benefit the city, both economically and socially.

Keyword : Flexibility, Programming, Marketplace, Public Space

ABSTRAK

RANCANGAN PASAR PUSAT MANOKWARI MELALUI *SPATIAL FLEXIBILITY*

Ditulis oleh:
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Sebagai kota pantai, pusat perkembangan kota Manokwari terletak di garis pantainya, salah satunya adalah Pasar Sanggeng. Area ini merupakan sebuah sistem yang krusial bagi kota Manokwari, tetapi masih minim perkembangan yang ada untuk mengakomodasi dan merespons tantangan dan pertumbuhan kota ke depannya. Isu yang dibahas adalah posisi pasar sebagai wadah komersial dan rekreasi, dan bagaimana keduanya dapat terintegrasi ke dalam satu ruang untuk warga kota Manokwari.

Rancangan yang diusulkan dalam Tugas Akhir ini menyatukan fungsi komersial, rekreasional, dan ruang-ruang sosial dalam satu wadah pasar melalui *spatial flexibility* dan *programming* pengalaman ruang. Dengan merancang sebuah pasar yang tidak hanya menawarkan fungsi ruang yang fleksibel namun juga merefleksikan sebuah pengalaman ruang yang khas dengan karakter kota Manokwari, sehingga pasar Sanggeng dapat hadir sebagai sebuah pasar pusat yang dapat menguntungkan kota ke depannya.

Keyword : Fleksibilitas, Programming, Pasar, Ruang Publik

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CHAPTER I

INTRODUCTION

I.1. BACKGROUND

Manokwari is the capital of West Papua province in Indonesia. It is often referred as as Kota Injil or the "gospel city" due to the spread of Christianity in this area around the 19th century. It is situated in the Doreri Bay area and in between low hills, with Arfak mountain bordering on its south. Since it was founded in 1942, Manokwari has undergone urbanization yet is still perceptibly vulnerable towards various risks in its urban fabric. There are many chronic stresses that affect the city daily, such as underdeveloped infrastructures, energy and resource shortages, and the ongoing population growth.

The coastlines of Manokwari is the central development zone where most commercial activities take place there. A strong economic system is important for a city to grow, yet this area have not experienced major change to accommodate future growth, especially in the central market area called Sanggeng Market. This central market area is a vital system in the city yet it lacks the development required to accommodate future growth and respond to future risks. The Sanggeng market is a combination of a traditional open market and a "modern" wholesale market in a multi-storey building.

Although it is an important axis in the city, there have not been much development in the area. It has many potentials to catalyse economic growth and further support the social and recreational needs of the citizens yet the current infrastructure does not support it. It is also located in the seafront, which is a large advantage to attract more visitors, activities, and growth. Sanggeng Market suffers from poorly managed facilities, weak infrastructure, lack of proper building systems; making it almost unfit for current activities, yet it possesses the advantages that makes it into a central marketplace of the city.

I.2. ISSUE & CONTEXT

The issue at hand discusses the marketplace's position as a commercial and recreational space and how both can be integrated into a space that caters to the bright, multicultural citizens of the city of Manokwari.

I.3. DESIGN PROBLEM & CRITERIA

The design problems found in this object are reviewed from several aspects, of which are: functional aspects, regarding the main programs and function of the object; formal aspects, which includes issues related to the formal aspects of the building, and contextual aspects, which includes issues related to the site and context.

- Functional
  - Merging the various programs intended for the site
- Formal
  - Balancing the various circulation patterns between visitors, vehicles, and materials
  - Creating a coherent flow of spatial experience between each function
- Contextual
  - Imagery that reflects the contemporary cultural values and character of the city

The fundamental criteria for the central marketplace is to provide integrated spaces that functions as commercial, recreational, and social hub. The intended design must also express imagery or spatial experiences that is of value to the cultural landscape of Manokwari. Therefore, the object intended requires an approach that focuses on spatial flexibility and programming.

CHAPTER II

DESIGN PROGRAM

II.1. PROGRAM SUMMARY

The object intended is a building that will contain activities related to trading, and various activities in a public space. According to building typologies this object is a type of market, and a public space. A market by its definition is (1) a regular gathering of people for the purchase and sale of provisions and other commodities, and (2) an area or arena in which commercial dealings are conducted; whereas a public space is a social space that is generally open and accessible to people; roads, pavements, public squares, parks, and beaches are typically considered public space.

- **Activities**

  The various activities in this object are:

  ○ *Commercial*

  Commercial activities are related to the buying and selling of various products, ranging from fresh produce such as fruits and vegetables, cooking ingredients, kitchen appliances, clothes, accessories, food, books, and cassettes. This also includes the buying and selling of services such as salon, photography and photo printing, tailors, and etc.

  ○ *Recreation and Social*

  The social spaces and public functions intended in the design is for recreational values as well as a green space in the centre of the city.

  ○ *Administrative*

  This encompasses activities regarding management and maintenance, safety, and various other activities related to building service

- **Users**

  The types of users of this object are:

  ○ *Vendors/sellers*

  Vendors are the people who sell their product in the market. They do not privately own the stalls but rent them.

  ○ *Buyers*

  Buyers are the people who does transaction in the market with vendors. Buyers

come to the market with the intention of purchasing certain products.

○ *Visitors*

Visitors are those who come to the market without the intention of purchasing anything; these type of users usually come to the market to meet with other people or for recreation.

○ *Administrative personnel*

Administrative personnel are the people who runs the management of the market, from handling managerial issues to supervision of the building area in general.

- **Facilities**

From the existing condition of the market and its activities, the basic facilities required can be divided into two types, of which are the main facilities and supporting facilities.

The main facilities are:

○ *Market stalls*

There are two types of market stalls, open air stalls and closed unit stores (the open market and the wholesale market). The open-air stalls are in an informal setting, which mostly sells fresh agricultural products; whereas closed unit stalls are formal stores which sells non-agricultural products such as packaged ingredients, clothing, accessories, home tools and appliances in wholesale, making it the central marketplace in the city.

○ *Social Space and Public Functions*

This facility functions as the recreational area of the site, integrated in the market to promote a lively environment. It consists of a plaza, an open stage, a night market, a food and beverage strip, and independent stores outside of the market stalls.

○ Green Spaces

This is divided into hardscapes and softscapes, where hardscapes feature facilities such as seating, awning, plazas, and etc.; whereas softscapes are mainly features such as greeneries and waterscapes, functioning as green spaces in the site.

And the supporting facilities are:

○ *Management office*

This includes administrative areas and activities regarding the management of the various facilities

○ *Public facilities*

Public facilities involve facilities such as car park, service area, security posts, and etc.

- **Spatial Requirements**

From the activities, users, and required facilities we can then determine the spatial requirement for the object.

○ *Marketplace*

The marketplace is divided into two typologies, of which are the open-air market and the wholesale market.

No.	Program Type	Standard Re-quirement	Source	Capacity	Total Area
	Open-Air Market / Night Market				
1.	Stall unit	$9m^2$/unit	Study	250	$2250m^2$
2.	Restroom/ Handwash	$2m^2$/person	Time Saver Standard	10 people/50 stalls	$60m^2$
3.	Circulation	30% of total floor area	Study	-	$693m^2$
	Wholesale Market				
1.	Store Units	$9m^2$	Study	200	$1800m^2$
2.		$12m^2$	Study	250	$3000m^2$
3.	Restroom	$2m^2$/person	Time Saver	10 people/floor	$80m^2$
4.	Circulation	30% of total floor area	Study	-	$1464m^2$
	Total Area Required				**$9347m^2$**

Table II.1 Spatial requirement for marketplace

○ *Green Area*

The green area includes garden/parks, which functions as a part of the public recreational area in the site.

No.	Program Type	Standard Re-	Source	Capacity	Total Area
1.	Hardscapes	60% of green area	Study	-	6624m^2
2.	Softscapes	40% of green area	Study	-	4416m^2
	Total Area Required				**11040m^2**

Table II.2 Spatial requirements for green area

- *Social & Public Spaces*

  The social and public spaces consist of the Food and Beverage Walk, various store units, and the open stage, all of which functions as the recreational attraction of the site.

No	Program Type	Standard Requirement	Source	Capacity	Total Area
	F&B Walk				
1.	Food stalls	9m^2/unit	Study	50	450m^2
2.	Eating area	1.4m^2/person	Time Saver Standard	200 people	280m^2
3.	Restroom/ Handwash	2m^2/person	Time Saver Standard	20	40m^2
4.	Circulation	30% of total area	Study	-	231m^2
	Independent Stores				
1.	Store Units	9m^2	Study	50	450m^2
3.	Restroom	2m^2/person	Time Saver Standard	10 people/floor	80m^2
4.	Circulation	30% of total floor area	Study	-	135m^2
	Open Stage				
1.	Stage deck	1m^2/person	Study	200	200m^2
2.	Circulation	30% of total area	Study	-	60m^2
	Total Area Required				**1926m^2**

Table II.3 Spatial requirements for social & public spaces

○ *Supporting Facilities*

The supporting facilities include the management/administrative office, service, and utility areas.

No.	Program Type	Standard Requirement	Source	Capacity	Total Area
	Management Office				
1.	Administration room	2m^2/person	Neufert	20 people	40m^2
2.	Staff room	2m^2/person	Neufert	25 people	50m^2
3.	Restroom	2m^2/person	Time Saver Standard	10 people	20m^2
4.	Circulation	30% of total floor area	Study	-	33m^2
	Parking				
1.	Car parking	15m^2/unit	Time Saver Standard	75 units	1125m^2
2.	Motorcycle parking	17m^2/unit	Time Saver Standard	300 units	510m^2
3.	Bicycle parking	1.3m^2/unit	Time Saver Standard	25 units	57.5m^2
4.	Security Post	6m^2/unit	Time Saver Standard	3 units	18m^2
5.	Circulation	30% of total floor area	Study	-	513.1m2
	Service Area				
1.	Mechanical electrical room	Plumbing room Trafo & gen-	Study	-	300
2.	Waste management	5m^2 /unit	Study	4 units	20m^2
3.	Loading & unloading	7.5m^2/unit	Time Saver Stamdard	4 units	30m^2
	Total Area Required				**2416.65m**

Table II.4 Spatial requirements for supporting facilities

○ *Total Area Required*

No.	Program Type	Total Area
1.	Market Stalls	9347m^2
2.	Green Spaces	11040m^2
3.	Social & Public Spaes	1926m^2
4.	Supporting Facilities	2416.65m^2
	Total Area Required	**24729.65m^2**

Table II.5 Total area required

- **Spatial Organization**

The spatial organization is determined by the relationships of each program to each other, whether it is essential, non-essential, or desirable.

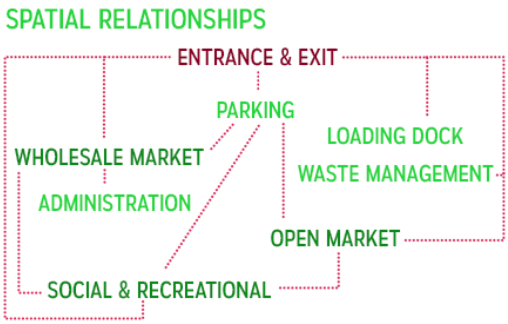


Figure II.1 Spatial relationships

As a result, the spatial organization follows the following sequence: visitor entry to the object can be accessed from either the parking area, a direct entry from the open market, or from the wholesale market. The loading dock and waste management area will gain direct access to both open and wholesale markets as these two programs' paths crosses over, they will be connected by a single space. Various public gardens and social spaces are within the area, and exits from the site are generally in the same route as the entrances.

II.2. SITE DESCRIPTION

The site is located in the city of Manokwari, West Papua. The existing site is a current marketplace that is central to the city, and is situated in the , Bay area.

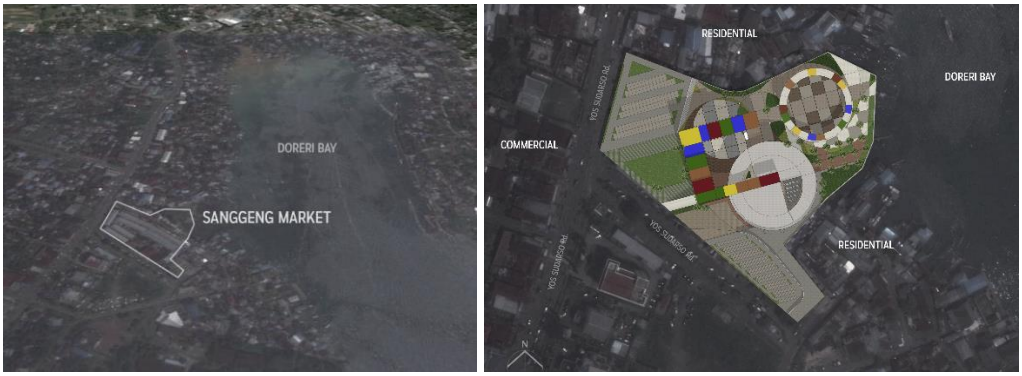


Figure II.2 Site

- North border: Residential
- West border: Yos Sudarso Rd
- East Border: Doreri Bay & Residental
- South Border: Yos Sudarso Rd

The site has a total land area of 2.76 hectares. According to the municipal regulation in the regional spatial plan of Manokwari, the building coverage for this site is specified at a maximum of 60% of the total area. The site is easily accessible as it is located in the central area of the city, surrounded by a major road with relatively heavy traffic (Yos Sudarso Rd) and residential areas. It also has advantageous views to its surroundings as it borders on the Doreri Bay. The site has a seafront advantage and can be catalysed as a social space and public attraction.

CHAPTER III

DESIGN APPROACH AND METHOD

III.3. DESIGN APPROACH

Based on the resulting issue and response, there two design approaches in designing this object, of which are flexible space design and design with association to other arts.

- **Flexible Space Design**

  One example of a flexible space in architecture is the concept of an open-plan room, where the floor plan is usually made out of large open spaces and minimizes the use of smaller enclosed rooms. In these large spaces, walls are replaced by temporary partitions that can be moved around to create various spatial configurations, hence its flexibility.

  To understand how to design a flexible space, an understanding of the relationships that happen between space and the activities inside it is necessary. Flexible space is by its nature deconstructive; it strips the notion that certain rooms must belong to certain uses. As Bernard Tschumi (1994) defined it, there is no space without event and no architecture without "event" or program. Space is created by an event taking place within it and architectural space is defined by the activity taking place inside/in front/around – in any spatial relation with it. By understanding spaces by the activities or "events" that occur inside of it, we find that there are three types of relationships between space and program; either it is reciprocal, meaning that both space and program is totally interdependent and fully condition each other's existence; indifferent, where space and program is functionally independent of each other; or conflicting, in which program is made to

clash with its space, resulting in a complex relationship between the two (Tschumi, 2012). In creating a flexible space, we must also be able to understand the different relationships between each event or program as well. Similar relationships can be applied when programming several events in a space:

- Crossprogramming: using a given spatial configuration for a program not intended for it
- Transprogramming: combining two programs regardless of their incompatibilities, together with their respective spatial configurations
- Disprogramming: combining two programs whereby a required spatial configuration of program A contaminates program B and B's possible configuration

The programmatic relationship between a market and public space can be seen as crossprogramming; where these spaces with each of its different programs are merged into one reciprocal spatial configuration.

- **Design Through Association with Other Culture and Arts**

  In Poetics of Architecture (1990) Anthony C. Antoniades describes the various channels of which architecture may be explored; in this case through the inclusivity of culture and expression through the arts that touches it. "The Exotic", as he calls it, may be shown through exploration of site, materials, details, and history of the culture itself. It is most impactful when used to stimulate a certain experience both physically and intellectually. Local cultures are intertwined with arts. These expressions can be carried out by using several transformational strategies Anthony (1990)

considers as the three major strategies:

- The traditional strategy, which is transformation through step-by-step adjustability to specific constraints;
- Borrowing, the act of borrowing formal departures from other artefacts/subject, learning their two-dimensional or three-dimensional properties while constantly probing interpretations with regards to their applicability and validity
- And de-construction or de-composition, a process whereby one takes a given whole apart in order to find new ways to combine the parts and to evolve possibilities of new wholes.

III.4. DESIGN METHOD

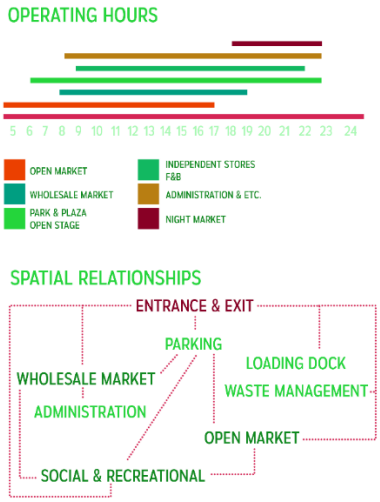
In implementing the design approach, a method is formed based on each approach. The method as a result of the flexible program approach is by understanding and analysing each program's relationship to each other, finding the overlaps between each program, to which it will create types of spaces according to those overlaps.

- **Program & Spatial Organization**

  The programs within the market are first analysed to find the various relationships between them in order to create an overlap between them. This overlap will act as a base for spatial organization, experience, zoning, and massing in the future.

Figure III.1 Program

Based on the main spatial needs and functions of the major programs, we can conclude that there are several similarities in between them. The open market by its own can overlap with the park, night market, wholesale, and F&B area; while the wholesale market may overlap with the independent stores and the F&B area; we can also see that there is a similarity between the park and the open stage. Further analysis of the connections between the program can be seen from observing each of its operational hours and the connecting relationship between each of them.



Firgure III.2 Program analysis

Based on the observations above, we can conclude that the overlapping programs, therefore the spaces that may be merged are as such:

- Open Market x Park
- Open Market x Night Market
- Open Market x Wholesale Market
- Park & Plaza x Open Stage x F&B area
- Open Market x F&B area x Park and Plaza x Night Market

The second method is a result of the approach to culture and arts, of which is translated to the sequences of spatial experiences and the flow of

functions and programs within the object. This is achieved through experimenting with the Borrowing method, which is the act of borrowing formal departures from other artefacts/subject, learning their two-dimensional or three-dimensional properties while constantly probing interpretations with regards to their applicability and validity.

An aspect to remember is that the object is always affected by its context. In this case, it is not the geographical context that most affects the object, but the cultural context. Manokwari is a diverse, multicultural city; that is rapidly growing by each year. As the object intended is a marketplace that is combined with various public social spaces, the experience is not a traditional one, but rather a contemporary cultural experience.

The people of Manokwari is characterized by their youthful festivities that are ingrained from local cultures. Music and dance play a large part in influencing the contemporary scene; one of which is the Yospan dance. Yospan is a contemporary dance in Papua; it is a hybrid of the Yosim and Pancar dance that expresses the youthful spirit of Papua through the simple yet upbeat nature of both its music and movements. Yospan is usually danced at celebrations and festivals, but can be danced at any time by anyone of any ages.

Figure III.3 Yospan dance performance

- **Spatial Experiences & Flow**

  Essentially, the borrowing approach uses interpretation of the dimensional properties in the object; so to do so would mean to observe the properties that

exist in the Yospan dance, both in its music and its dance.

○ *The Music*

Yospan is traditionally performed with a live music team, directing the dance. The music used in Yospan is a medley of local and folk songs in Papua. The medley of songs last for around 22 minutes.

Figure III.4 Yospan song duration

In interpreting the music to the object, the method used is an experimental method of direct-ear interpretation by visualizing the musical elements into a graph, to which the graph will be projected to the site and translated into architectural form.

The aspects analysed in the music are:

- Rhytm-Tempo: the changing tempo and rhythms in the music
- Density: the amount of noise/musical elements involved
- Vocal Harmony: the dynamics of each vocal element
- Feel/Emotion: the expression conveyed through the music

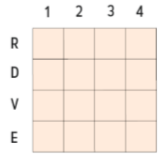


Figure III.5 Music graph used for analysis

This results in four typologies that is then sequenced and projected into the site.

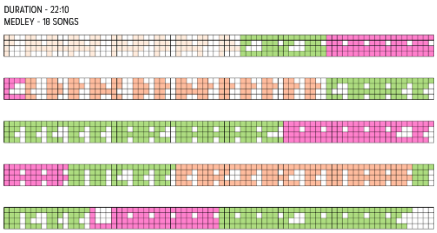


Figure III.6 Yospan song graph

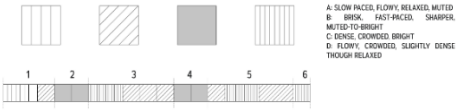


Figure III.7 Sequence

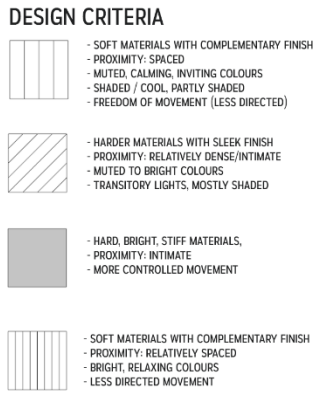


Figure III.8 Design Criteria

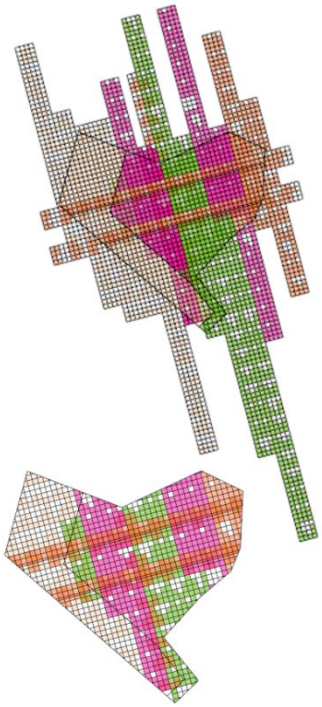


Figure III.9 Projection of graph to site

○ *The Dance*

The Yospan dance is a simple dance with repetitive movements. It is also flexible, as its moves has many variations with each different performance.

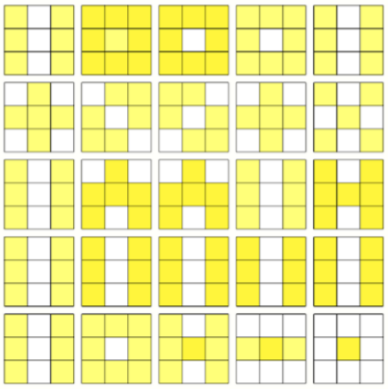


Figure III.10 Layout graph of dance formations

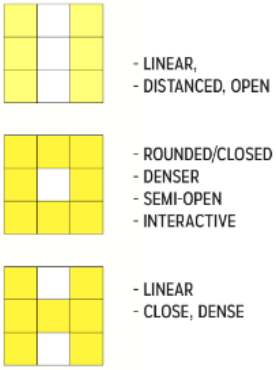


Figure III.10 Resulting criteria for dance formation

The dance formations in Yospan is an aspect that is reminiscence of the Western square dance yet also retains the character of a Papuan dance.

As a result, the dance creates three typologies that will be projected into the site.

CHAPTER IV

DESIGN CONCEPT

IV.1. FORMAL EXPLORATION

The concepts as a result of the design method are concepts of zoning, circulation, mass, and spatial sequences.

- **Zoning and Circulation**

  Using the main linear formation as a means of reaching the open stage at the bay area, the flow is guided by the sequence of the Yospan song. There are approximately six sequences (see **Figure III.7**) of which each is translated into the corresponding program and is then projected into the site accordingly

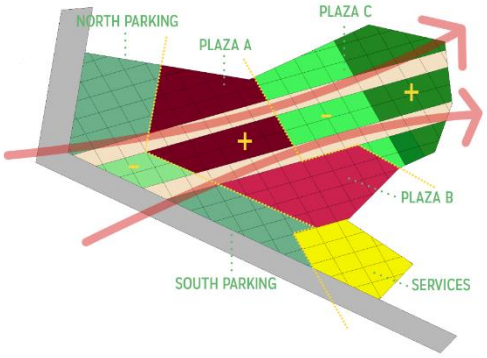


Figure IV.1 Zoning

The circulation within the site can be divided into three types, of which are circulation of the visitors, vehicles, and materials/produce.

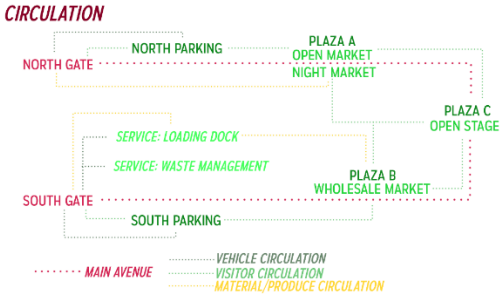


Figure IV.2 Circulation concept

- **Massing Concept**

  The mass is projected from the main dance formations correlating with each programmatic requirement.

- Three circular areas translated as the open market/night market, wholesale market, and F&B and open stage respectively.
- The linear formation represents the timeline from beginning to end of the song and likewise to the site; starting from the western point and ending at the bay area to the east.

- And the second linear formation represents another part of the wholesale market area that overlaps with the circular formations and respective programs.

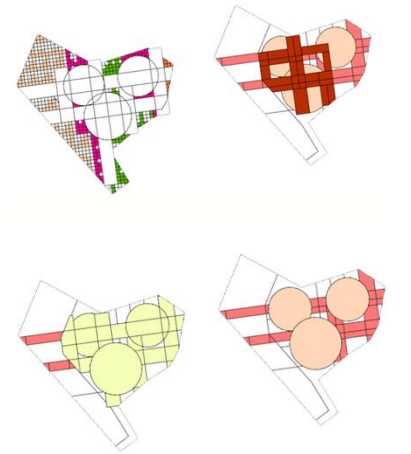


Figure IV.3 Massing

- Spatial Sequences

The main sequences were divided into six parts and translated into the site; the resulting zones were then projected with the mass formations, which then results in spatial sequences based on these projections.

○ *Sequence 01 – Introduction/Entry*

- Correlating program: Parking area and market plaza
- Criteria: Soft materials with complementary finishes, spaced proximity, muted/calming colours, less directed and gives freedom of movement
- Concept: An open plaza, mainly greenery.

○ *Sequence 02 – Highlight 01*

- Correlating program: Open-air market and night market
- Criteria: Bright, striking colours with "hard" materials, strong contrasting finishes, intimate proximity and controlled movements through the space
- Concept: Open spaces to accommodate the open market. The stalls are temporary stalls, based on existing open-air market.

○ *Sequence 03 – Intermission 01*

- Correlating program: Wholesale market, plaza, supporting facilities
- Criteria: Relatively proximate space, "hard" materials with complementary finishes, relatively controlled movements, between muted and bright colours
- Concept: Programs are in an enclosed building, but with

minimum closures in between areas. Plaza functions to connect one program to another.

- *Sequence 04 – Highlight 02*

- Correlating program: F&B area, open stage
- Criteria: Bright, striking colours with "hard" materials, strong contrasting finishes, intimate proximity and controlled movements through the space
- Concept: An open area surrounded by a semi-enclosed mass

- *Sequence 05 & 06 – Intermission 02 and Fade out*

- Correlating program: Plaza and park
- Criteria: Soft materials with complementary finishes, spaced proximity, muted/calming colours, less directed and gives freedom of movement
- Concept: Recreational paza and park overlooking the bay area, plays with height differences of the ground

IV.2. TECHNICAL EXPLORATION

Technical aspects of the object include the structure and utility needs of the site. There are several points to consider, of which are:

- Loading functions; transporting products from the loading dock to the store. This requires a large space between stalls, a freight lift, and ramps.
- Types of market stalls; since the wholesale market sells a variety of products, most heavier and larger products will be positioned at the lower floors whereas the upper floors will be used for services and recreation.
- Façade system; using sun shade systems to protect from the sun's glare, mainly using natural ventilation.
- Waste system; uses a waste chute that effectively transfers trash from the top floors to the bottom floor and the waste area for the main building
- Structure: A light, open structure for the overlapping of wholesale market and open market, and structure that

supports ramp uses for the main buildings.

- Drainage systems for the open-air markets that eases the cleaning and maintenance of the area

CHAPTER V

DESIGN

V.1. FORMAL EXPLORATION

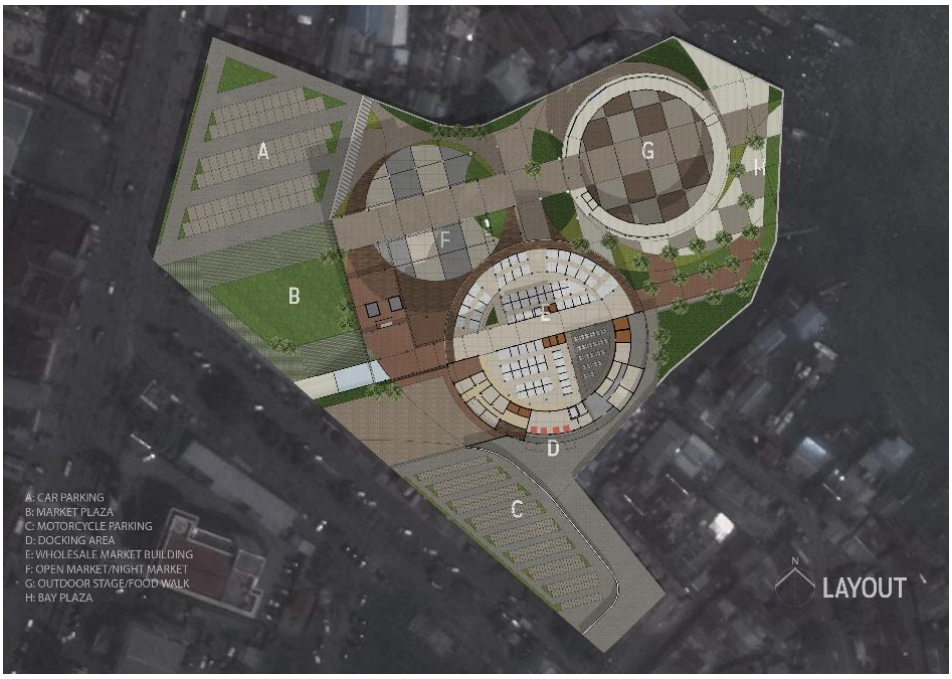


Figure V.1 Layout

Figure V.2 Siteplan

The main site as a result reflects the basic form and sequences of the dance, with the change in materials in each area reflecting the sequence requirements. The site starts with an open plaza and ends with an open plaza; with the main programs in between, complementing and contrasting each other.

The main sequence is expressed mainly through changes of colour, form, and materials.

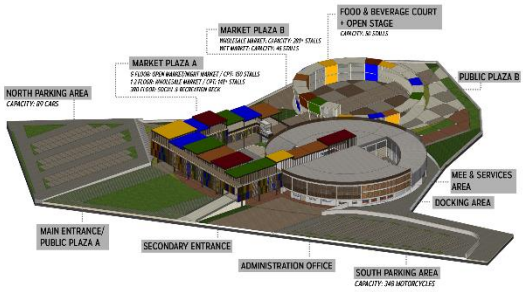


Figure V.3 Programs

Figure V.4 Sequence 01

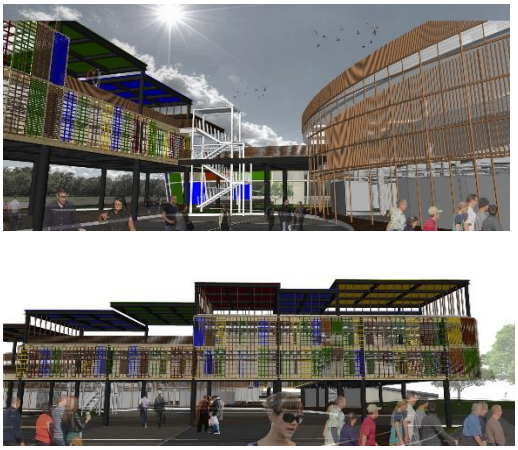


Figure V.5 Sequence 02, Open Market

Figure V.6 Sequence 02, Building A / Wholesale Market A

Figure V.7 Sequence 03, Building B / Wholesale Market B

Figure V.8 Sequence 03 towards Sequence 04

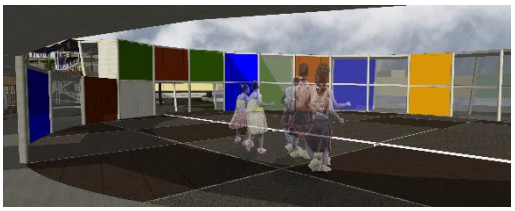


Figure V.9 Sequence 04, Open Stage and F&B area

Figure V.10 Sequence 05 – 06, Bay Plaza

V.2. TECHNICAL EXPLORATION

The main structures use a combination of metal and concrete structures, 60cm in diameter. The façade is a system of sun shades with varying sizes of openings, and the top deck functions as an open recreational space covered with canopies of varying heights with a metal frames.

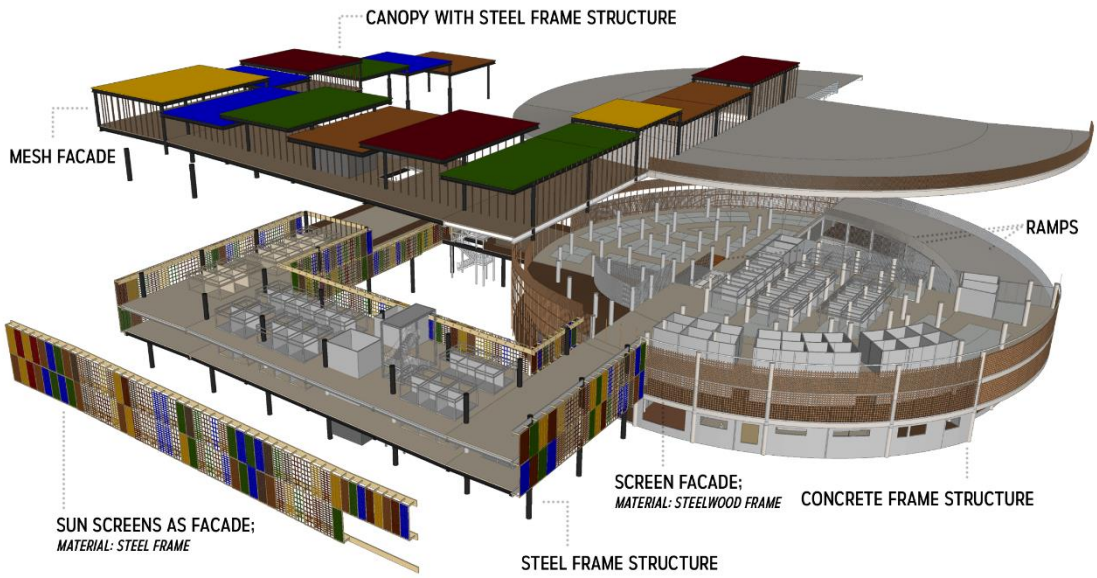


Figure V.11 Structural system

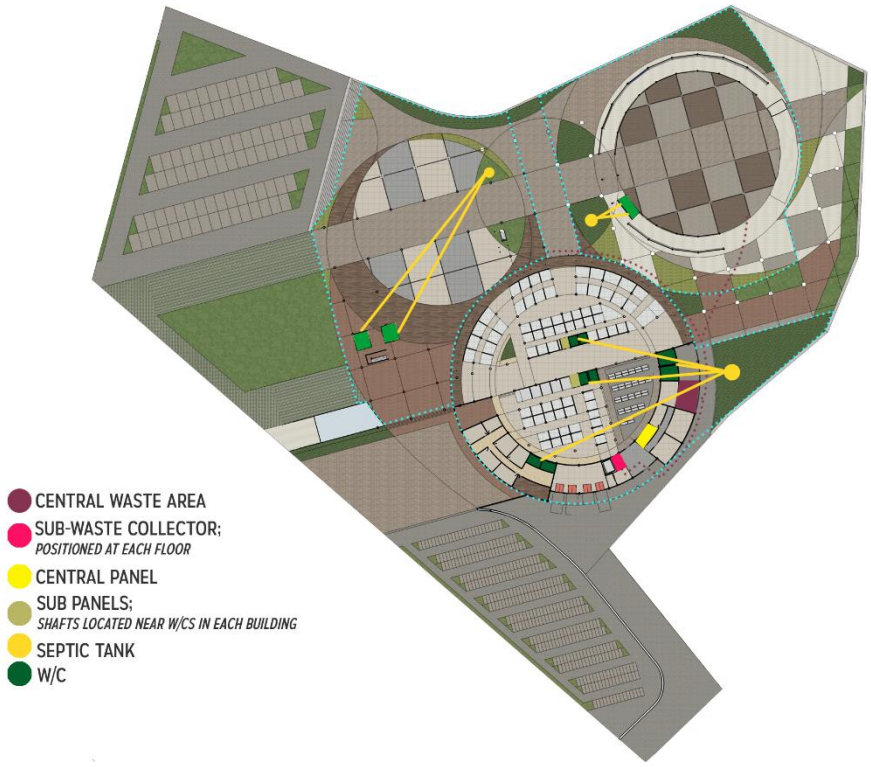


Figure V.12 Waste, Electricity, Plumbing System

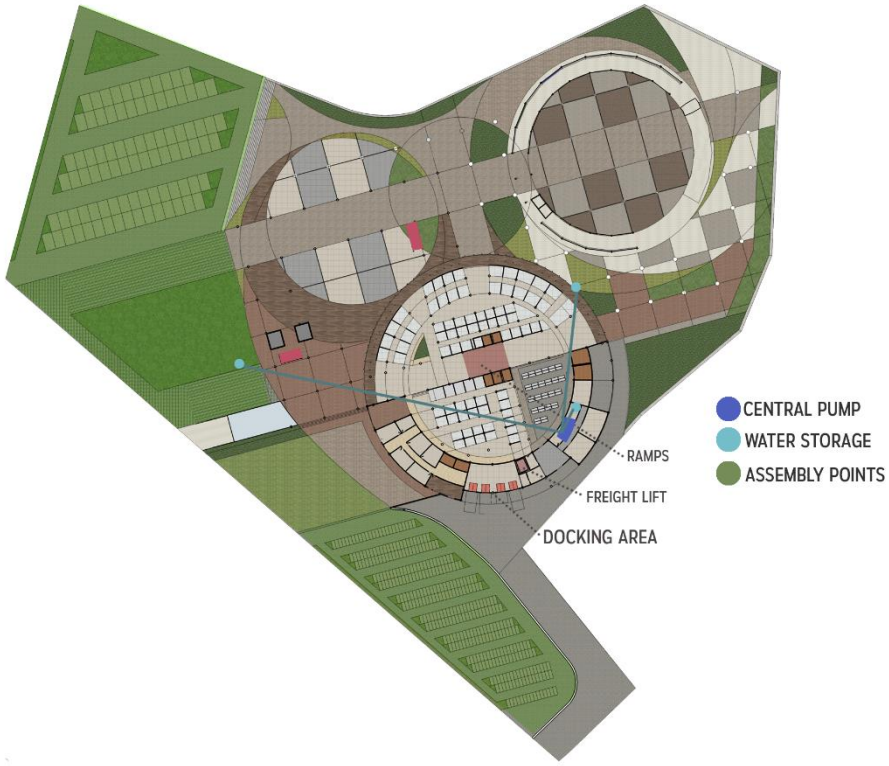


Figure V.13 Clean Water System

CHAPTER VI

CONCLUSION

While the existing Sanggeng Market still functions as a marketplace, it still lacks much of the basic infrastructure to support it in the longer run. The Sanggeng Marketplace possesses many advantages as a marketplace in a growing city such as Manokwari; if these potentials are harnessed and fully used, the marketplace can exist as more than just a commercial hub: it can also act as the central social hub of Manokwari, helping to improve the quality of public spaces in the city.

By designing a marketplace that not only delivers flexible spatial functions but also reflects the vibrancy and provides a spatial experience that is exclusive to the character of Manokwari, the Sanggeng Market can exist as a central marketplace that can significantly further benefit the city, both economically and socially.

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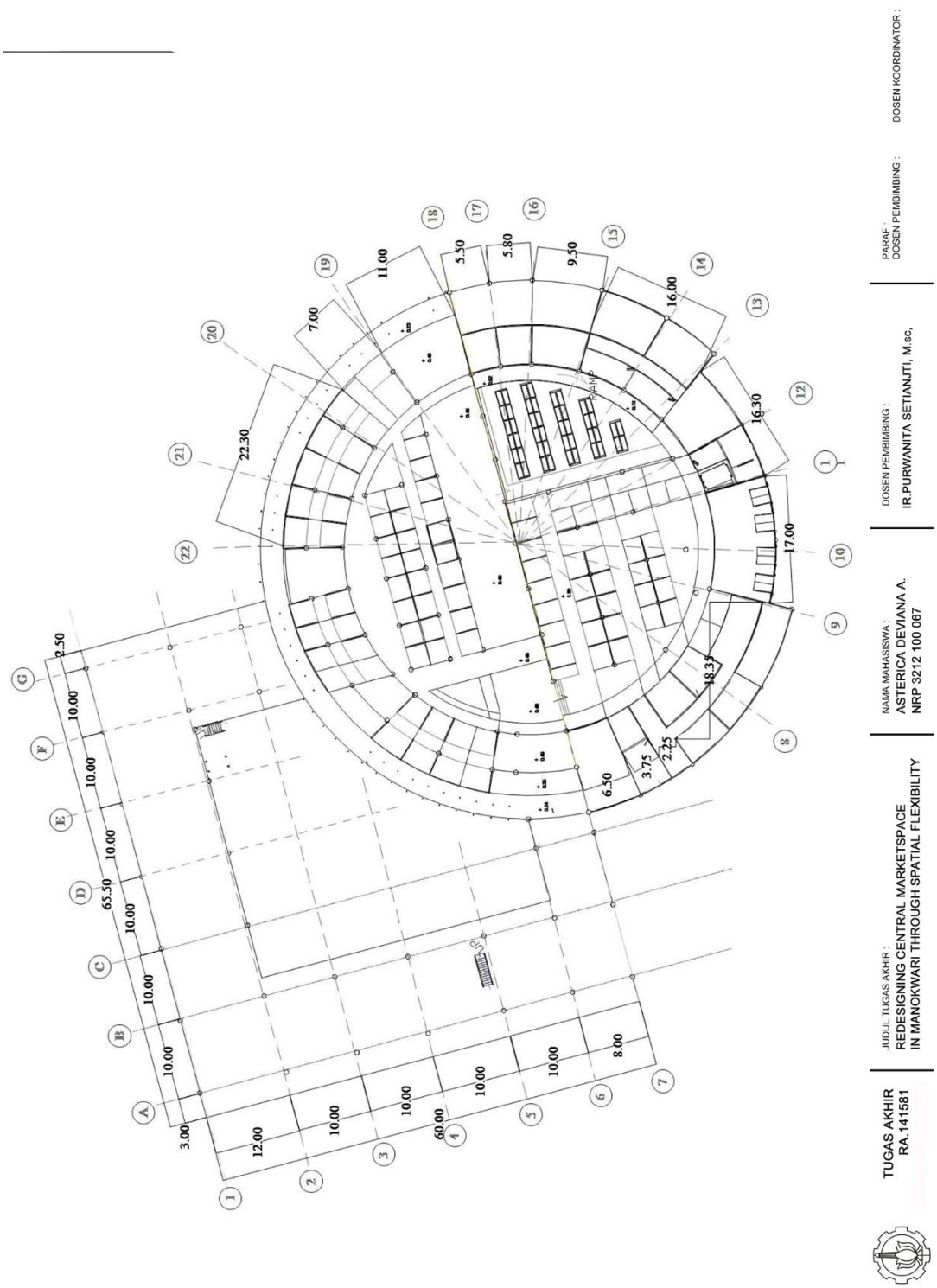
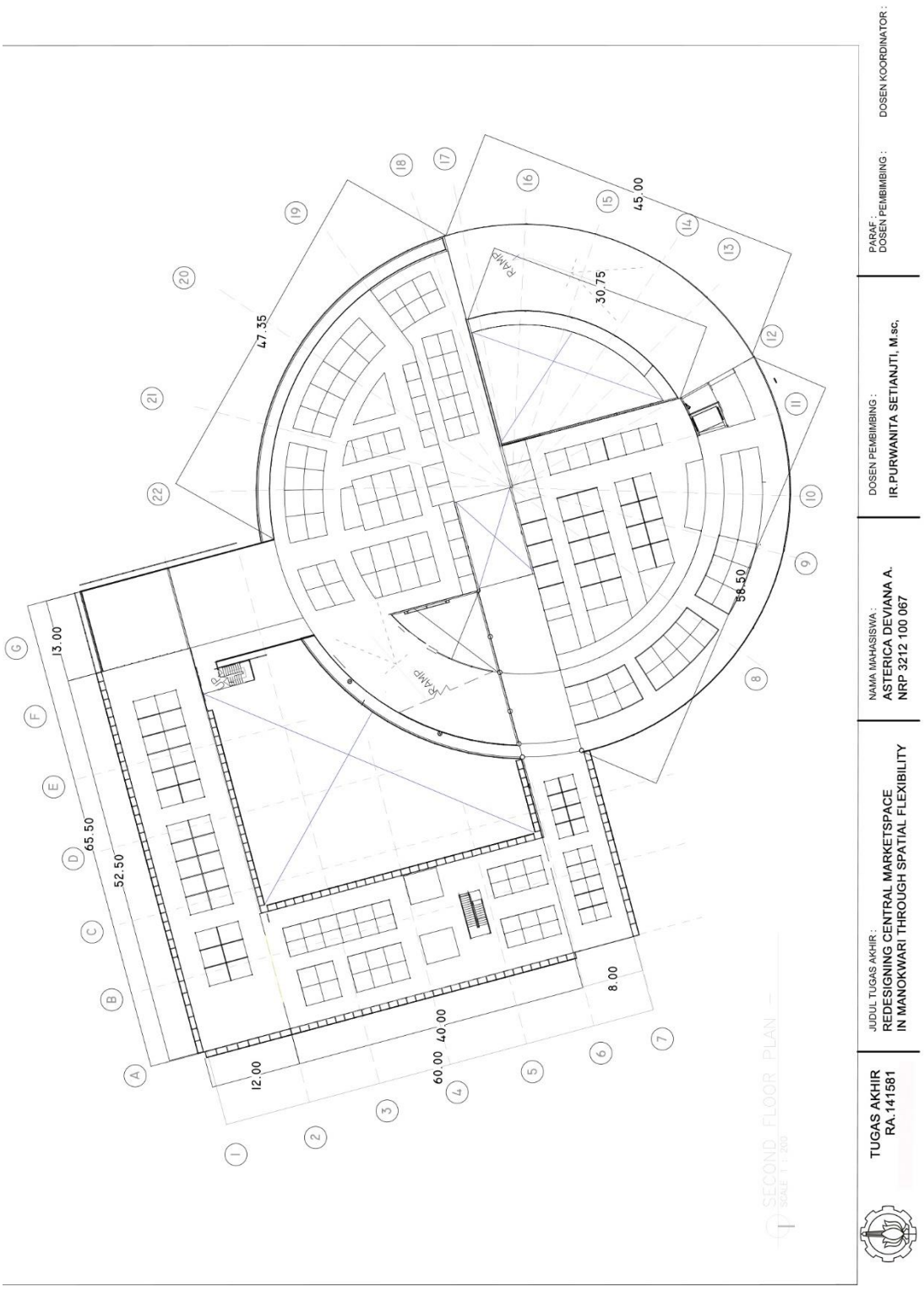
APPENDIX

APPENDIX A



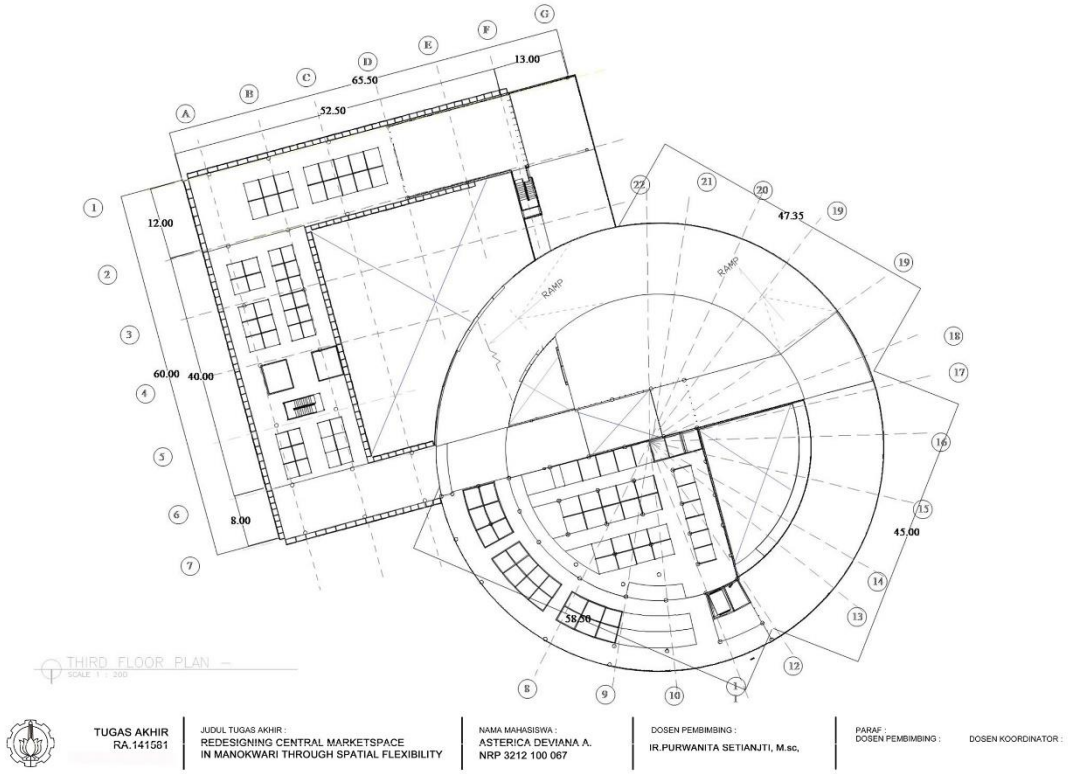
FLOOR PLAN – 1ST FLOOR

APPENDIX B

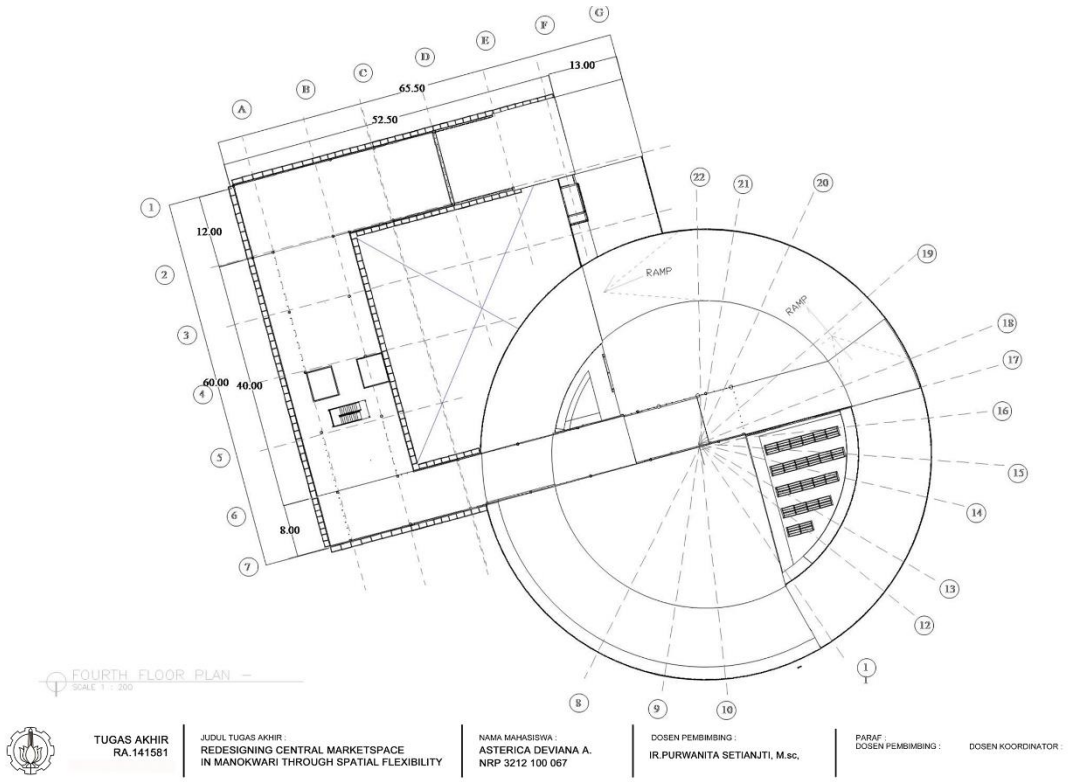


FLOOR PLAN – 2ND FLOOR

APPENDIX C



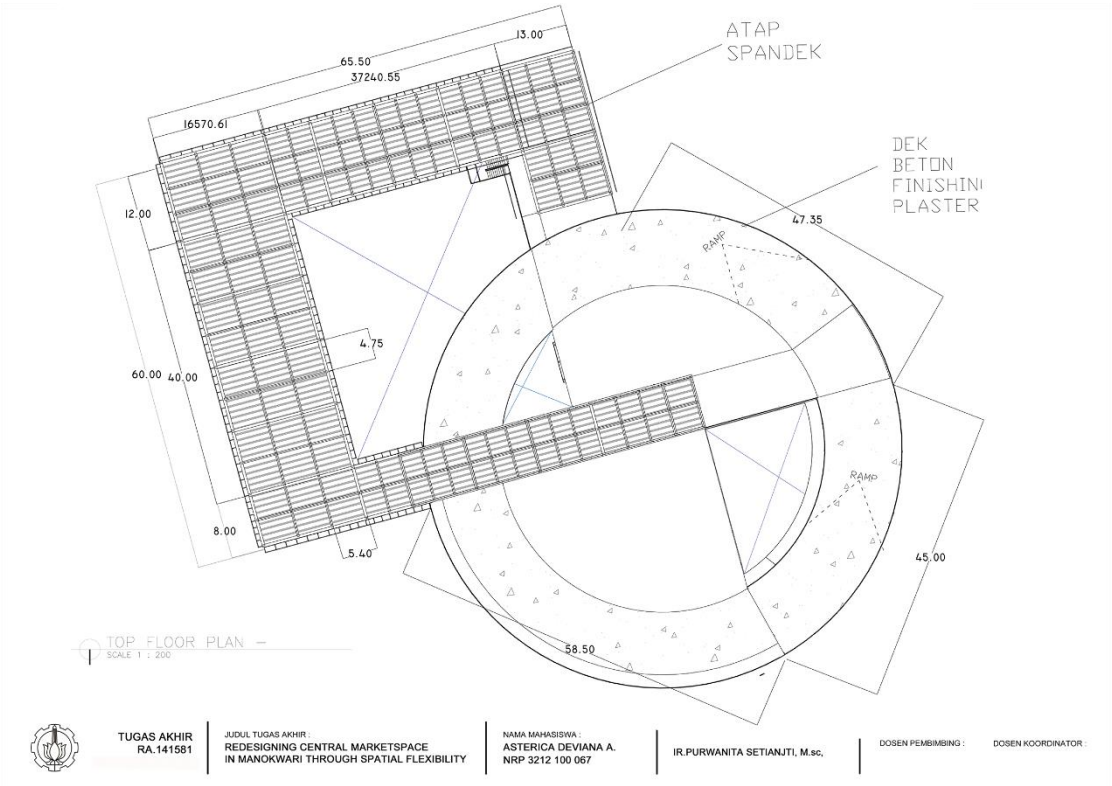
TUGAS AKHIR RA.141581	JUDUL TUGAS AKHIR : REDESIGNING CENTRAL MARKETSPACE IN MANOKWARI THROUGH SPATIAL FLEXIBILITY	NAMA MAHASISWA : ASTERICA DEVIANA A. NRP 3212 100 067	DOSEN PEMBIMBING : IR.PURWANITA SETIANJTI, M.sc,	PARAF : DOSEN PEMBIMBING :	DOSEN KOORDINATOR :



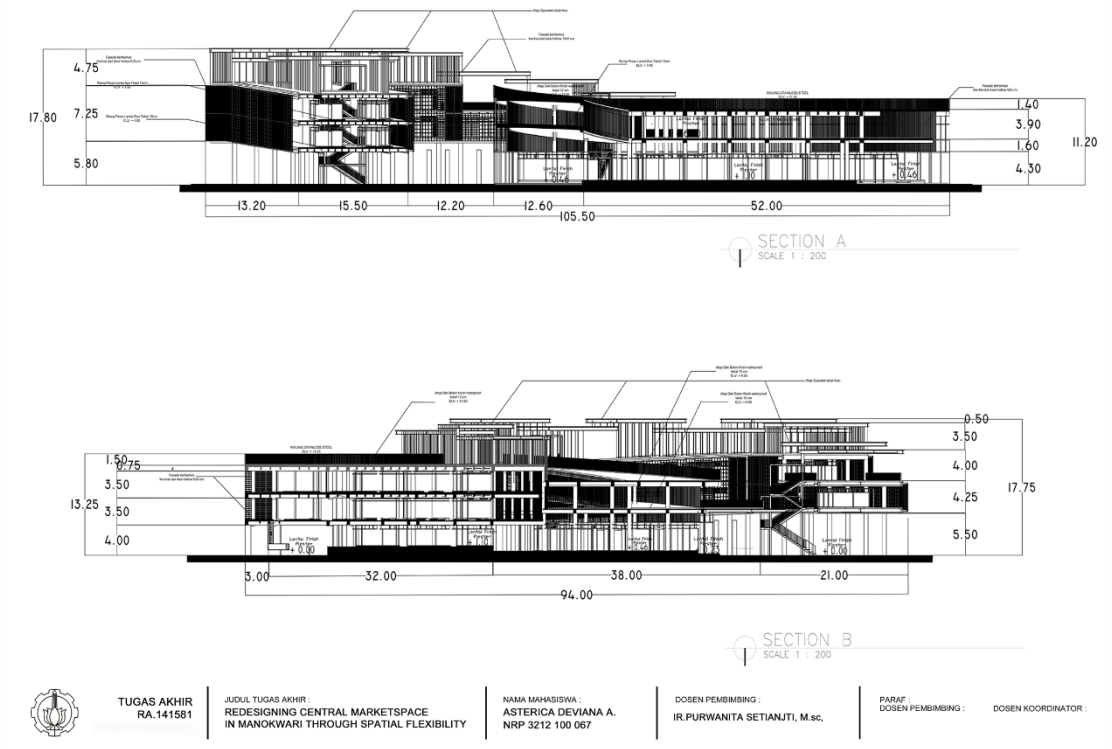
TUGAS AKHIR RA.141581	JUDUL TUGAS AKHIR : REDESIGNING CENTRAL MARKETSPACE IN MANOKWARI THROUGH SPATIAL FLEXIBILITY	NAMA MAHASISWA : ASTERICA DEVIANA A. NRP 3212 100 067	DOSEN PEMBIMBING : IR.PURWANITA SETIANJTI, M.sc,	PARAF : DOSEN PEMBIMBING :	DOSEN KOORDINATOR :

FLOOR PLAN – 3RD & 4TH FLOOR

APPENDIX D

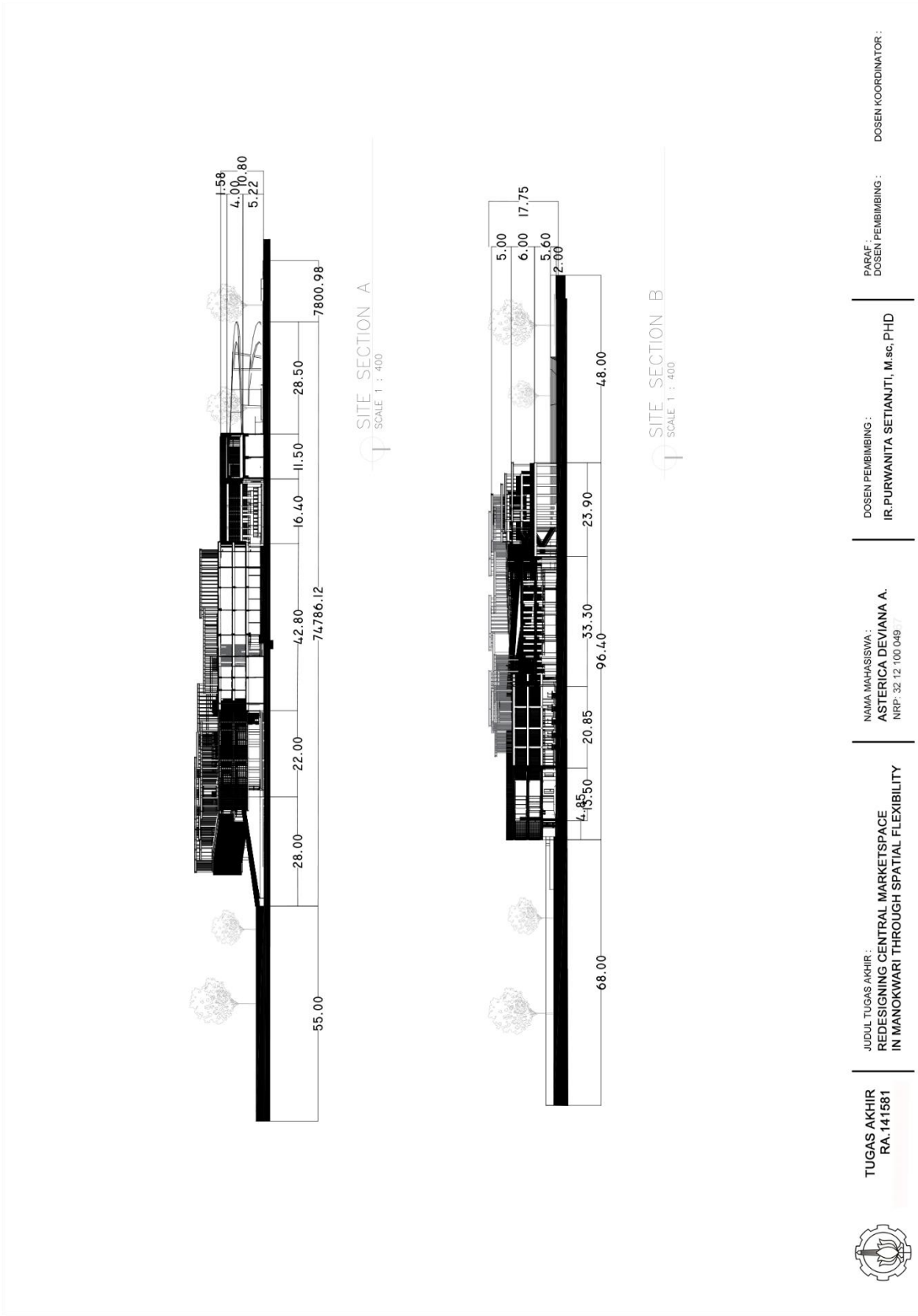


ROOF PLAN



BUILDING SECTION

APPENDIX E



SITE SECTION