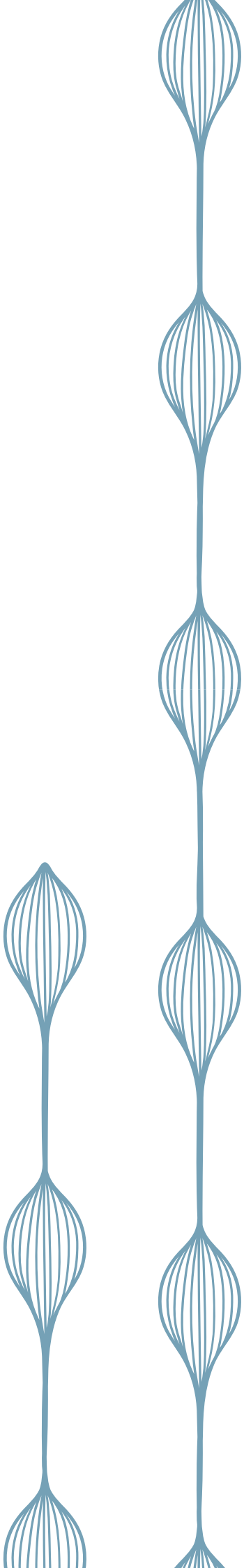
BRINGING BACK *MOVEMENT* IN SKYDEBANEHAVEN

Anne Chantal Brand



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GRADUATION PROJECT BY

Anne Chantal Brand

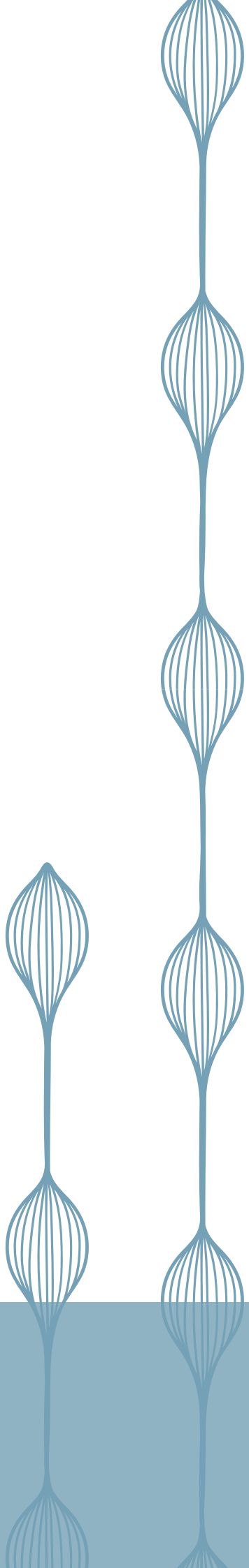
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TU Delft

Master of Science Architecture,
Urbanism and Building Sciences
Delft, 2019/2020

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CONTENT

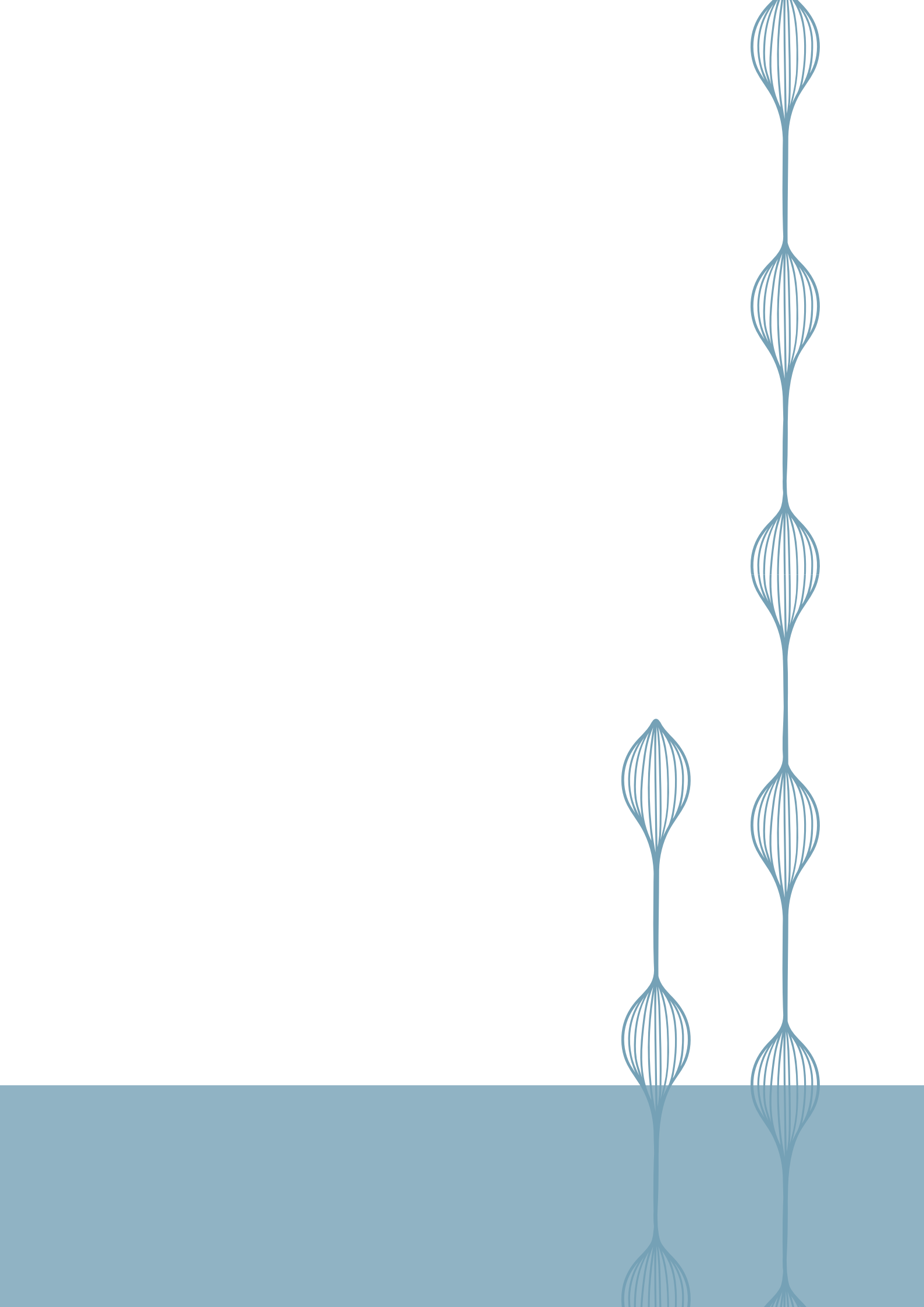
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INTRODUCTION

PUBLIC BUILDING GRADUATION STUDIO

In this document the process of the design for a public condenser in Copenhagen will be shown.
At the start of the graduation studio introductions were held, as well to get to know the students and tutors as for the explanation of the studio itself. A studiopassport was required to give an introduction about yourself.
The first quarter of the semester was reserved for research. As well as theoretical research on several topics as an excursion to the two cities, Copenhagen and The Hague, was scheduled. The different topics that were researched by all students of the studio were: city, connection, people and power. This way all elements that are interesting for creating a building were covered. From these topics personal interests were made out of the conclusions. The second quarter of the semester covers the process of a design concept for the public condenser. Students chose their preferable city to work with and mine is Copenhagen. The site in Copenhagen is called Skydebanehaven, meaning shooting range which it was in a previous state. Copenhagen consists of multiple districts and Skydebanehaven is vested in Vesterbro. Skydebanehaven is nowadays a playground to go to for children and their parents. The public condenser will be vested in the Vestebro area with Skydebanehaven as its site. This proces contains several products as a written plan, a journal to keep track of the design process and a design manifesto and design brief will show you the ideas and program of the design concept, which is also included at the end of the book.

Chantal Brand , Delft 2019/2020



RESEARCH BOOK

DESIGN CONCEPT COPENHAGEN

I. What is missing in Copenhagen, Vesterbro, Skydebanehaven?

Before I am able to notice what is missing in Copenhagen, it is nice to know what is there already. These elements can become design elements that can help in a new design for a public area in the site of Skydebanehaven. Besides turning the existing elements in design elements, the missing or less obvious elements will come to light. To turn the attention towards those missing elements I will first note the existing elements in the order of the topic's city, connection, people and power.

City

The city has different layers, the social, cultural, political and technological developments are a few that helped the city grow. Skydebanehaven in particular has had three historical phases, in the beginning the place consisted of agricultural farms and transformed into a shooting range. While it is now a public garden and playground. Copenhagen is designed in **detail**, it has integrated elements of 'play and move' in several parts of the city. The overall elements of Copenhagen consist of paved playgrounds, pastel colours in facades and fences as a barrier of public areas.
*An element that is missing in the city, and especially in Vesterbro as a district, is the absence of **sport** facilities. The focus of a new design could lay within the boundaries of a sport function. The elements of playground, integrated 'play and move' spots and even pastel colours can help develop the public condenser into an area for all ages and cultures.*

Connection

The metro lines are expanding in the inner city. The already existing metro lines will now be connected to the district of Vesterbro, for a fact a new stop will be 5 minutes away from the site of Skydebanehaven. The neighbourhood will be **opened** more to the other districts.
As for the site of Skydebanehaven, it can be seen as an **oasis** but also as an **isolation**. Skydebanehaven is surrounded by boundaries, for examples fences, hedges and walls. These elements cause a closed character for the playground and the public garden. The element that is missing is an open character towards the outside in Vesterbro and even further on towards Copenhagen as the city. At the same time, opening up the place could mean for different reactions. As well for more people, more bikes and cars will have to be parked. And will it then still be an oasis, as the place is opening up. *(personal interested in this contrast, interfering with other elements I am interested in)*

The design for a public condenser could take the opening up of the site, combined with a greener space into account. A larger green space is related to the paved playground mentioned in the topic power.

People

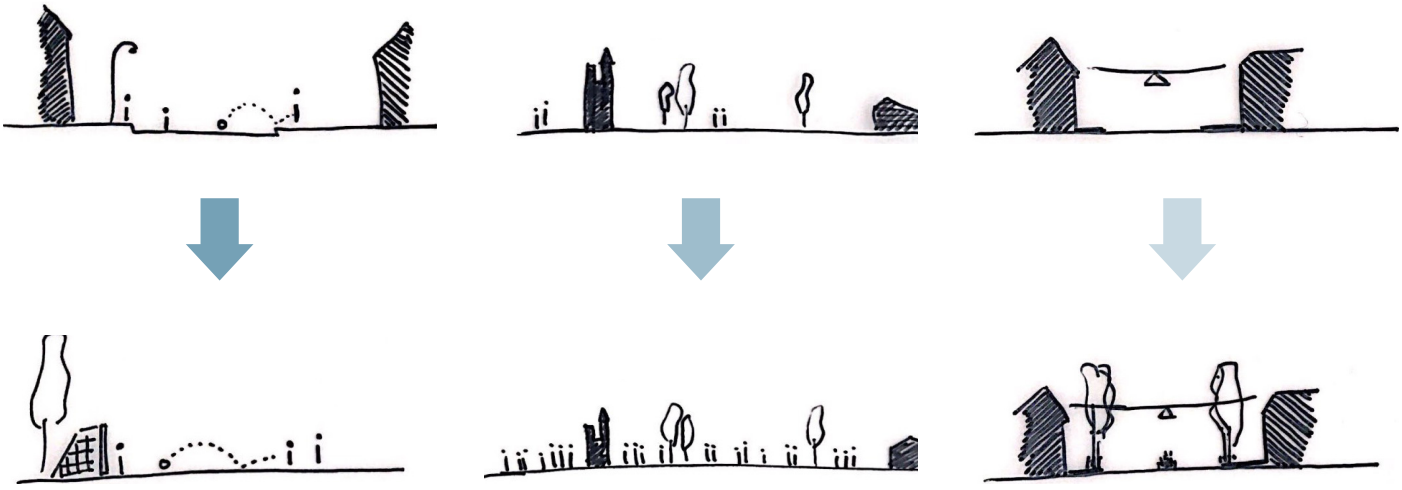
The Danish people are an egalitarian society, meaning they prevent from social pressure and are freeing about not having to be anything. They are also keen on a **healthy living**, which is a life with mental health and physical health. Both leading to life satisfaction, a work-life balance to create happiness, but also doing sports and outdoor activity in nature.
Gentrification and **social inequality** and missing **social interactions** are one of the biggest social problems of the area of Vesterbro. Groups in Vesterbro tend to stay in their circles.
In Copenhagen there is a more trustful and equal relation between people. Cause of the gentrification this process improved a lot of social problems, which caused a **divers mix** of population to disappear. A more one-sided and younger generation sort of took over the place.

The cause of gentrification is letting different population groups to disappear in the area of Skydebanehaven and Vesterbro. To let people live a healthy life sport facilities or facilities that move people are a design element for the public condenser. This element could allow different groups of the population to come together and move.

Power

In the Denmark's Hovedstad document is noted that the government wants the capital to be **good and attractive** to live life, work throughout the country and to do business everywhere.
The gentrification in Vesterbro started in 1990, as well mentioned in the topic 'people' just above. It was a start to making policies for the city, starting with the **liveability** of the city. The focus was on the reduction of noise and cleaner air, even now the municipality transforms grey and cramped backyards into **green oases** of flowers, trees, life and community. Besides greening up the city, the policy for urban planning has to do with the circle line of the metro and the **connection** towards Malmö. The district of Vesterbro will be opened up more to the other districts in this way and transforming places into more green will be a help into the mental and physical health.

As for the topic power, a good and attractive city will contribute to make an even better Copenhagen. By creating more liveability, green oases and a better connection between Copenhagen and Malmö the city is expanding its ideals.



1 2 3

SOLUTIONS OUT OF THE CONCLUSIONS OF THE RESEARCH BOOKLET

The first image shows sport facilities, which are currently lacking. In the second set of diagrams it shows the contrast between oasis and isolation. Opening up the district can lead to a transition of a grey area into a green one, as shown in the third set of diagrams. To create more facilities to support and encourage movement, combined with a greener space into the site, the problem of these elements can be solved.

HIGHLIGHTS

DESIGN CONCEPT COPENHAGEN

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DESIGNED IN DETAIL

Copenhagen has a lot of different and at the same time similar architecture. In a way there is to say that every building has a different colour, pattern or material on the facade. But in all of it together it fits all the same.



NO SPORTFACILITIES

In the area of Vesterbro it has been stated that there are not a lot of sport facilities for people to move around. It is mostly commercial and domestic buildings.

NEW METRO STATION

In the area a new metroline has been realised, meaning in 5 minutes from Skydebanehaven there will be a new metro station. The district will be more opened up towards the city.



GREEN UP

There is not a lot of greenery in the public area's, focusing mostly on roads and streets. As for a defined public space greenery is more present.

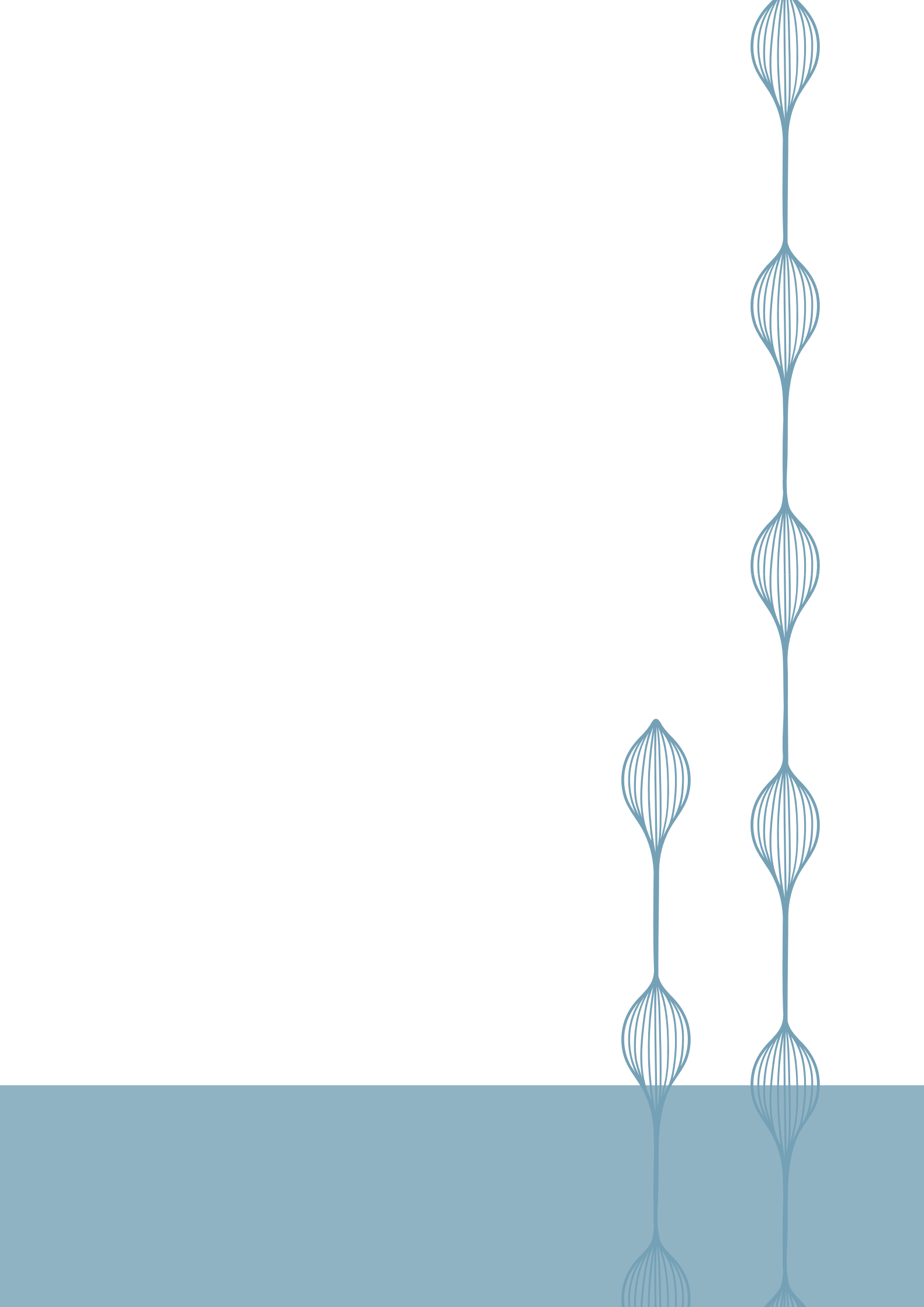
SOCIAL MIXING

As the research noted that the Danish people are an egalitarian society, social mixing is necessary. Danish people are also very keen on healthy living (mental and physical health), social inequality and social interactions are currently missing in Vesterbro.



BETTER COPENHAGEN

In the policies of political influences the aspire is to create a good and attrictive city. Where liveability should be of a high quality, greenery and connections between people are important issues.



GRADUATION PLAN

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

The graduation plan consists of at least the following data/segments:

Personal information	
Name	**Anne Chantal Brand**
Student number	4725840
Telephone number	+31 6 38 41 54 24
Private e-mail address	chantalbrand@hotmail.com

Studio	
Name / Theme	**Public Building / Graduation Studio Public Condenser: The Hague-Copenhagen**
Teachers / tutors	Henk Bultstra Jelke Fokkinga, Building Technology
Argumentation of choice of the studio	The subject of multiplicity, which is to be explored in this graduation programme, was also evident in my previous projects. After completing the Master 1 in Heritage and Master 2 in Public Building, I wanted to focus again on Public Building in my graduation. In both studios multiple functions were placed in the designs. Furthermore, I completed a similar project with multiple functions whilst studying for my bachelors at my previous school. In my opinion this year's Public Building studio can offer me a broader and more varied perspective than the experience I already have.

Graduation project	
Title of the graduation project	Building as a City – Connections in an Oasis
Goal	
Location:	Skydebanehaven, Vesterbro, Copenhagen
The posed problem,	The general posed problem, resulting from research into the topics of 'city', 'connection', 'people', and 'power', is that fewer connections between people of different ages and cultures take place in the city. Copenhagen has an absence of sport facilities in the city. Though the connection of the metro lines are expanding into other districts, the site of Skydebanehaven is still secluded. This site can be seen both as an oasis and as an isolation. This contradiction could lead to a 'too open space' or a 'too closed off' space - it is necessary to find out what the best conditions could be for this site. Combined with gentrification, social inequalities and social interactions in the district of Vesterbro a decrease of groups of mixed people is happening. As for the topic of 'power' in Denmark, parliament wishes to create an even better Copenhagen in general. A few examples of transforming grey places into green oases of

	flowers, trees, life and community and connection of metro lines to other districts have been mentioned in the pursuit of creating a better part of the city.
research questions and	The research question that will be answered is about how to create the best conditions to develop and encourage connections between different people and their actions.
design assignment in which these result.	Figuring out what an event-city means for the site in Copenhagen, and how a building as a city typology works, are design assignments that have to be developed to create the right conditions to let connections take place. How to implement 'play and move' to get more movement into a building, or what influence sport facilities would have on the site are assignments and research to be done. The effects on people of transforming grey areas into greener oases is a design assignment on its own as well.

To create more or/and better connections between people, it is necessary to design a building with the possibility to do so. The building will be located in Skydebanehaven, in the district of Vesterbro in Copenhagen, Denmark. The building will act as a public condenser and will be designed within the 'building as a city' typology. Just as architect Jan Gehl uses in his approach for designs, he creates for the people where it is a city for the people (Gehl Architects, 2019). A building as a city typology will be developed in such a way that people will feel that they are provided with all their needs. As such, people will come to the building to escape the city they live in and experience another one, even though this new city feeling is still in the same main city. The building as a city can be experienced both as an oasis of functions where people meet as well as it can feel as an isolated element within the main city - a place to retreat.

An element that is missing in the city, and especially in Vesterbro, is sport facilities. The focus of a new design could lay within the boundaries of a sport function, or to see 'play and move' as a design element to create movement. Furthermore, encouraging people to lead a healthy life by providing sport facilities or facilities that encourage movement are design elements for the public condenser. These elements could allow different groups of the population to come together and move. As for the liveability of the city or district, transforming grey areas into green oases will improve people's health, which could lead to more movement. By increasing physical health mental health will increase as well.

Process

Method description

The research to develop theories and design elements will be done by using technomic, socio-technic and ideological icons (Binford, 1962).
A technomic approach is to be seen as the program of the public condenser - the multiplicity of functions. The public condenser in a socio-technic perspective can be seen as the social system of where people can meet. It will showcase not only the

connections between people, but also connections between the spaces with different functions. When the public condenser acts as an intertwined space, where functions and meetings of people mingle, an icon arises into its surrounding claiming the perspective of an ideological icon. An example of this ideological icon and the socio-technic perspective is the building of Centraal Beheer in Apeldoorn by architect Herman Hertzberger (Herman Hertzberger, 2019) (AHH, 2019). These theoretical methods will be specified into three zones; action, relaxation and focus. These zones will create different connections between people and people and their actions.

By using the method of drawings and models for defining spaces and their connections in a spatial way, anthropology[1] and praxeology[2] are methods that can be used for theoretical research into knowledge of people, with their actions and behaviour, as discussed in the literature of, for example, architects Jan Gehl and Herman Hertzberger.

Literature and general practical preference

The elements of using different methods and technomic, socio-technic and ideological icons will contribute to a better understanding of spaces and their intersections and how to create them, but also to understand the meaning of how people can connect to each other through an intersection of space.

Proposed literature:
Jan Gehl – Cities for people
Jan Gehl – Life between buildings
Ali Madanipour – Whose public space?
Gaston Bachelard – The poetics of space
Doreen Massey – Space, place and gender
Steen Eiler Rasmussen – Experiencing architecture
Nigel Coates – Narrative architecture
Rem Koolhaas – Delirious New York
Bernard Tschumi – Event cities (multiple books)

Precedents:
KU.BE – MVRDV and ADEPT
Sesc Pompéia – Lina Bo Bardi
LocHal Tilburg - Civic Architects, Braaksma & Roos Architectenbureau, Inside Outside / Petra Blaisse

Reflection

Relevance

The combination of research about people and spaces by using practical methods of drawing and making models and theoretical methods of reading literature in a genre of an anthropological and praxeological approaches, will contribute to a broader

[1] Anthropology is the study of human societies and cultures and their development. (Oxford University Press, 2019)
[2] Praxeology is the study of human action, basically based on human behaviour. (Praxeology, 2019)

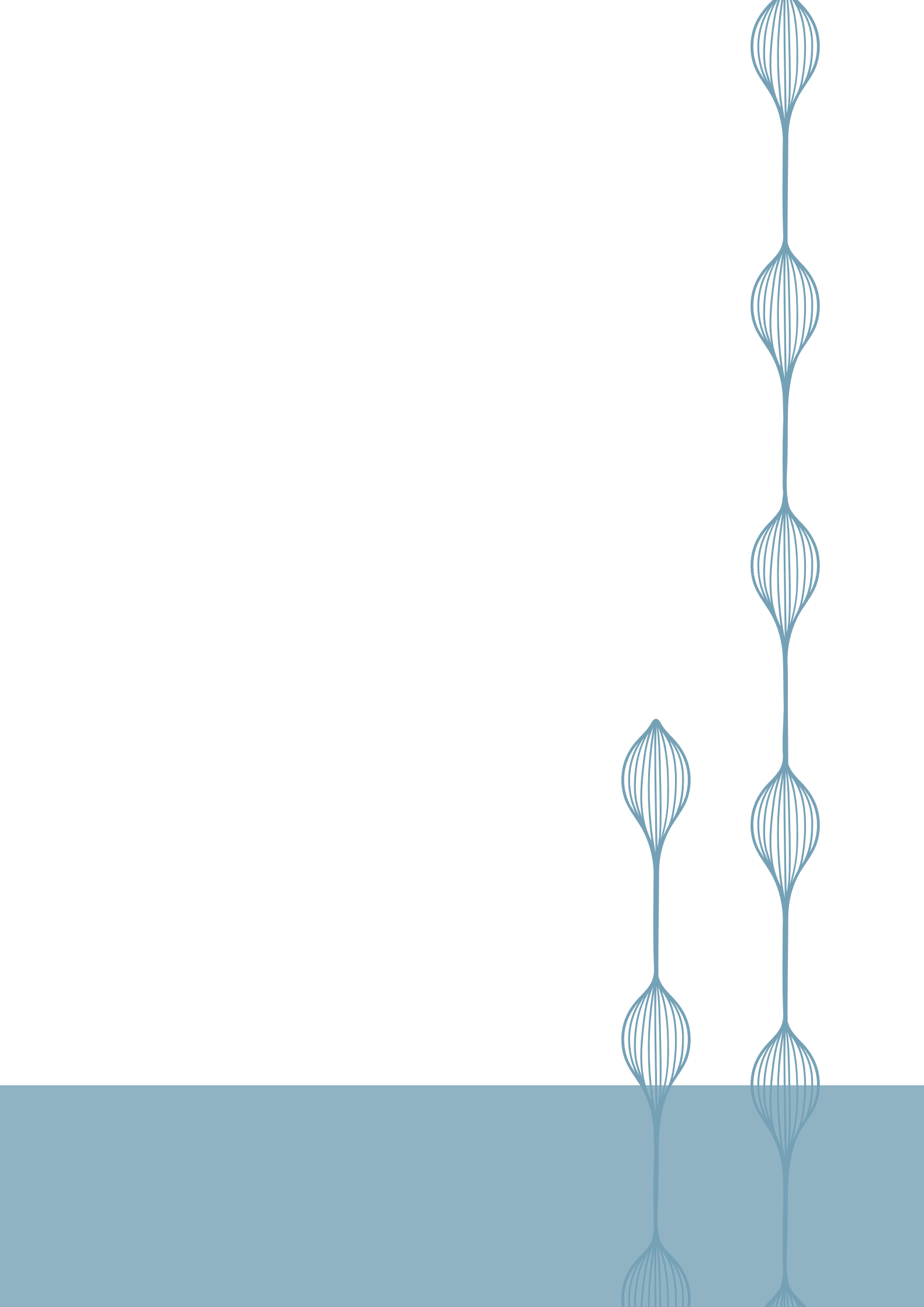
perspective of how spaces and people interact with each other.

Time planning

Q1	
Week 1.1 – 1.2	Kick-off and introductions Starting research on studio Tutorial, lecture and seminar on research methods lectures
Week 1.3	Excursion Copenhagen (6 days)
Week 1.4 – 1.7	Submitted research on the chapters: city, connection, people and power Creating a research book. Personal topic: politics within the chapter of power Tutorial, lecture and seminar on research methods lectures
Week 1.4	Research presentation Copenhagen
Week 1.5	Excursion The Hague (1 day)
Week 1.7	Research presentation The Hague
Week 1.9	P1 presentations
Q2	
Week 2.0 – 2.6	Studio tutoring Tutorial and seminar on research methods lectures
Week 2.4	Final due abstract seminar
Week 2.5	Final due paper lecture
BREAK	*Christmas break between week 2.6 and 2.7 (2 weeks)*
Week 2.7	Final reviews on tutorial and seminar
Week 2.8 (16th of January)	P2 presentations (GO – NO GO) - Research book (conclusions) - Case studies - Site model - Design journal - Graduation plan

	- Design manifesto - Design brief - Concept design o Urban context (1:500) o Public condenser (1:200) o Expressing design manifesto o Expressing design objectives
Week 2.10	Final due paper seminar Final due manifesto tutorial
BREAK	*Spring break between week 2.10 and 3.1 (1 week)*
Q3	
Week 3.1 – 3.5	Studio consultations (individual with architecture and building technology tutors)
Week 3.6	P3 presentations - Further integration of design on site (1:100 / 1:50 / 1:20) - Programmatic placement - Interior routing - Interior concept major programmatic elements - Multiplicity concept o Structure o Material o Sustainability
Week 3.7 – 3.10	Studio consultations (individual with architecture and building technology tutors)
Week 3.9 – 3.10	*Good Friday and Easter (4 days, long weekend)*
Q4	
Week 4.1 – 4.3	Studio consultations (individual with architecture and building technology tutors)
Week 4.2	*Kings day (1 day)*
Week 4.3	*Liberation day (1 day)*
Week 4.4 – 4.6	P4 presentations (GO – NO GO)

	- Design development (1:20 / 1:5) - Visualisation studies - Translation manifesto into project (1:20 / 1:10 / 1:5) - Description storyline (text) - Description clarification diagram (text) - Preparation final presentation (concept, pre-editing)
Week 4.5	*Ascension Day (2 days, long weekend)*
Week 4.7 – 4.9	Studio consultations (individual with architecture and building technology tutors)
Week 4.7	*Whit Monday (1 day)*
Week 4.10 – 4.11	P5 presentations (public) - Presentation panels o Plans (1:500 / 1: 200 / 1:100) o Sections (1:500 / 1: 200 / 1:100 / 1:20) o 3D (interior and exterior) o Physical model o Relevant details (1:20 / 1:5) o Integration interior elements o Materialisation o Structural designs

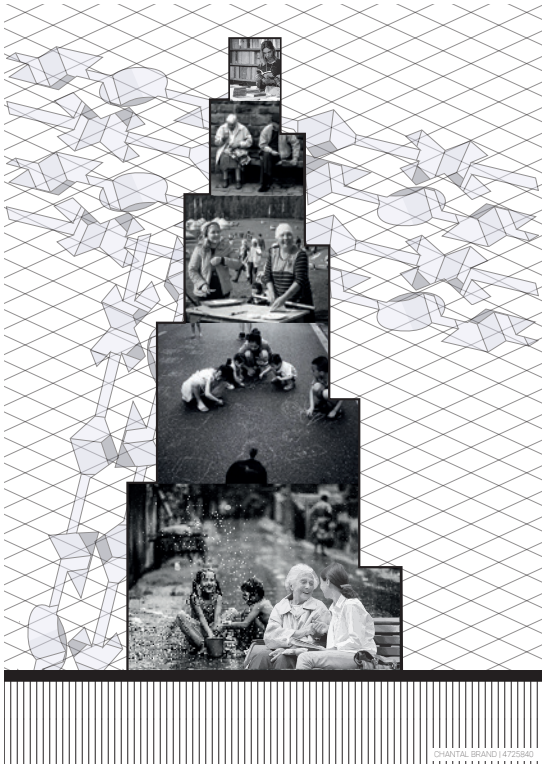


DESIGN MANIFESTO

MANIFESTO

PROCESS OF THE MANIFESTOS







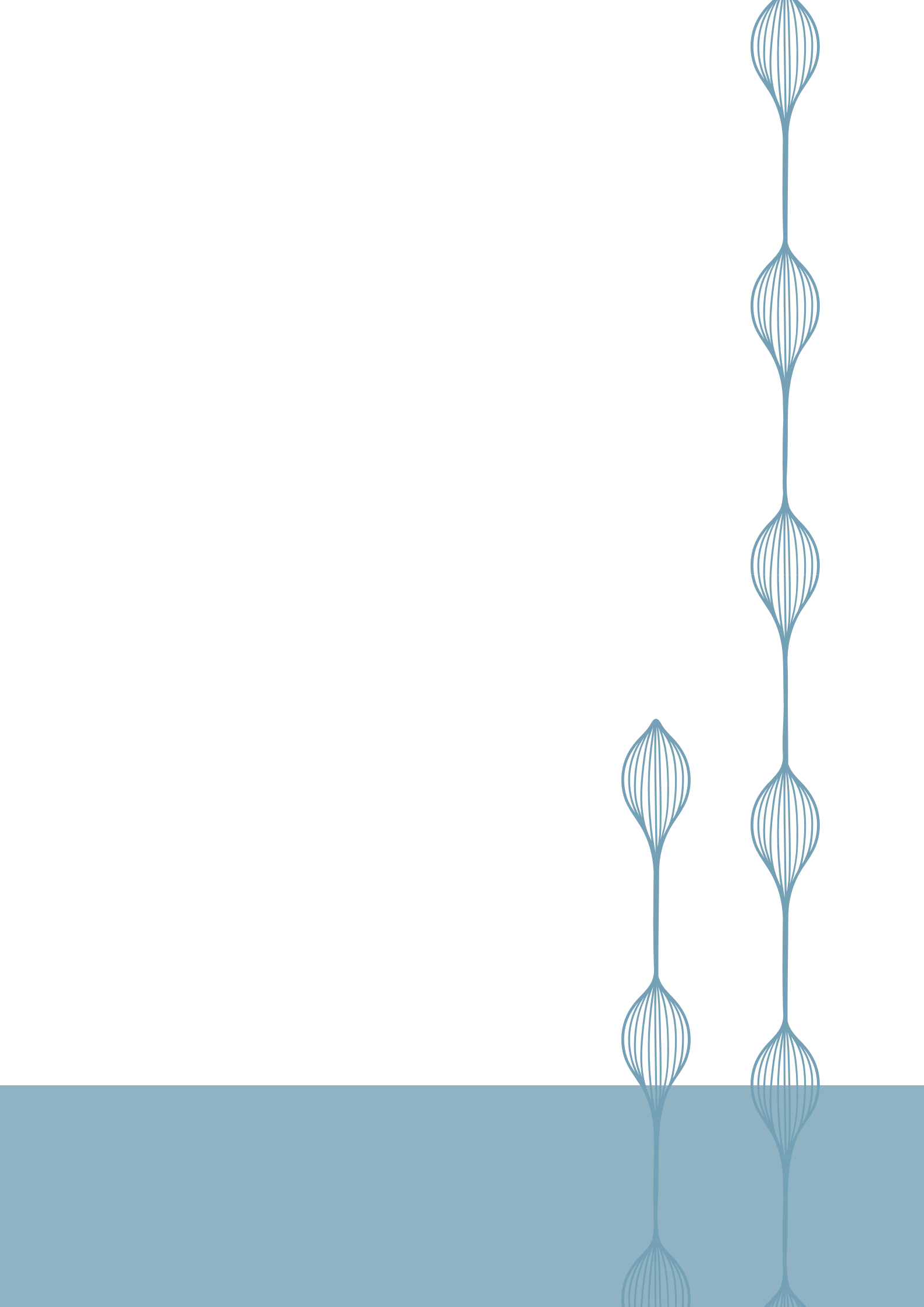


MANIFESTO

FINAL MANIFESTO



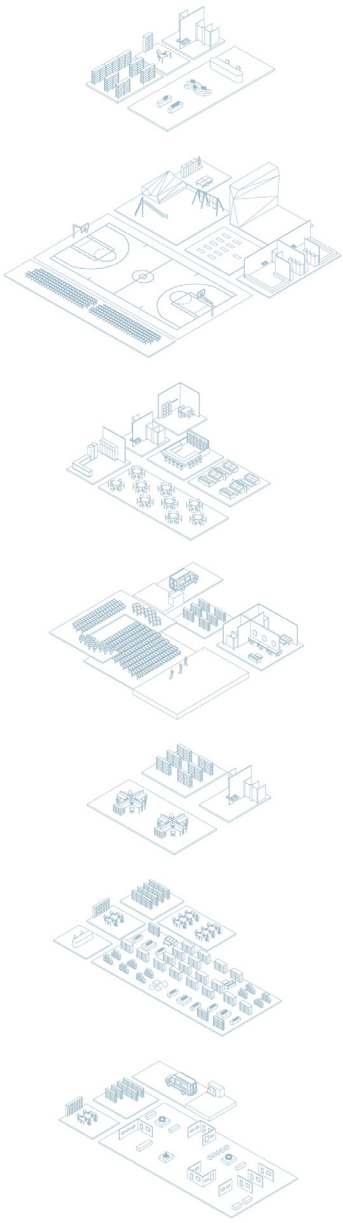
In Skydebanehaven there are in general two elements noticeable in its surroundings; high building blocks and green spaces. To connect the public condenser to the existing surroundings I am using 'Building as a City' as the typology for this design where 'Connections in an Oasis' will take place. Connections will take place as well on the outside as on the inside of the building. Movement of people will take place and that will lead to more connections in and outside the public condenser. This way the existing surroundings will participate with the new public condenser.



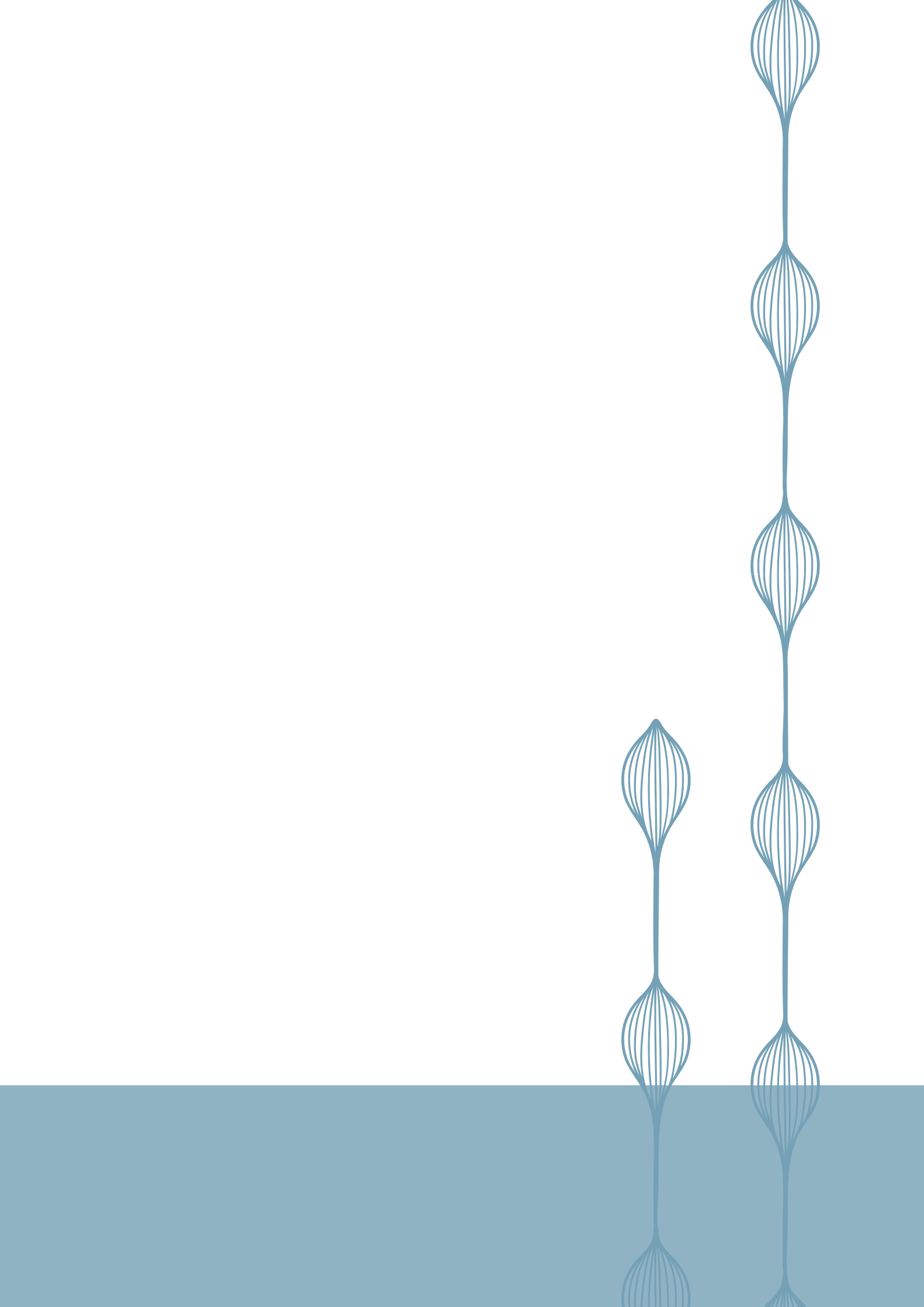
DESIGN BRIEF

DESIGN BRIEF

Program in m^2 and heights in m



FUNCTION		Height meters	M2 Nett	M2 Tarra	M2 Gross	M3 Nett	M3 Tarra	M3 Gross
Arrival		21,0	445	148	593	9340	3113	12453
Administration		4,5	71	24	94	317	106	423
Cafe		5,5	221	74	294	1213	404	1617
Library		4,0	411	137	548	1644	548	2192
Museum		6,5	271	90	361	1760	587	2347
Sports								
	Ball	9,5	605	202	806	5743	1914	7657
	Fight	5,0	209	70	279	1046	349	1395
	Mind	4,2	180	60	240	756	252	1008
	Monkey	12,0	330	110	440	3960	1320	5280
	Outdoor	~	451	150	601	~	~	~
	Performance	5,8	255	85	340	1479	493	1972
Stands		6,7	163	54	217	1090	363	1454
Storage		3,8	83	28	110	314	105	418
Tech	(GF height)	3,8	288	96	384	1094	365	1459
Change		3,5	223	74	297	780	260	1040
Toilets		3,5	35	12	47	123	41	165
Total			4238	1413	5651	30659	10220	40879



DESIGN CONCEPT

SKYDEBANEHAVEN

EXCURSION TRIP

As we zoom in on our project location it is shown that mostly in the area, pastel colours are used in the facades.

In the surroundings around the park, a few buildings have more bold expressions in their colours.

The overall look of the buildings show mostly stucco on their facades and a couple show a brick facade.







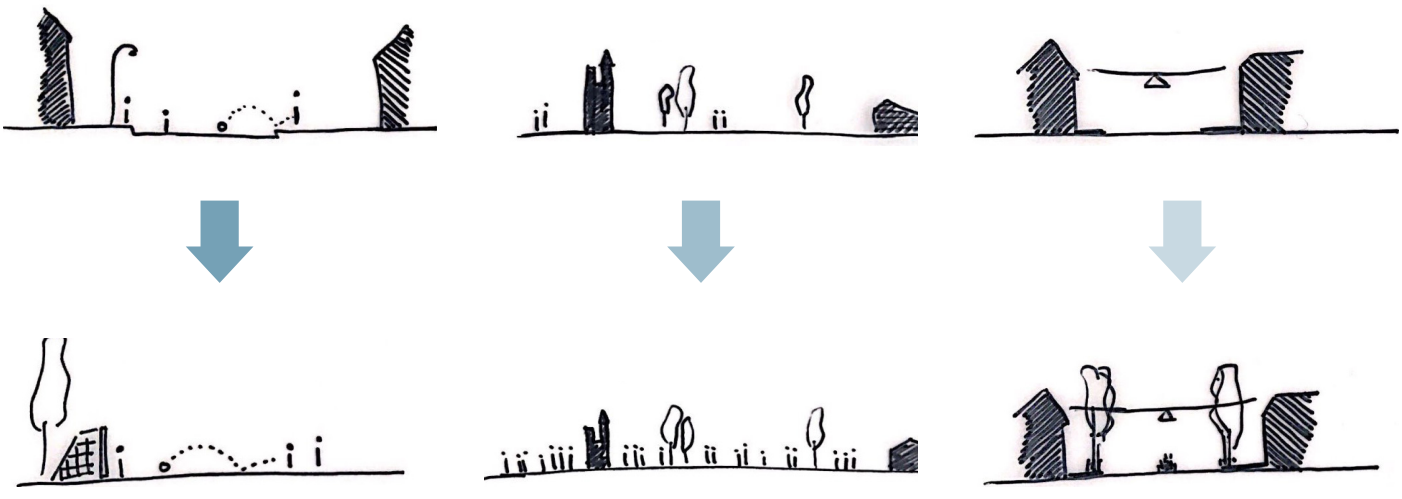
THEME MOVEMENT

MOVEMENT

As shown in the beginning of this document, a couple of issues in the area of Vesterbro were: lack of sportfacilities and lack of greenery. As the people of Copenhagen and the policies of the government also want to focus on a better Copenhagen, by increasing a healthy living (physical and mental). The solution for this district is to bring people together by letting them move.

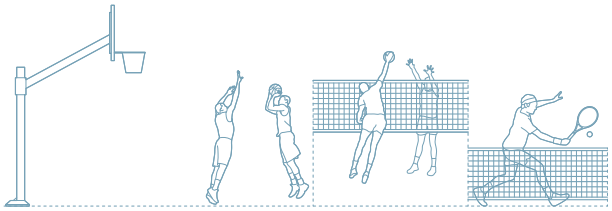
As movement becomes the theme for this project, the functions of this project mostly are sport functions. A few other functions are a library, a museam, a cafe and an office for the administration of the public condenser.

In the concept for this project the interior is about movement, but to create a place where everybody can move in and outside. The existing parks will be connected and movement, translated in activities will also take place on the outside of the building.

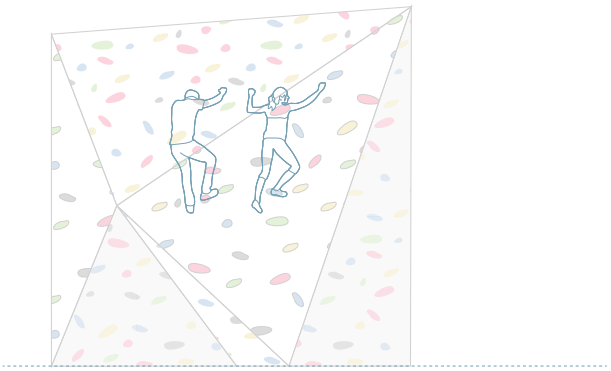


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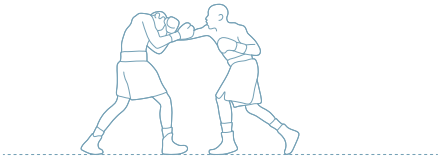
BALL SPORTS



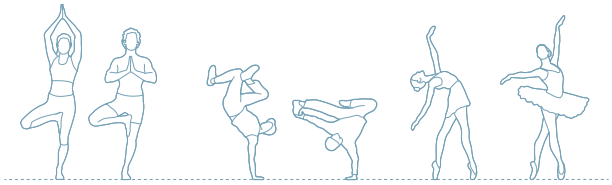
MONKEY SPORTS



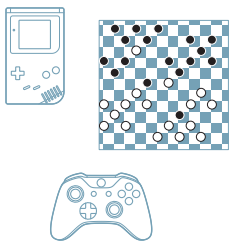
FIGHT SPORTS



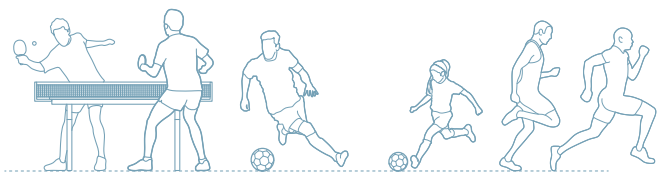
PERFORMANCE SPORTS



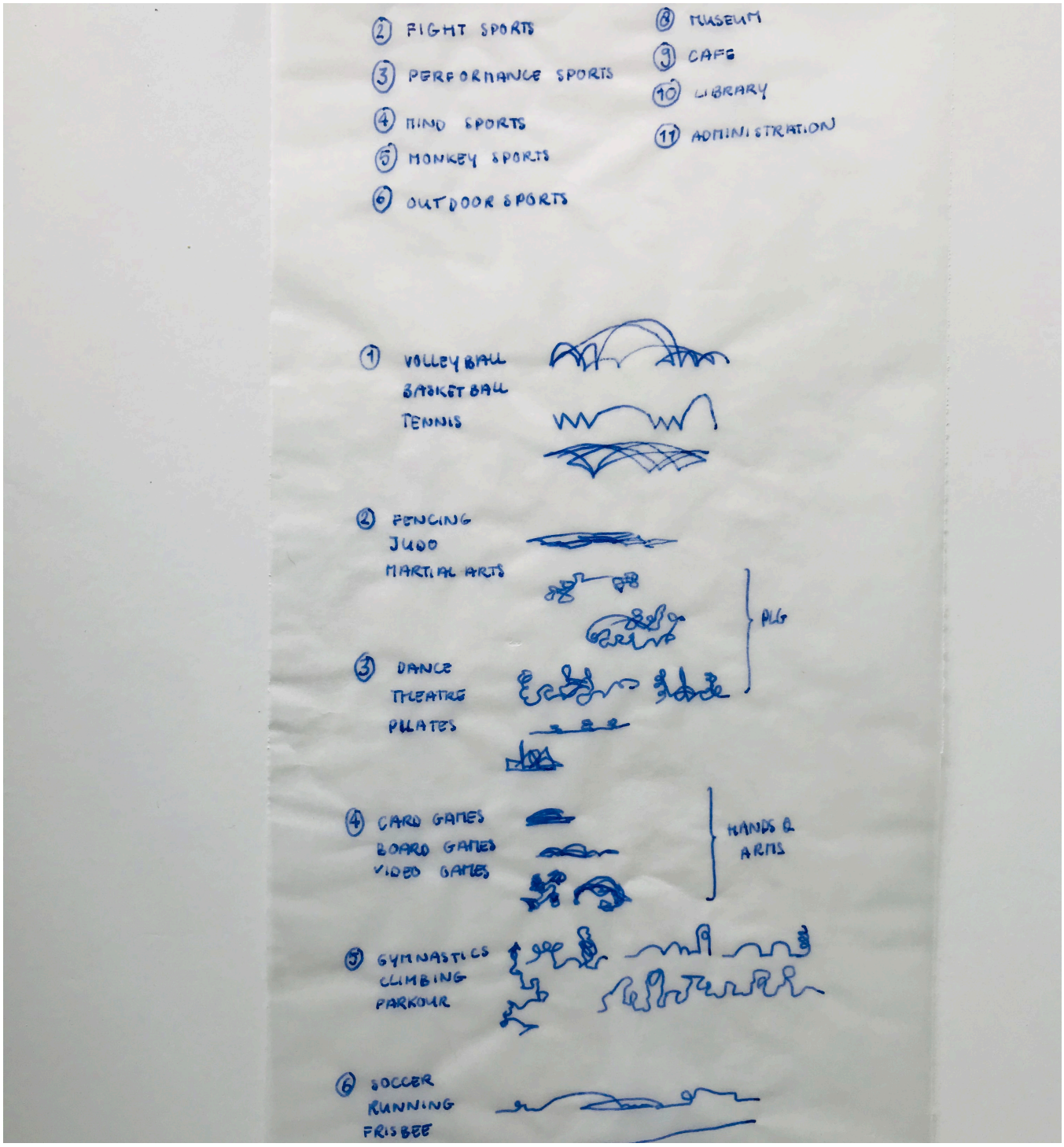
MIND SPORTS

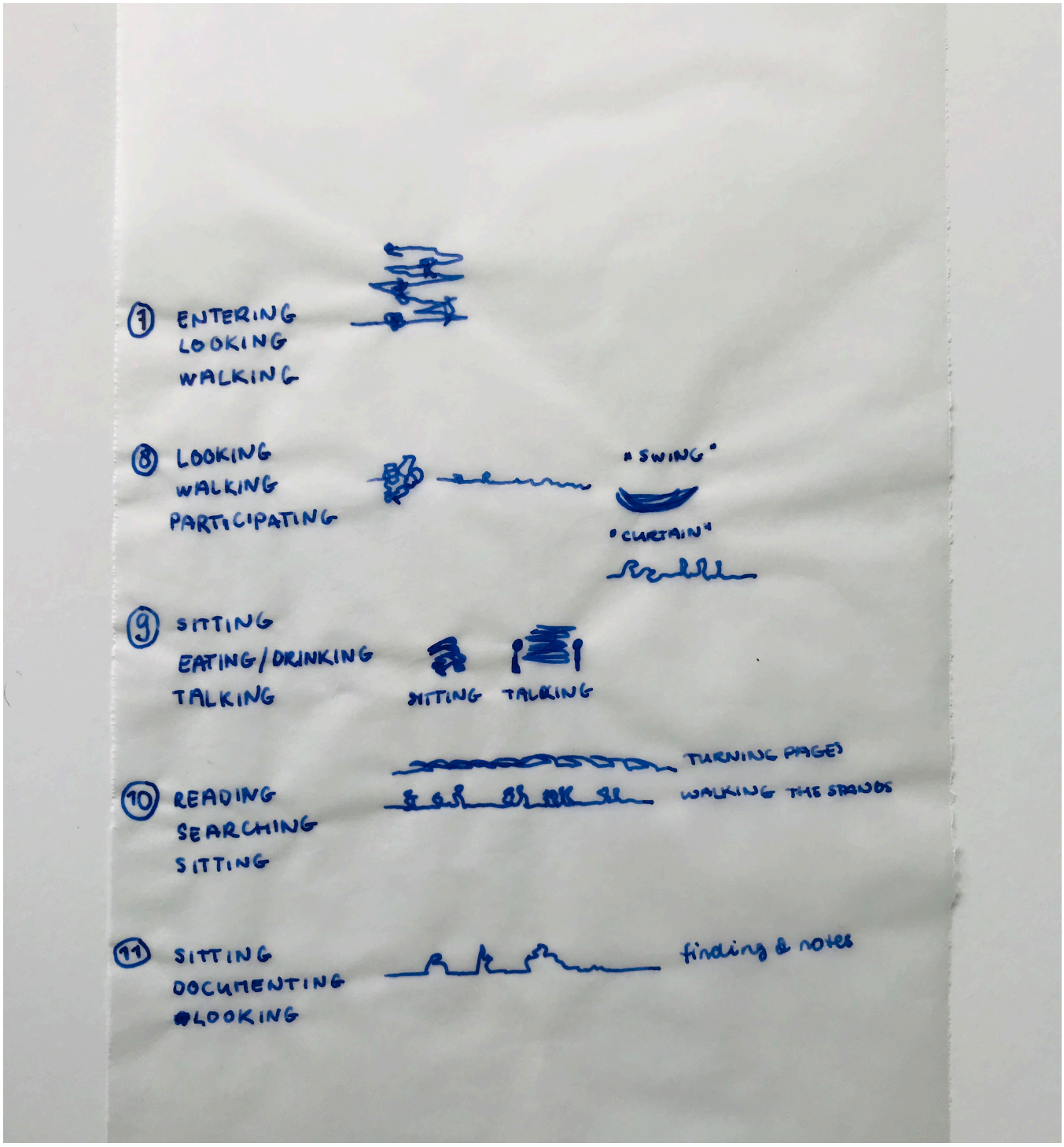


OUTDOOR SPORTS

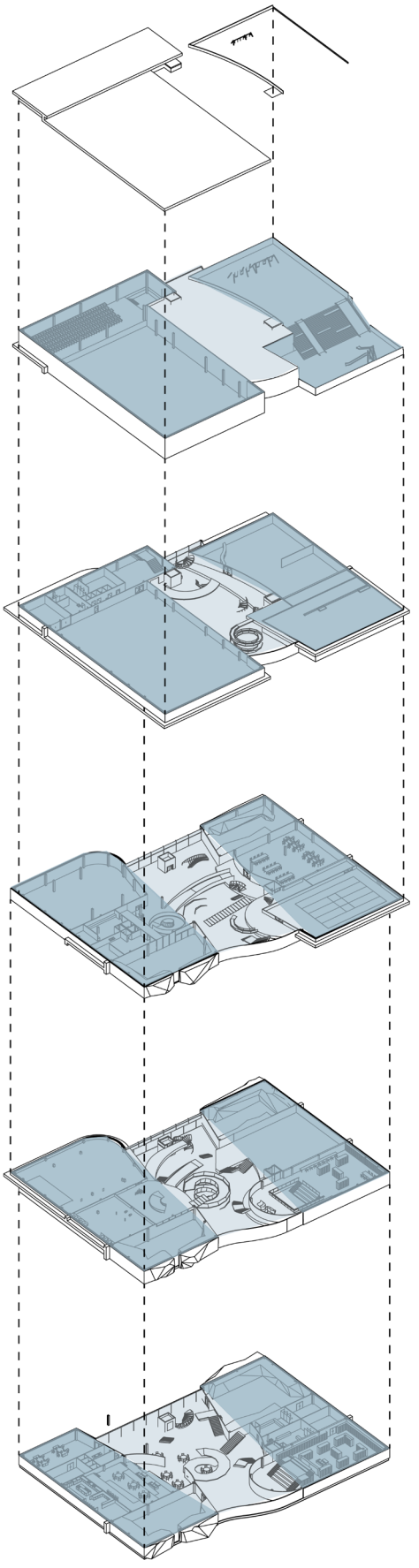


UNIQUE MOVEMENTS




1 ENTERING
LOOKING
WALKING
8 LOOKING
WALKING
PARTICIPATING
"SWING"
"CURTAIN"
9 SITTING
EATING/DRINKING
TALKING
SITTING
TALKING
TURNING PAGES
10 READING
SEARCHING
SITTING
WALKING THE STANDS
11 SITTING
DOCUMENTING
&LOOKING
finding & notes

UNIQUE MOVEMENTS



4. ROOF

3. THIRD FLOOR

2. SECOND FLOOR

1. FIRST FLOOR

1. FIRST FLOOR

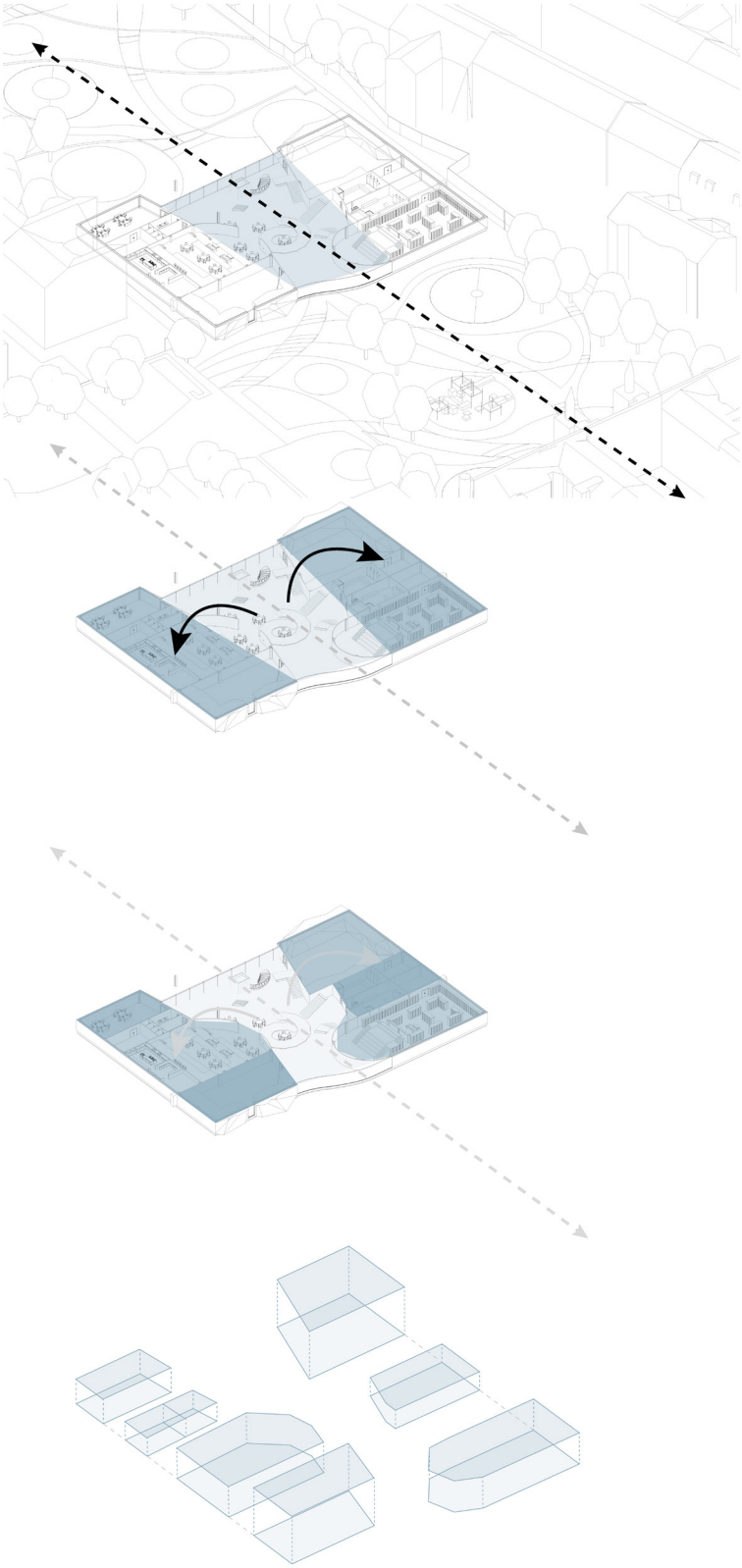
0. GROUND FLOOR

UNIQUE VOLUMES

INTERIOR

In this project the ground floor has two entrances that connects to the park. From this central space (the light blue plane), behind both entrances, the other functions towards the side are accessible. From within this central space the functions on the upper level are accessible as well.

On the first floor, two areas have a smaller height than others and that provides another level that is inserted into the first floor.

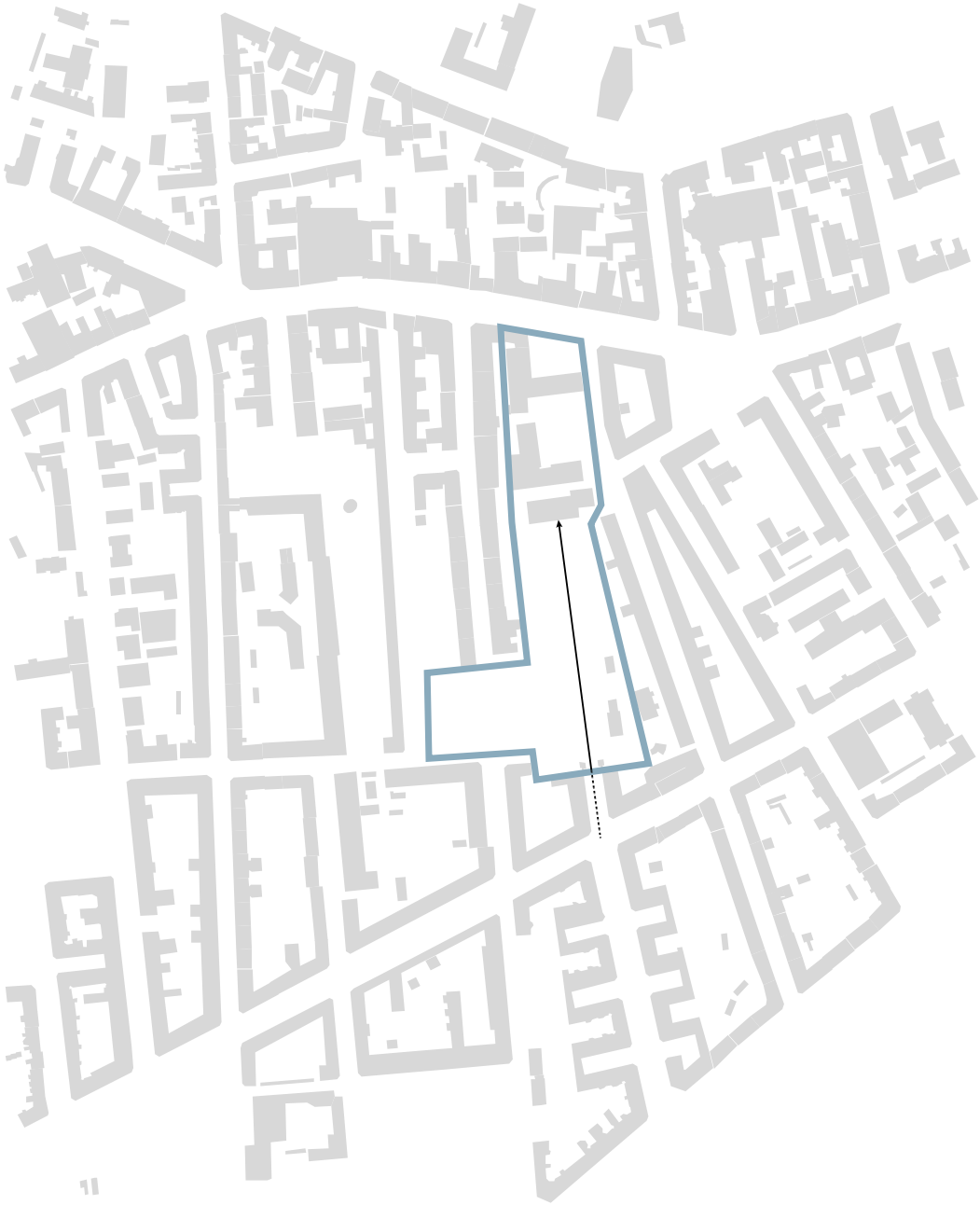


On the right a small diagram is visible showing the entrance from the park, going in one line that connects to the historical path.

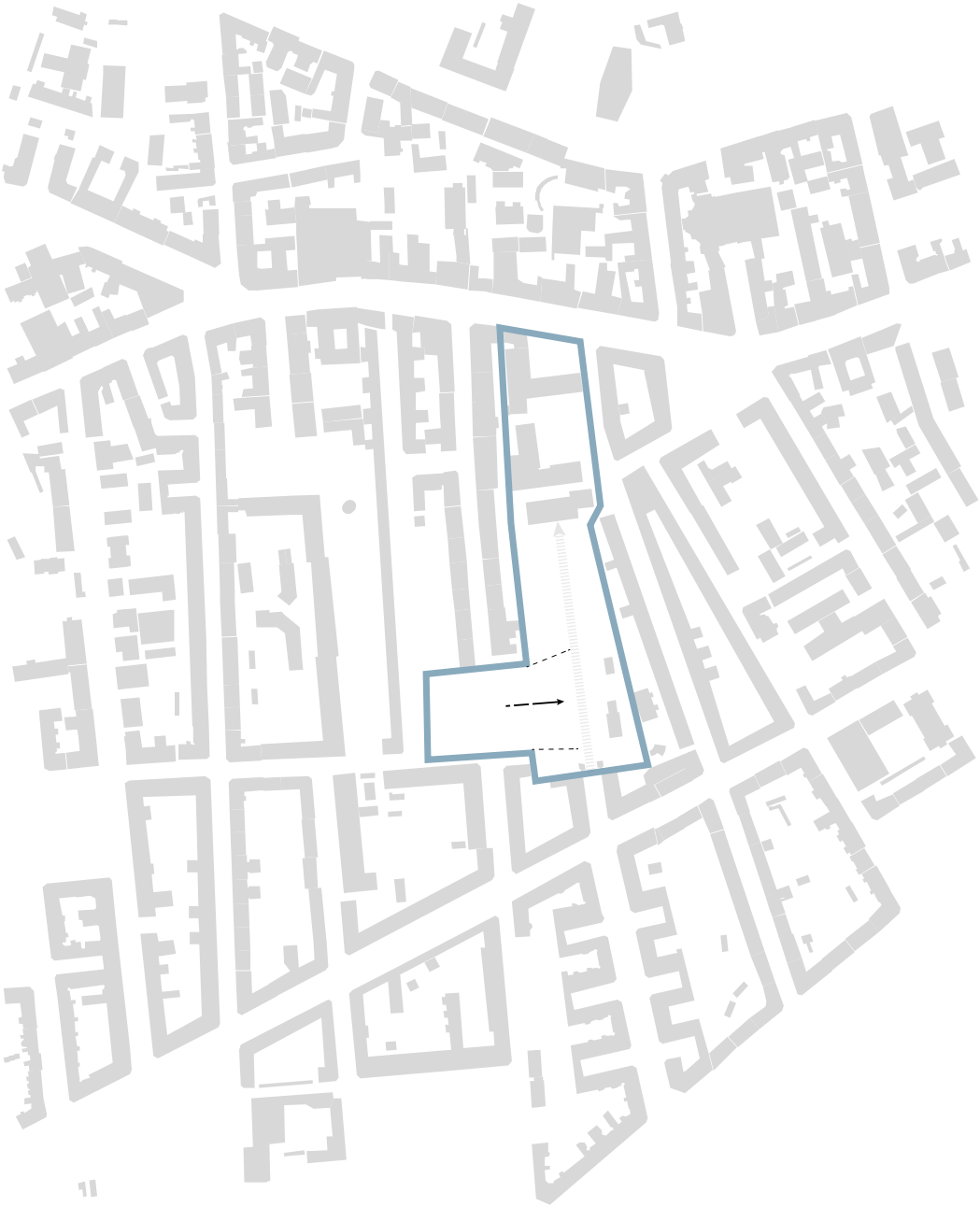
On the second diagram it shows that from within this central space the other functions on the perpendicular axis are accessible.

In the third diagram it shows that every function on one of the levels are unique in its form and dimensions. This is even more distinguished in the fourth diagram. This shows all unique forms and volumes that are placed on the ground floor. The same applies on all the other functions on the other floors and levels.

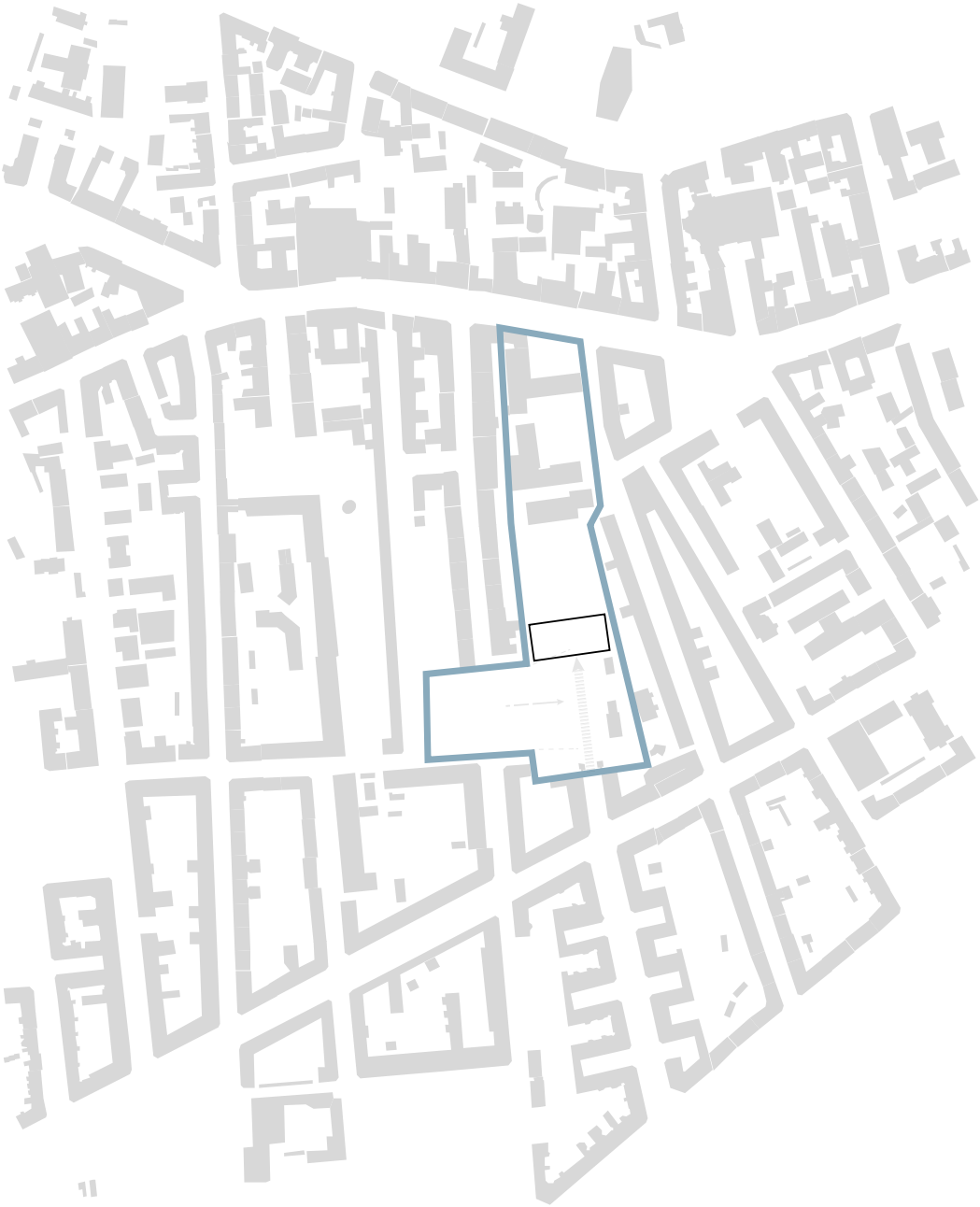
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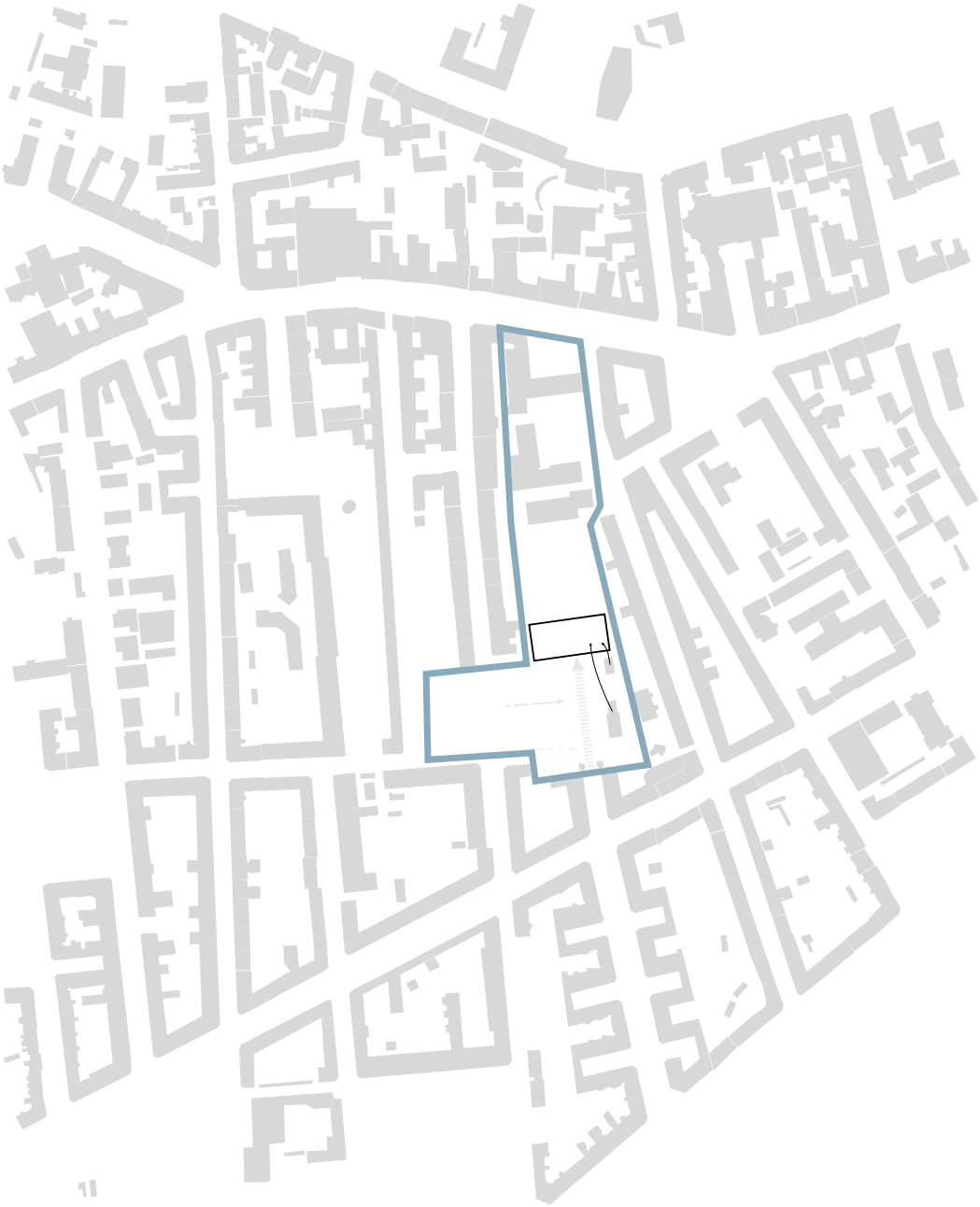
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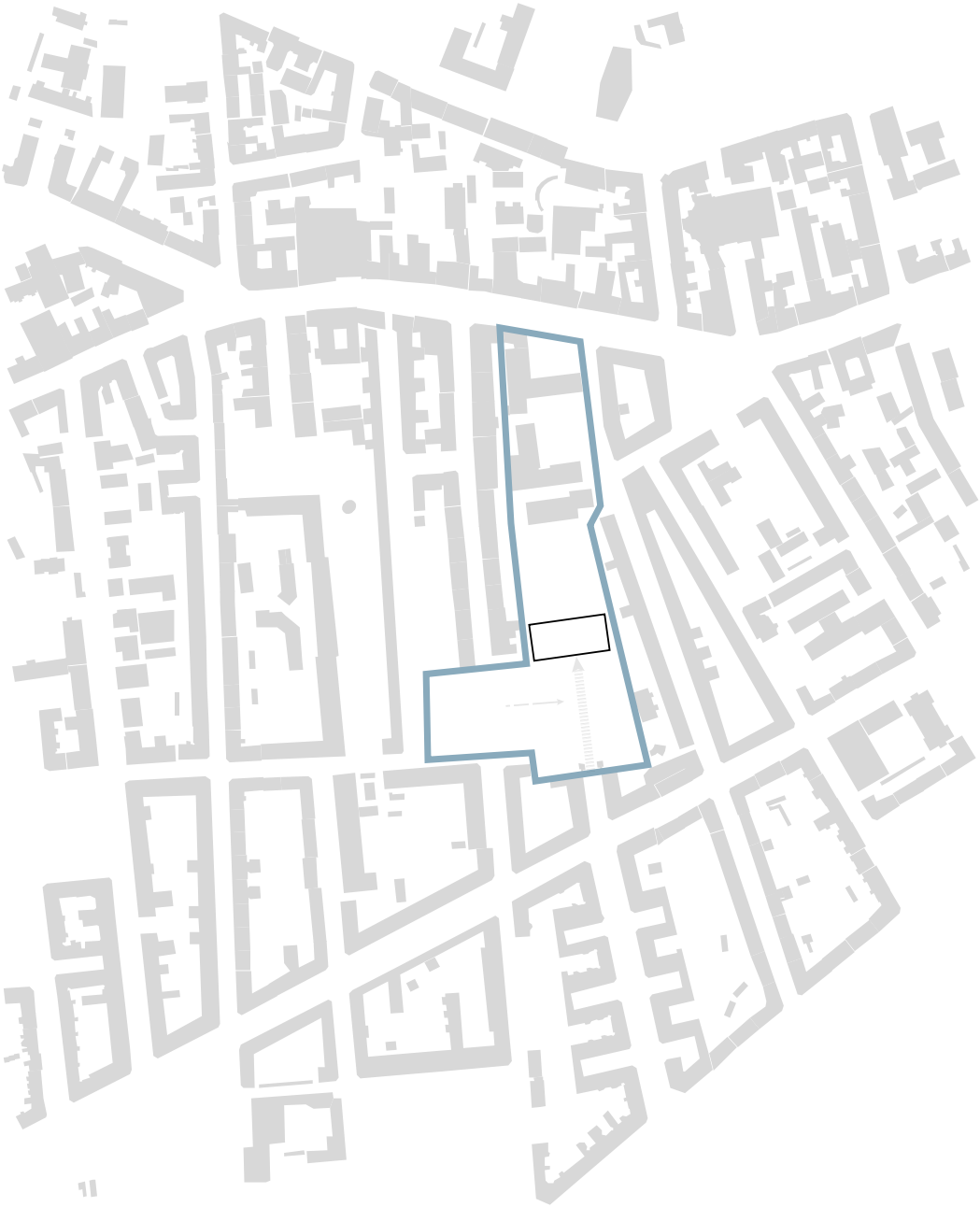
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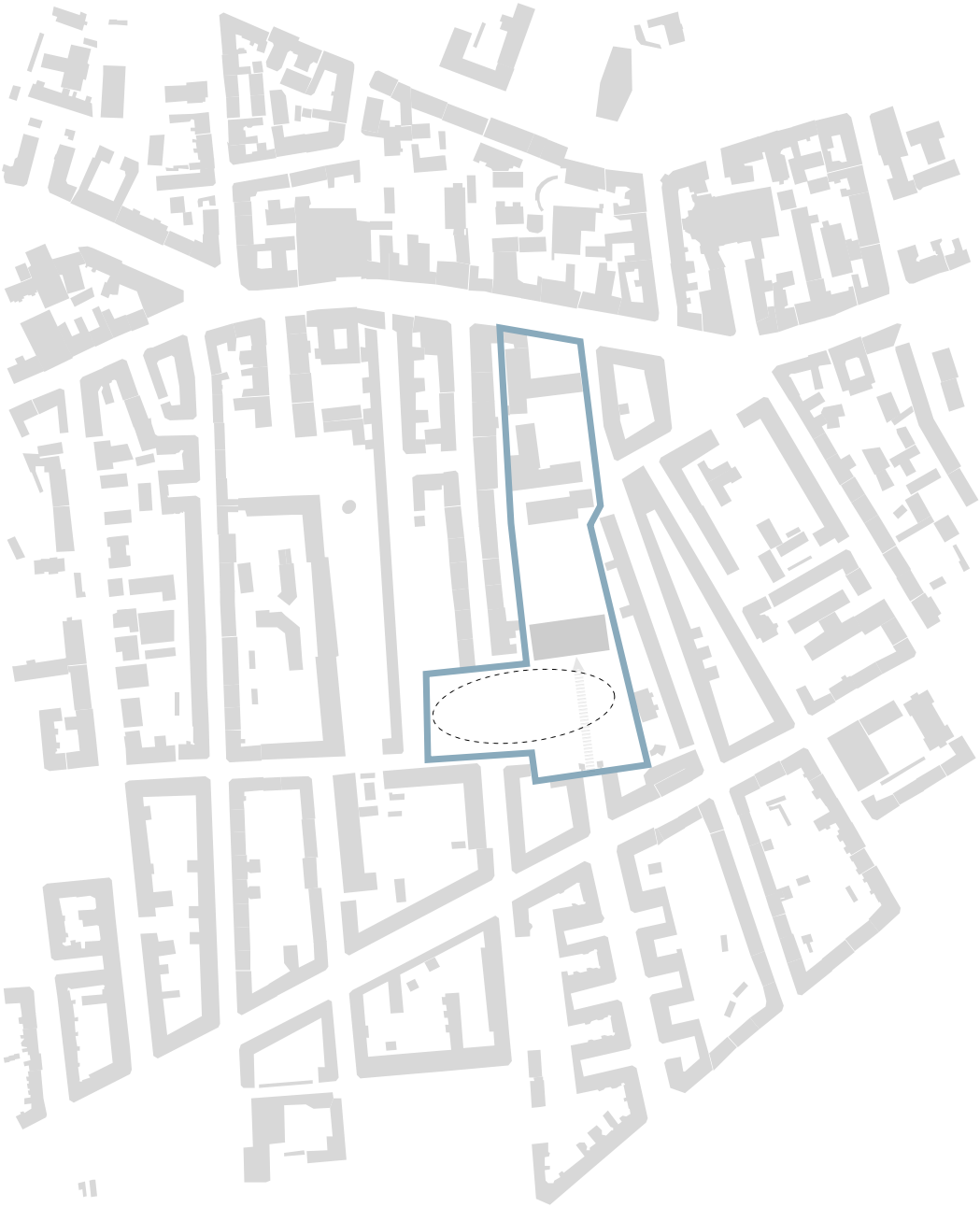
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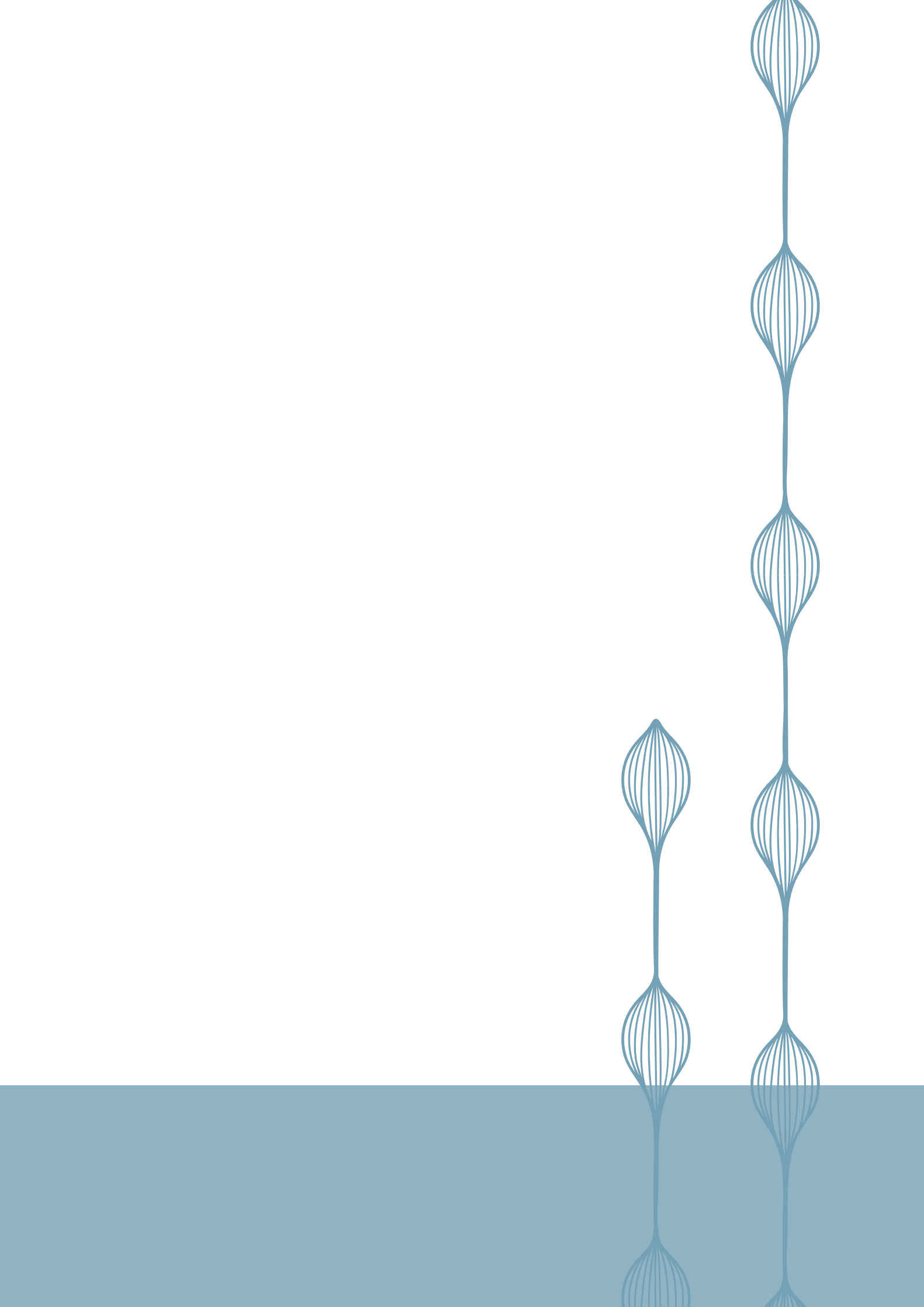


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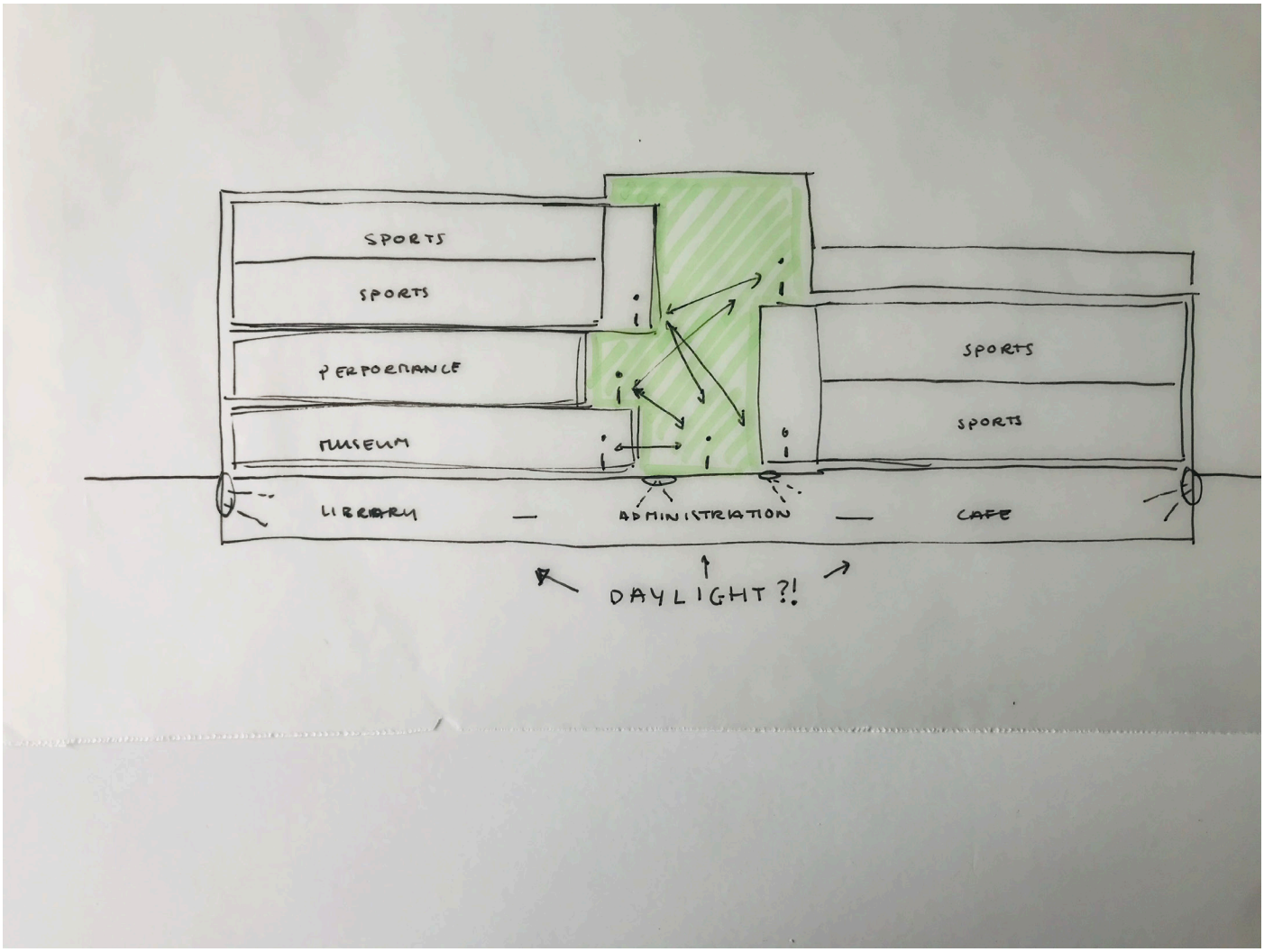
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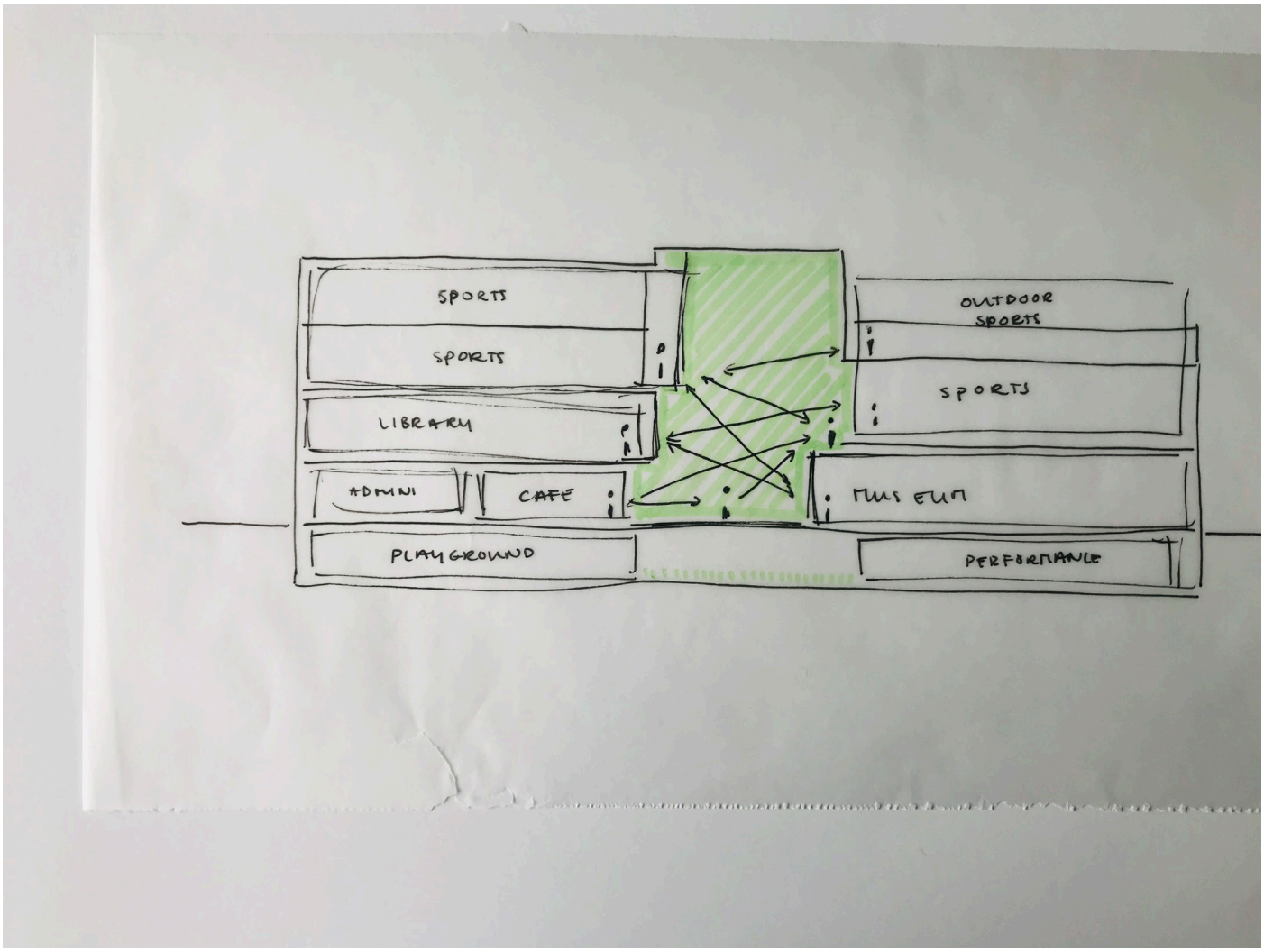


PROCESS DOCUMENTATION

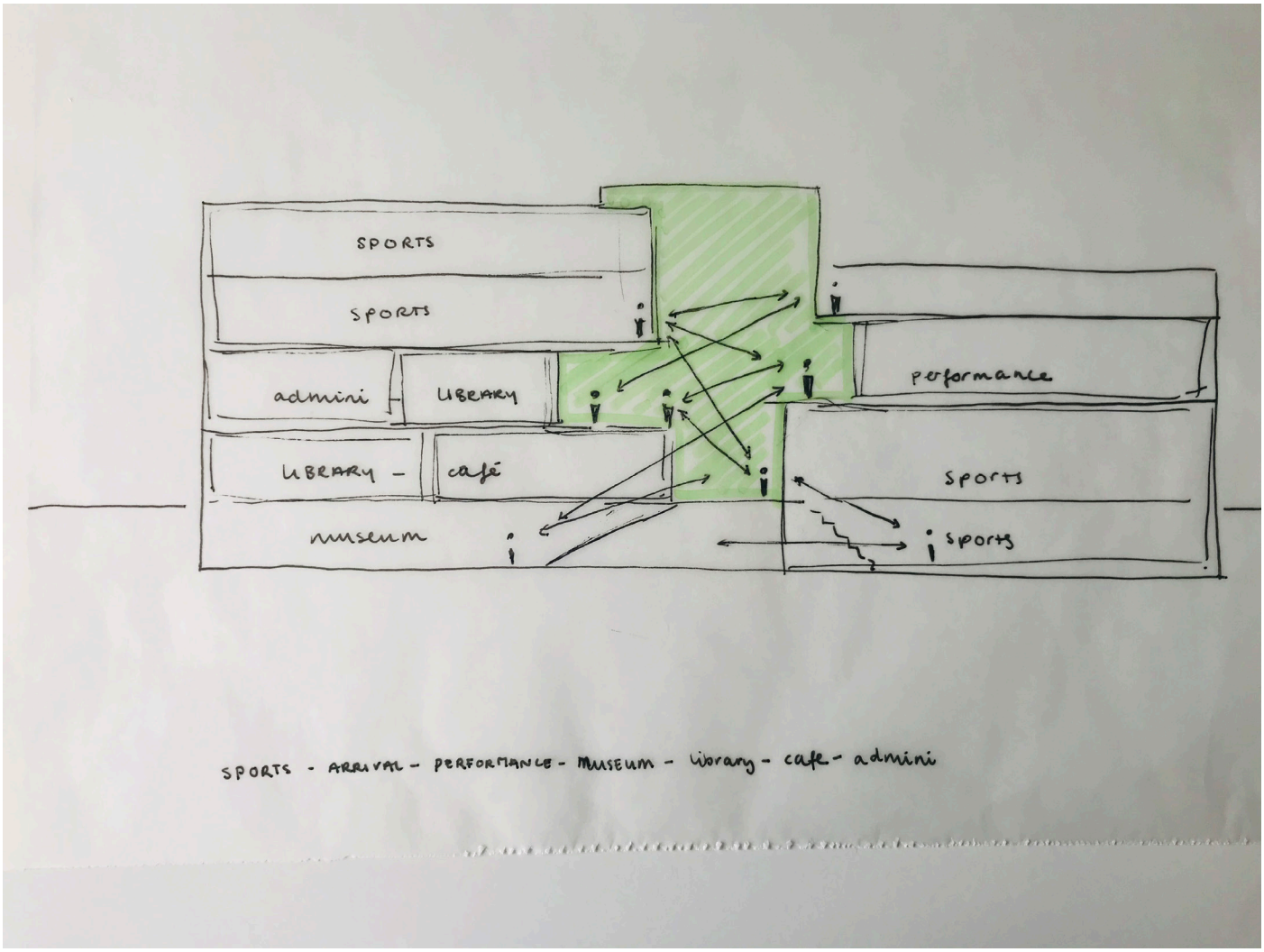
PROGRAM SHIFTS SINCE P2



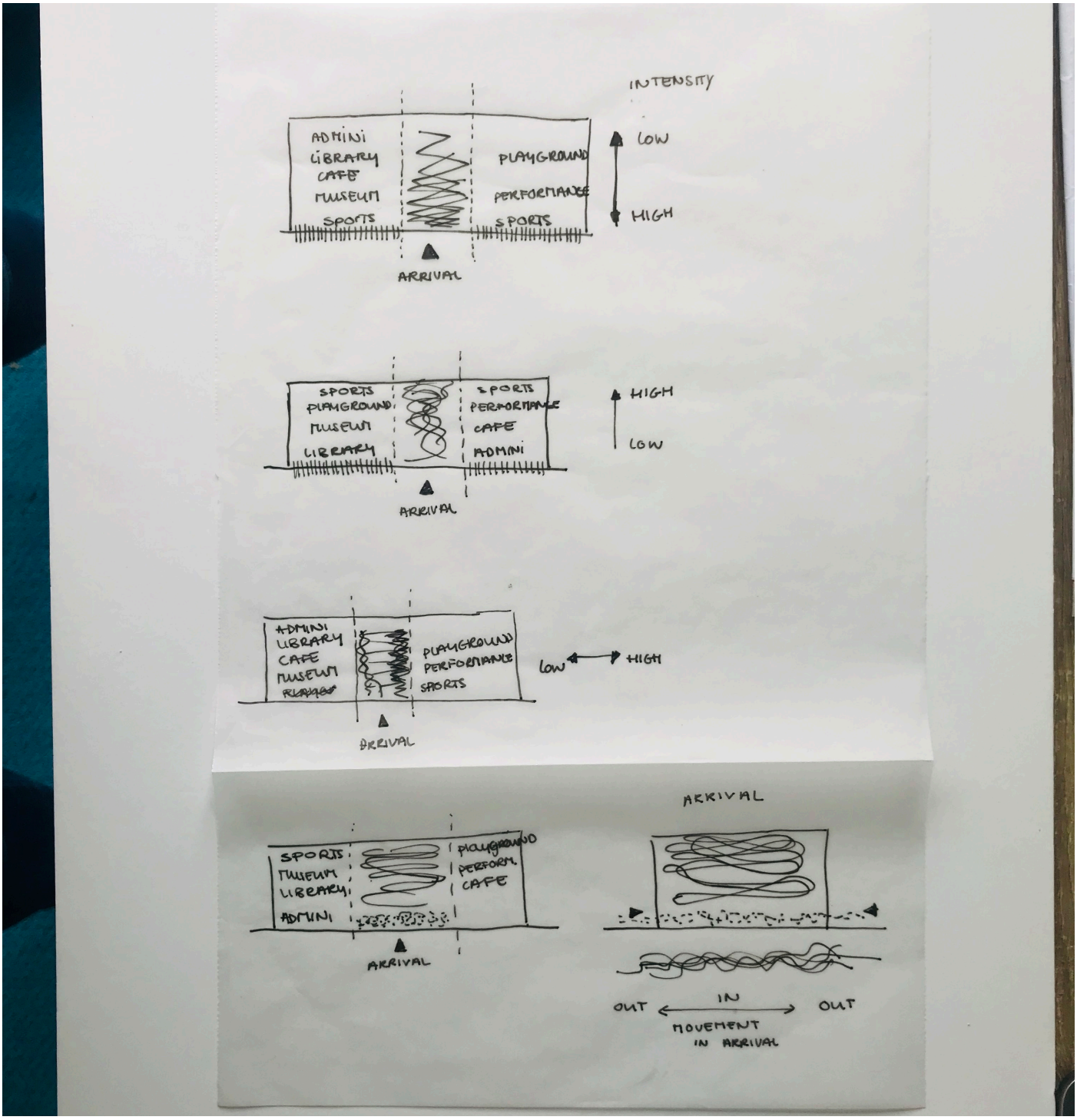
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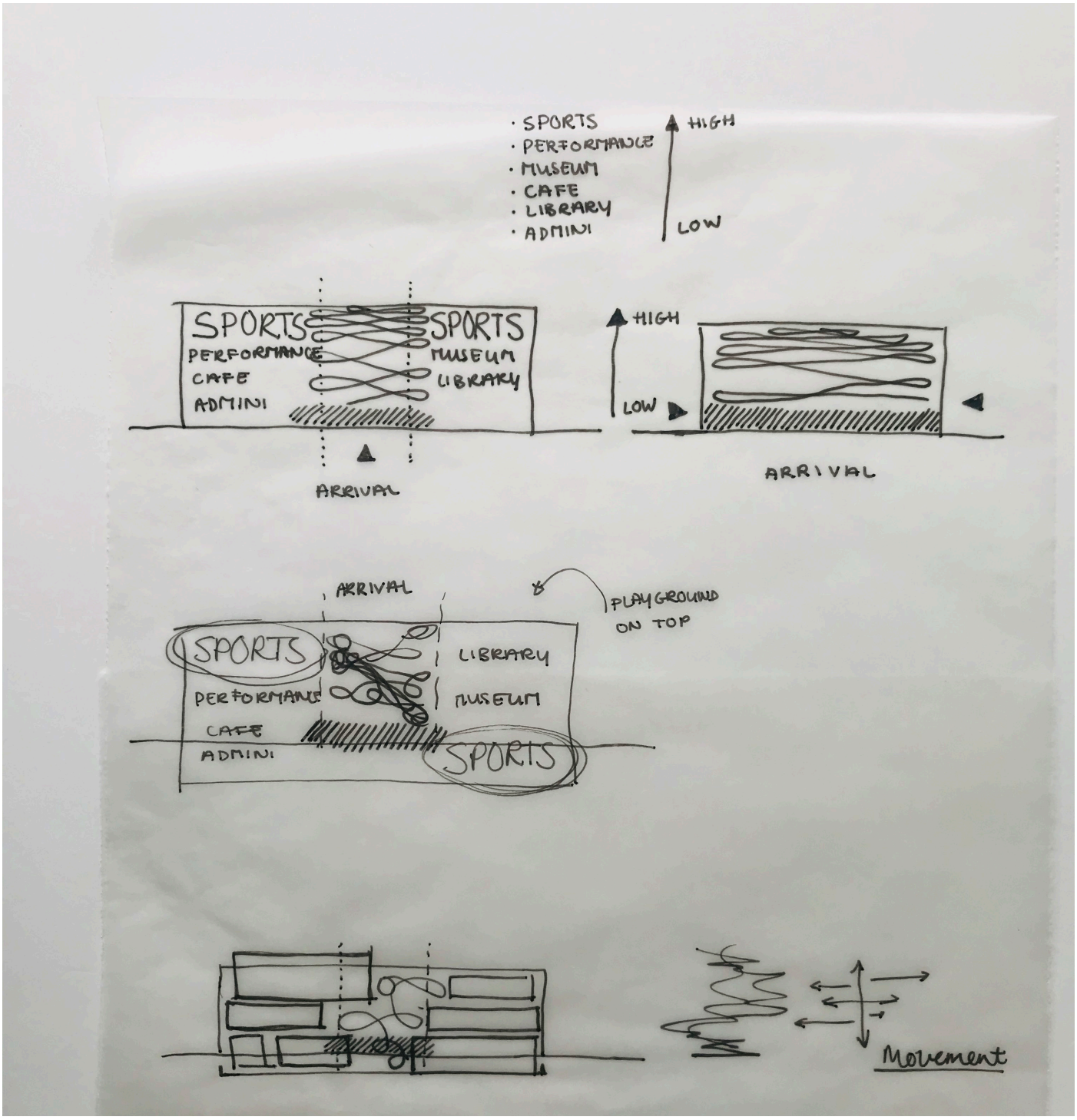
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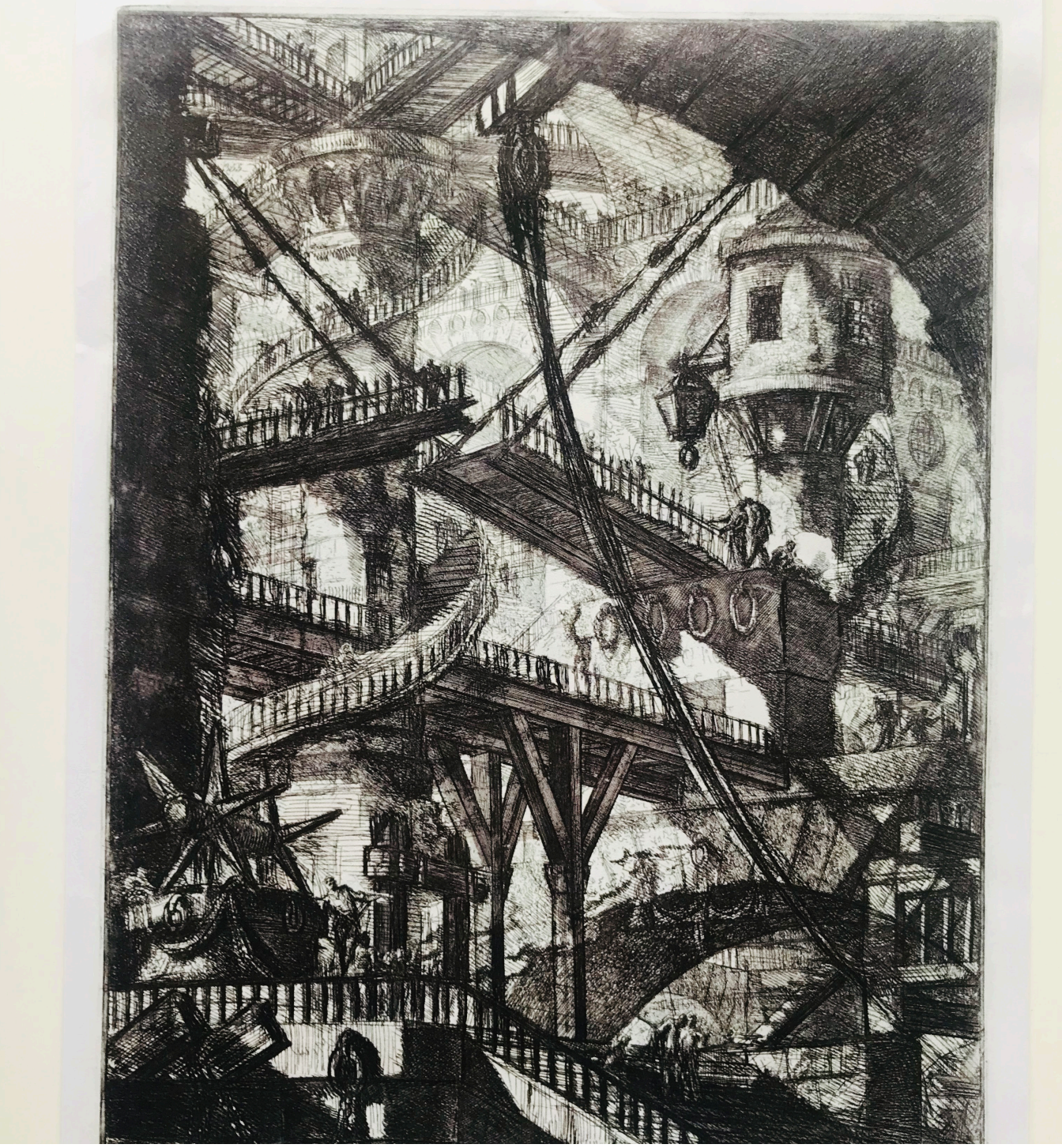
WHICH MOVEMENT?



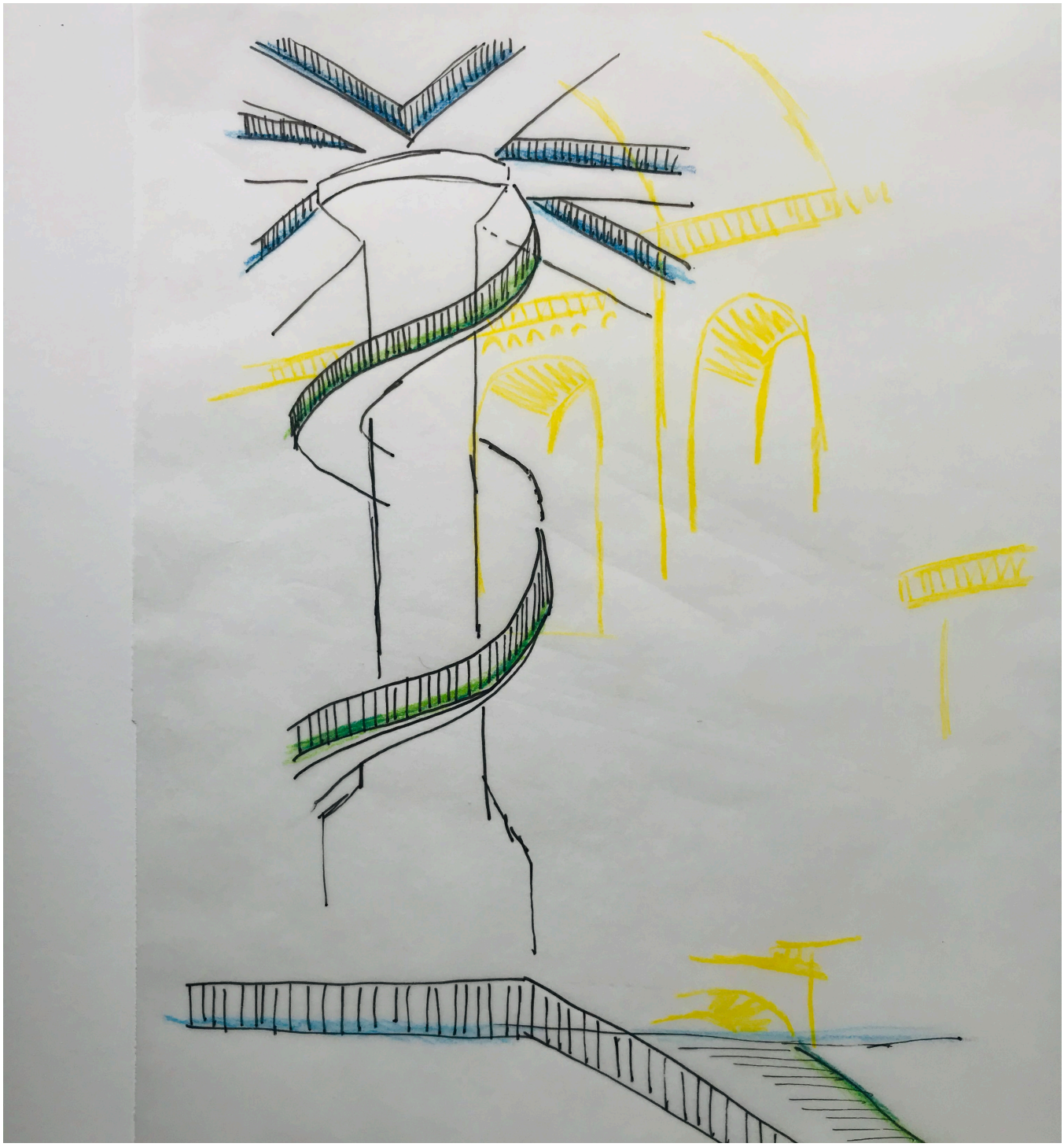
WHICH MOVEMENT?



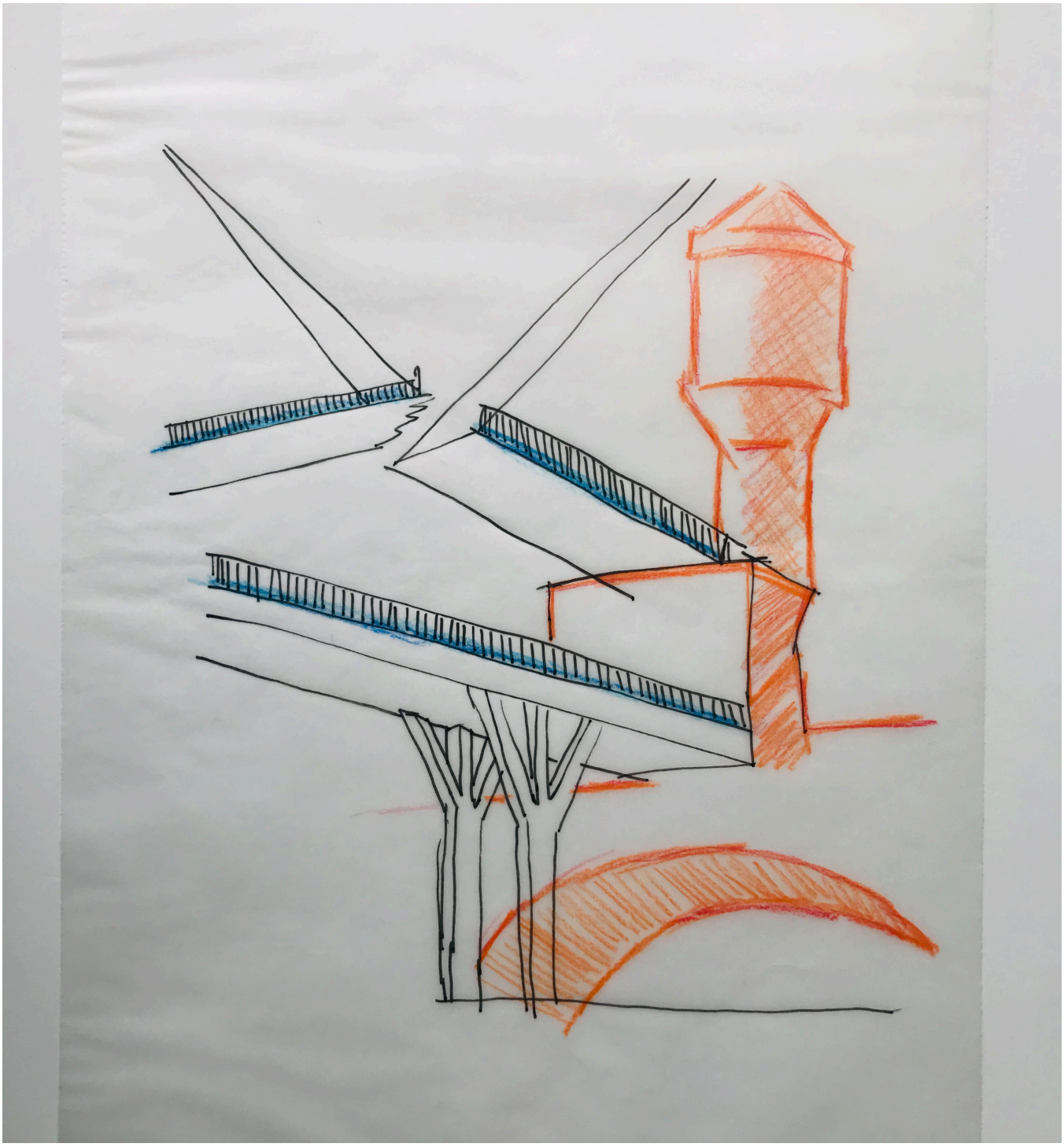
PIRRANESI



PIRANESI UNRAVELLED



PIRRANESI UNRAVELLED



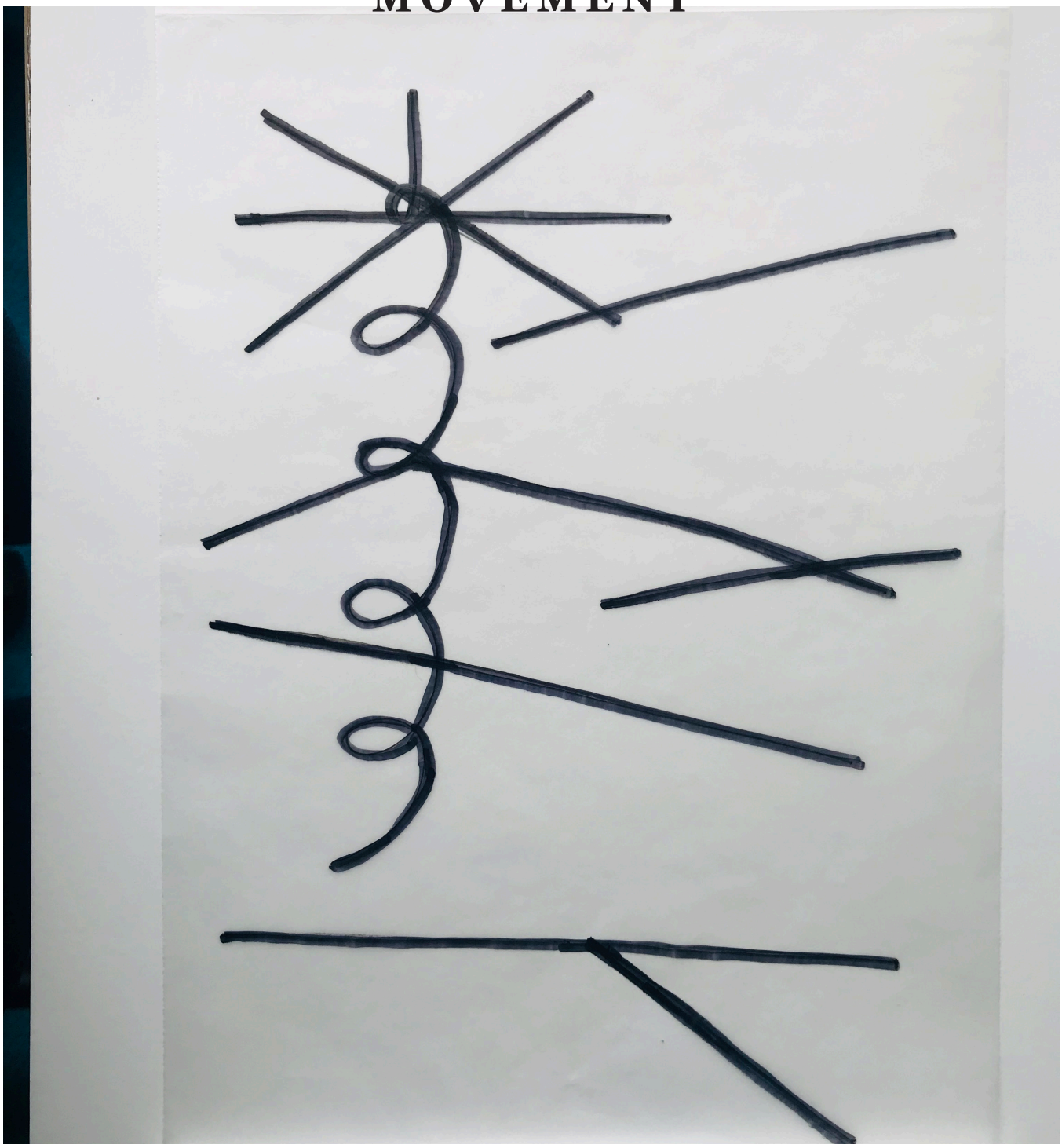
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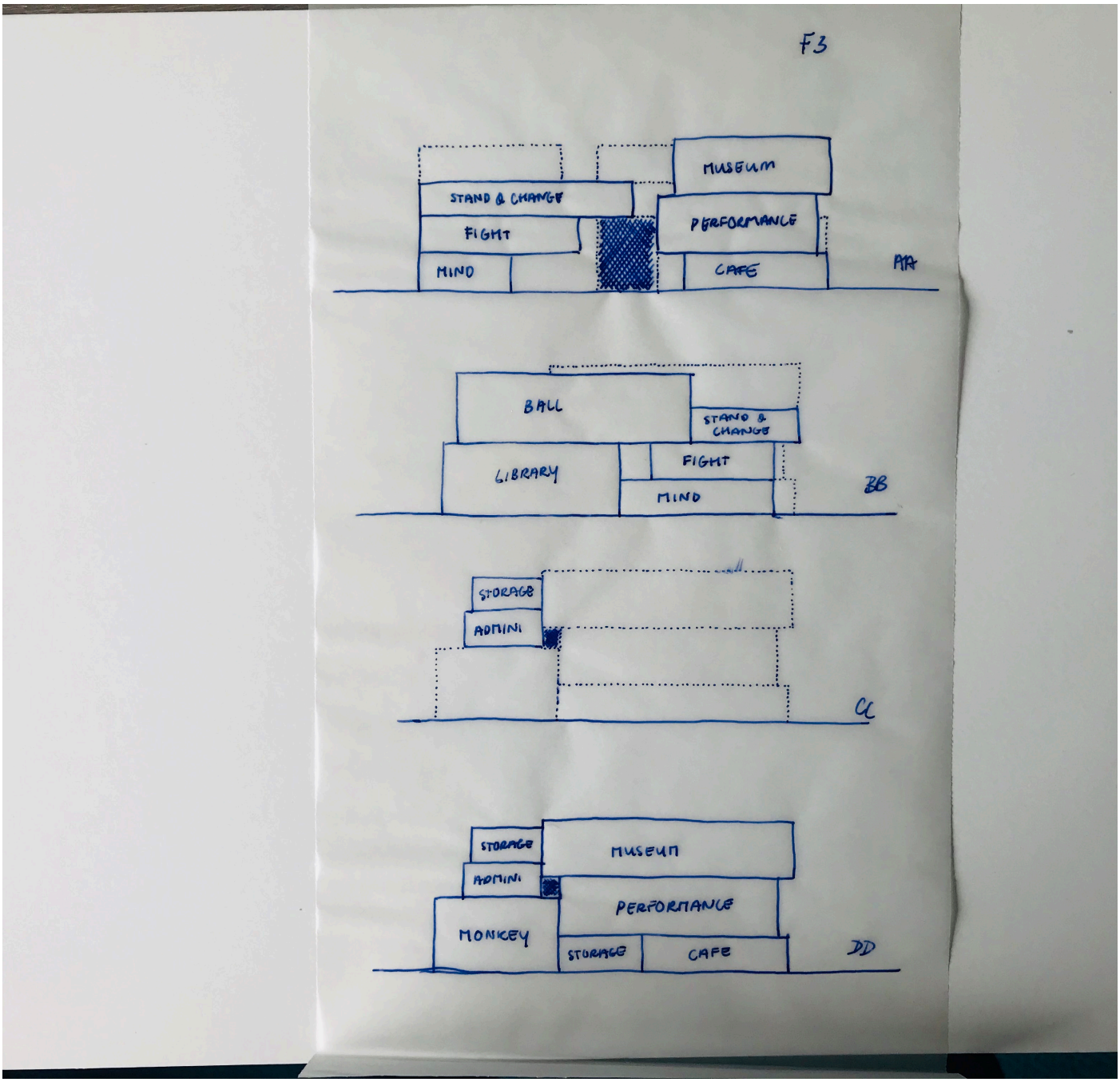
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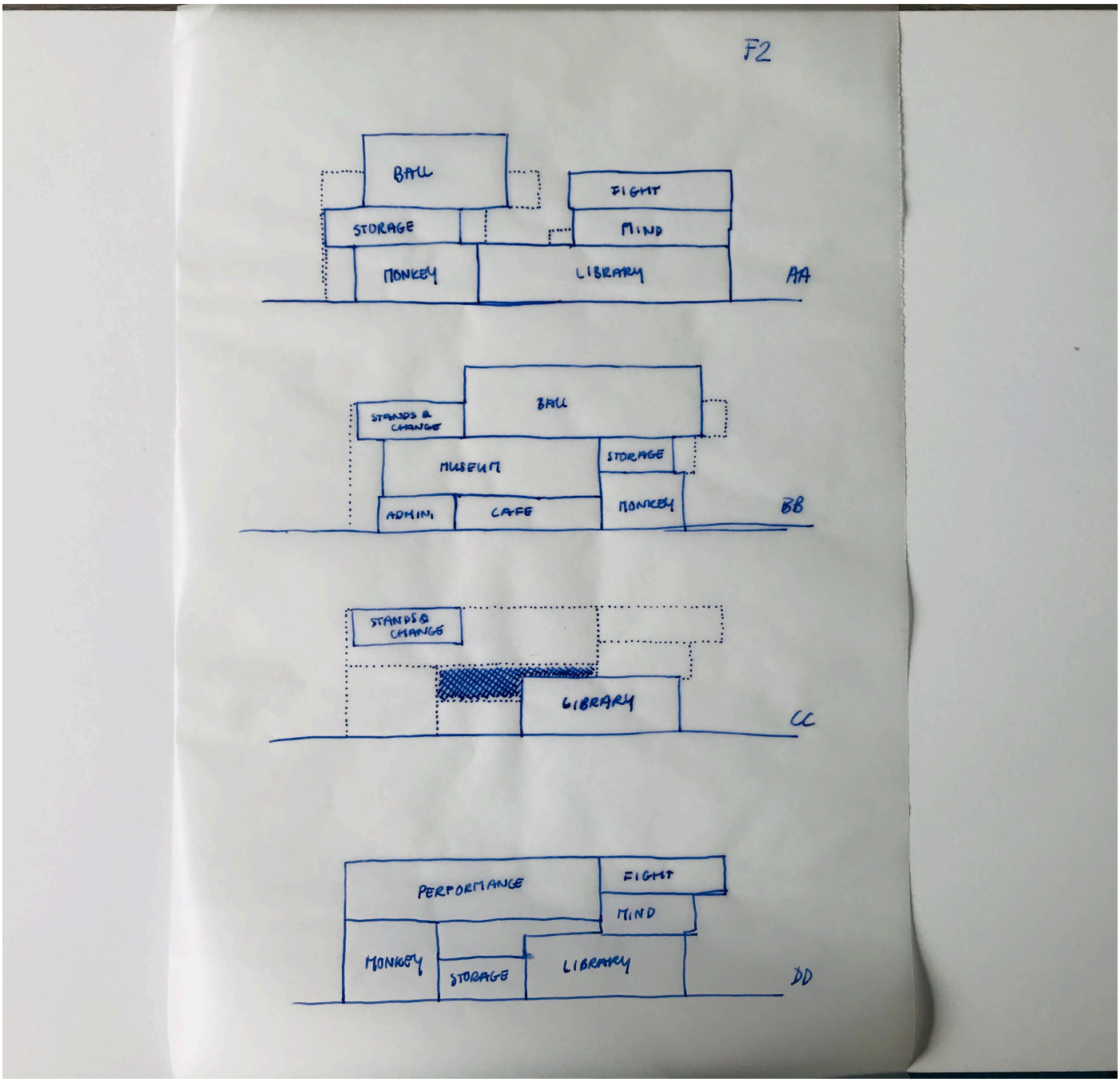
PIRANESI UNRAVELLED IN MOVEMENT



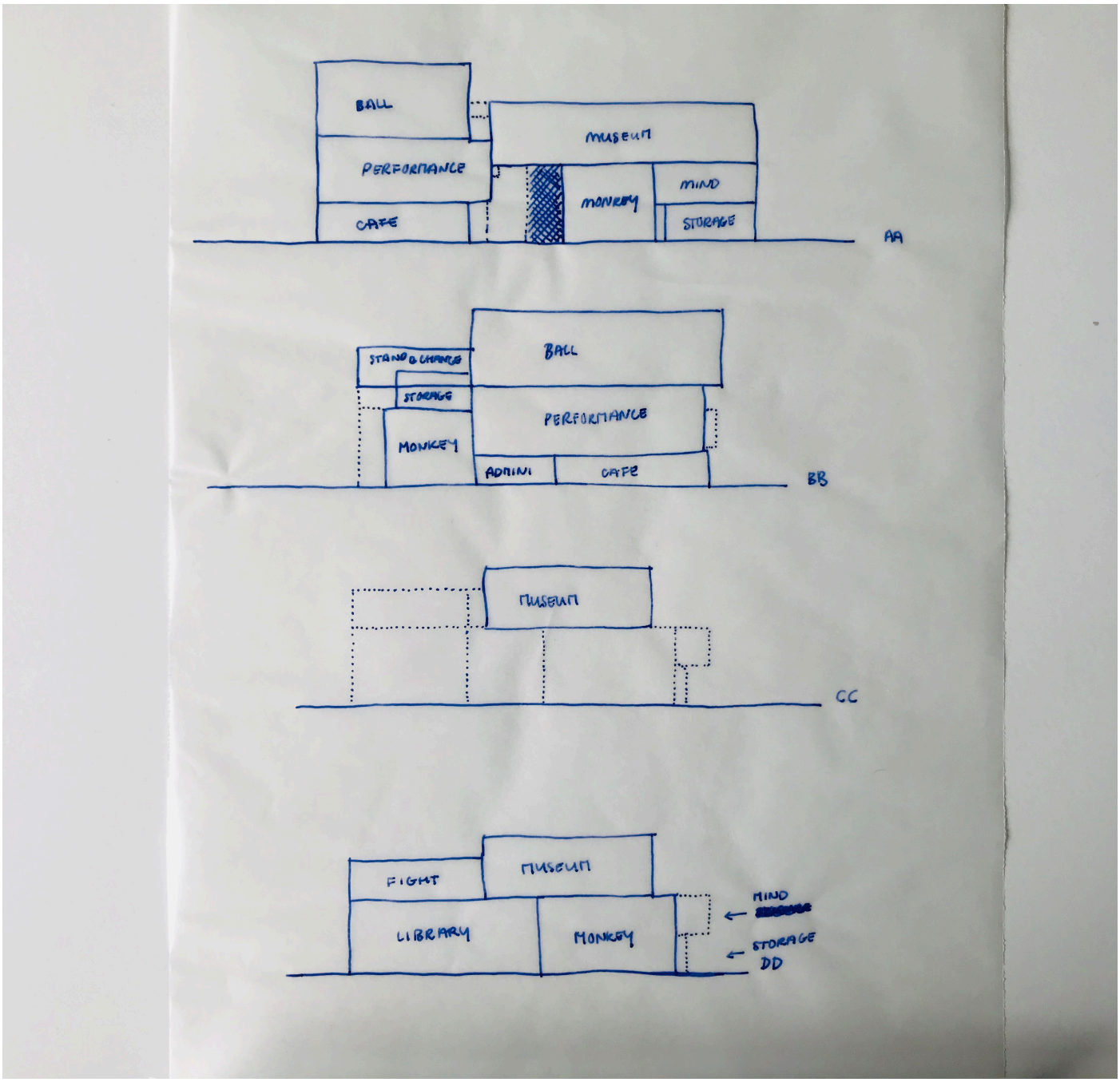
PROGRAM SHIFTS



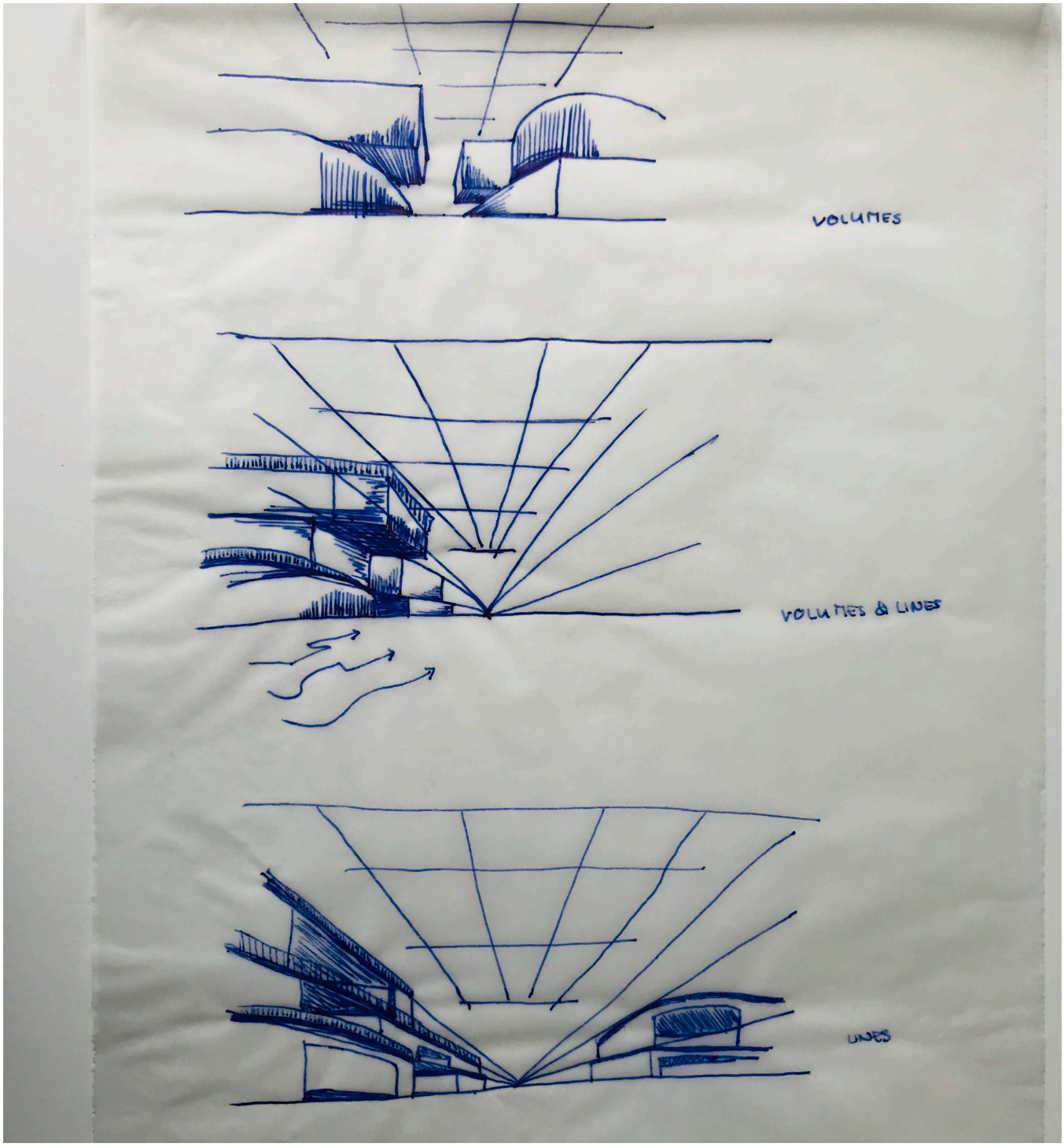
PROGRAM SHIFTS



PROGRAM SHIFTS



VOLUMES AND MOVEMENT



MODELS



MODELS



MODELS



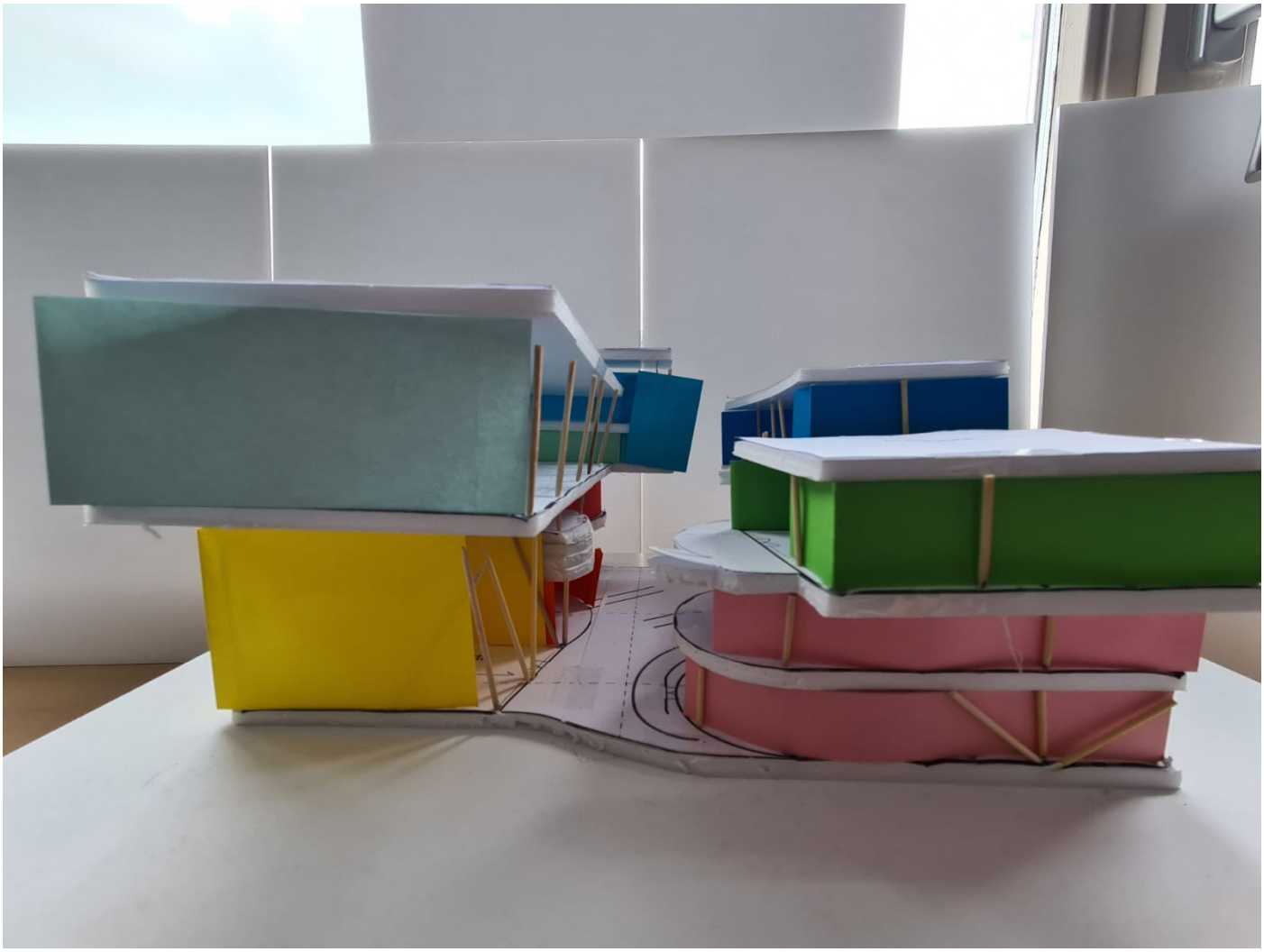
MODELS



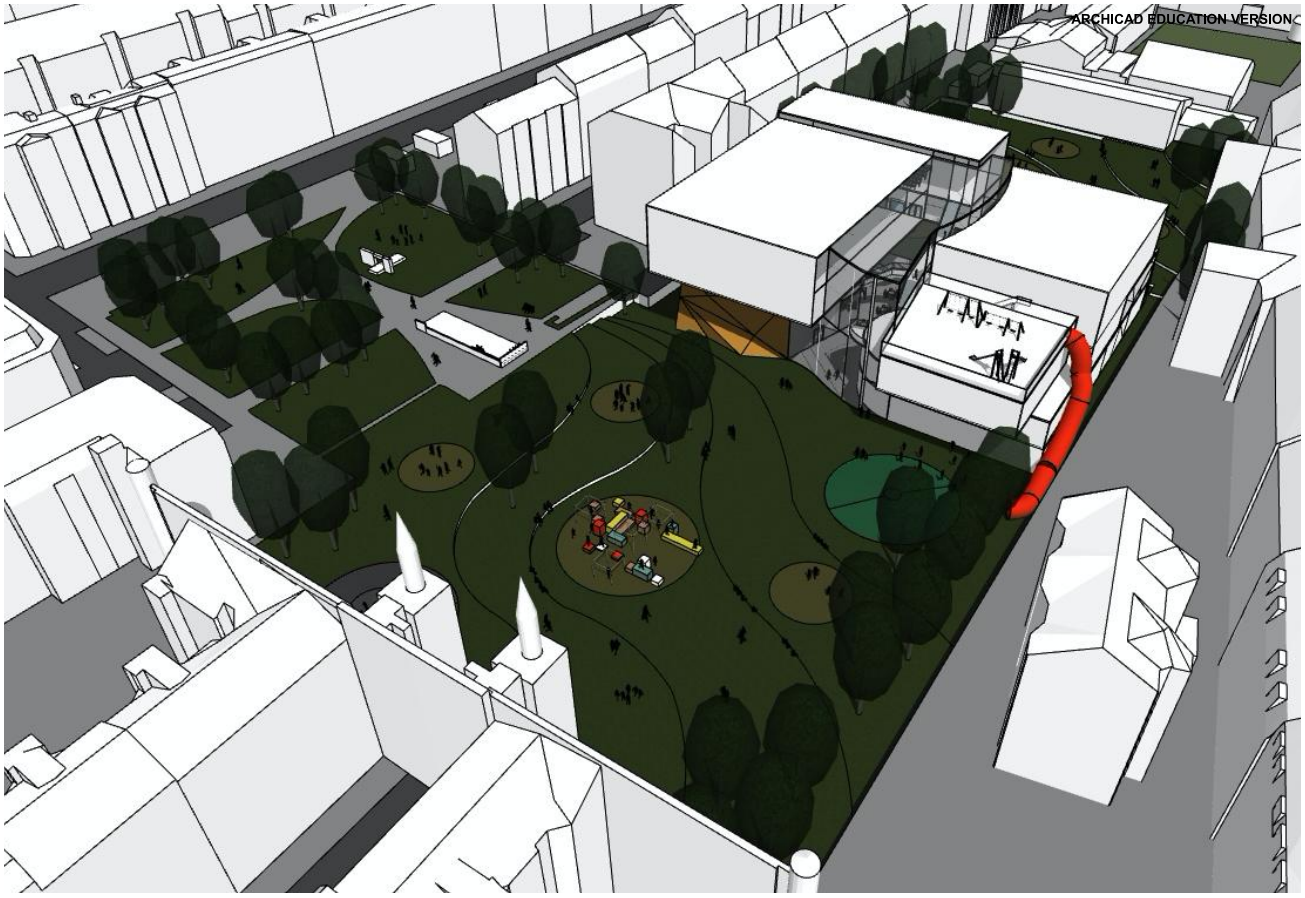
MODELS



MODELS

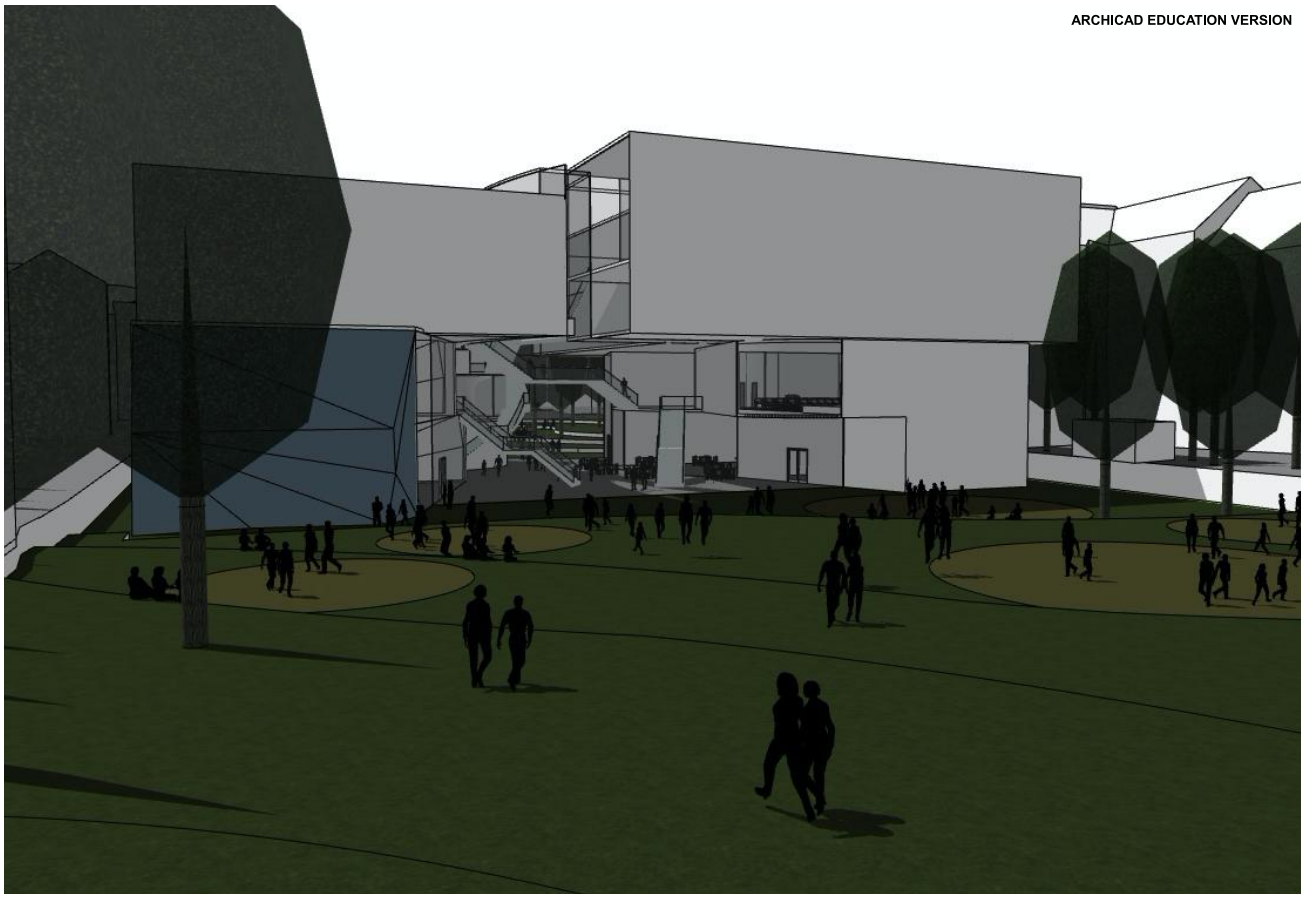


DIGITAL MODELS

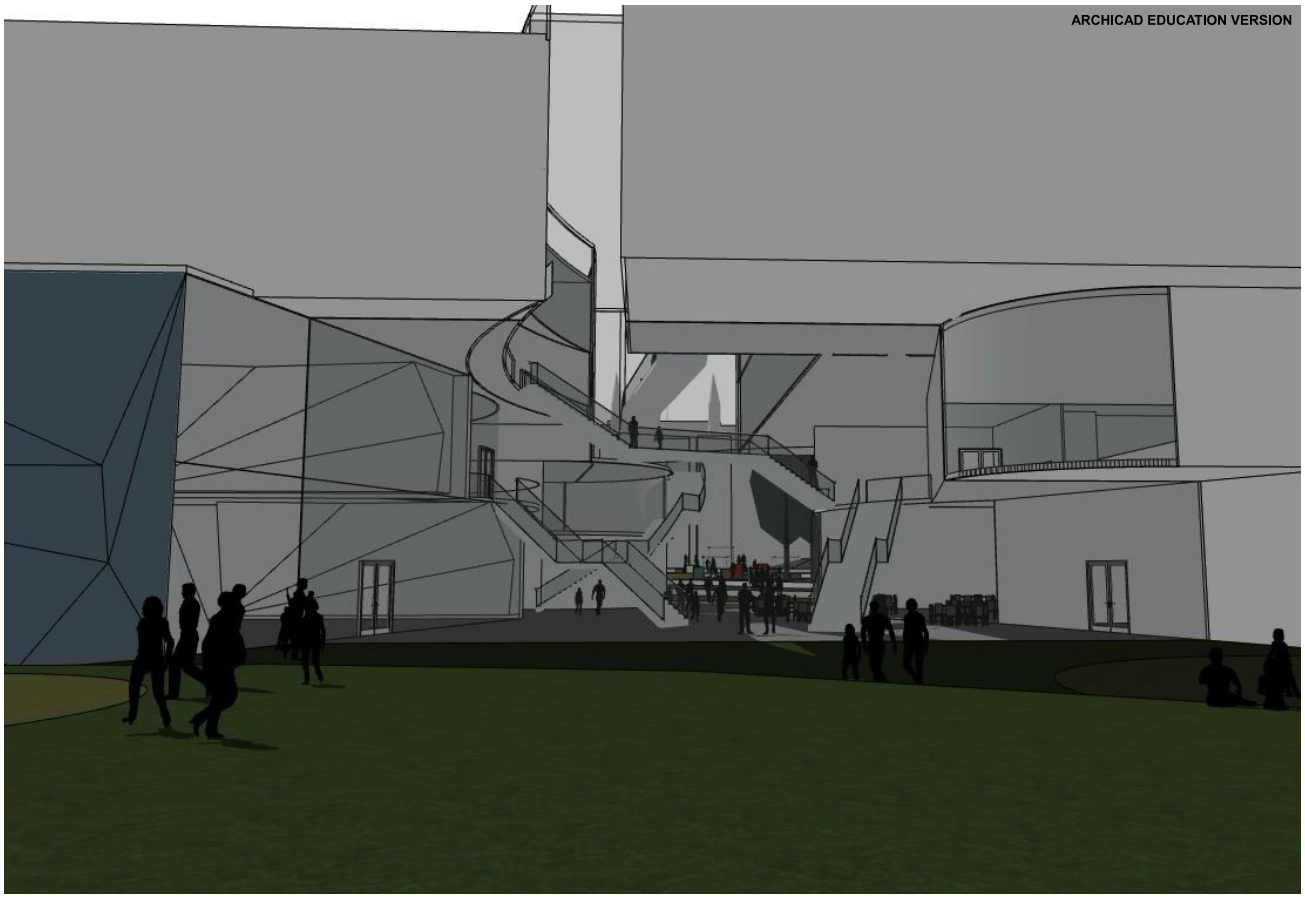


DIGITAL MODELS

ARCHICAD EDUCATION VERSION



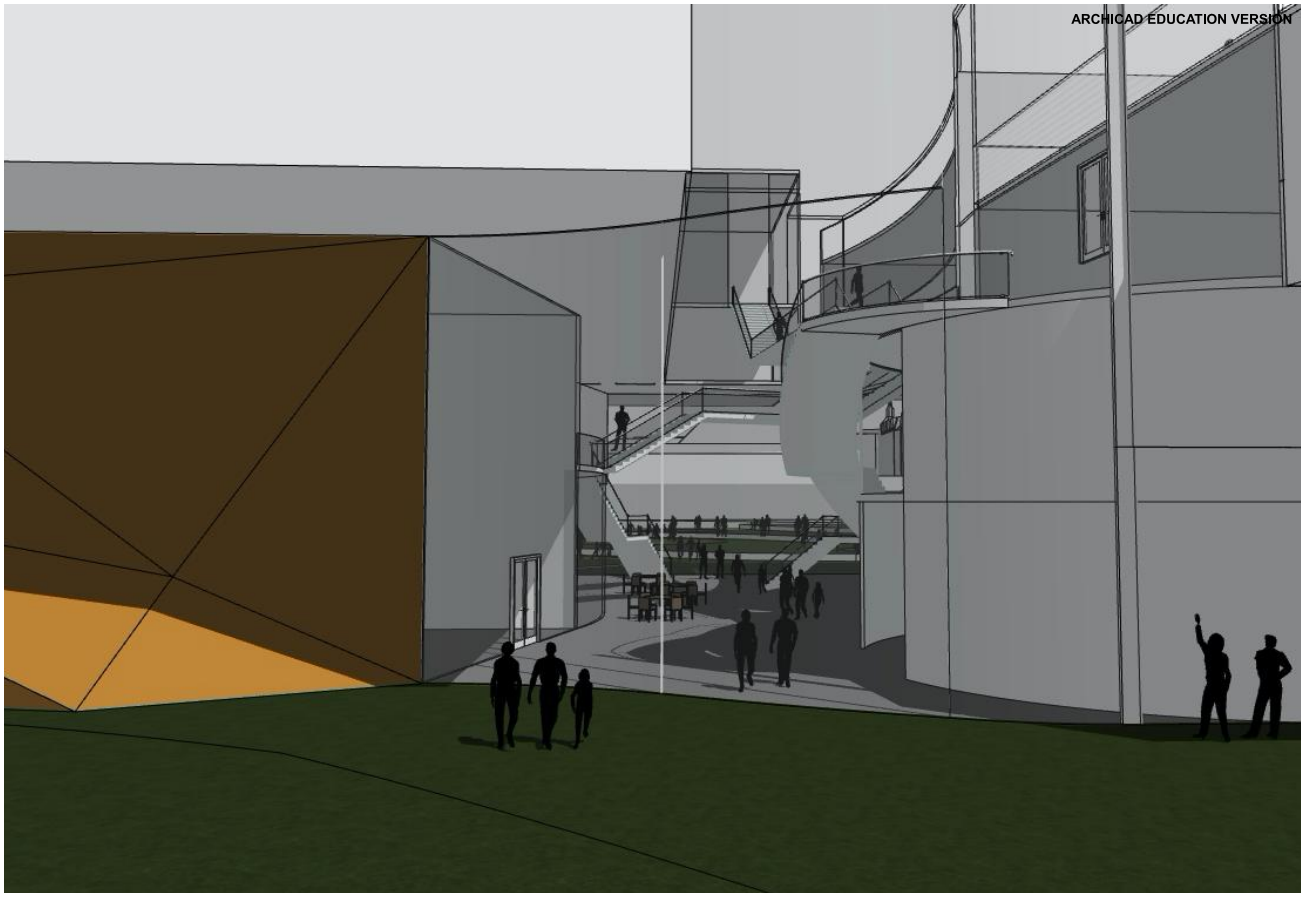
MODELS



MODELS



MODELS

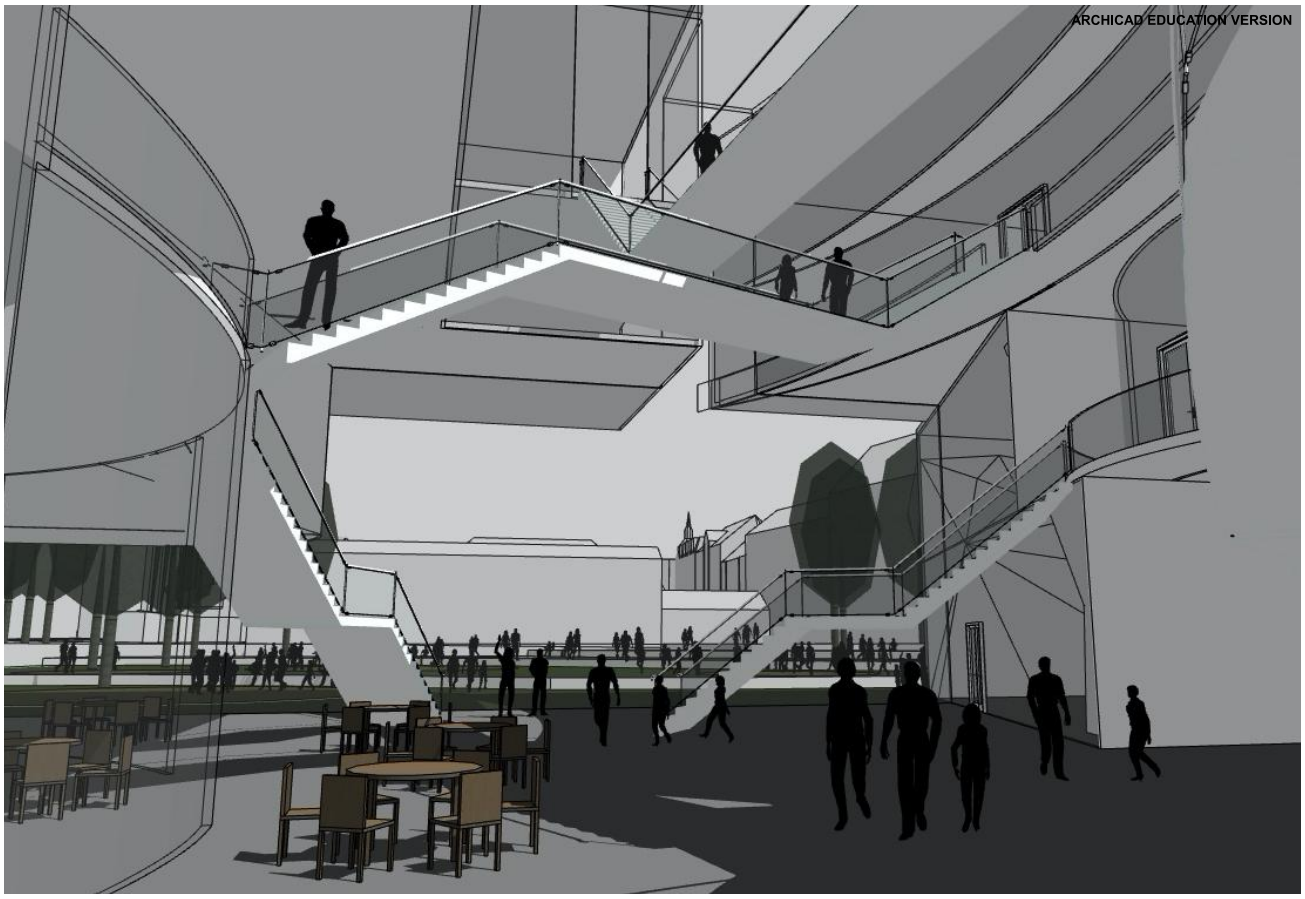


MODELS

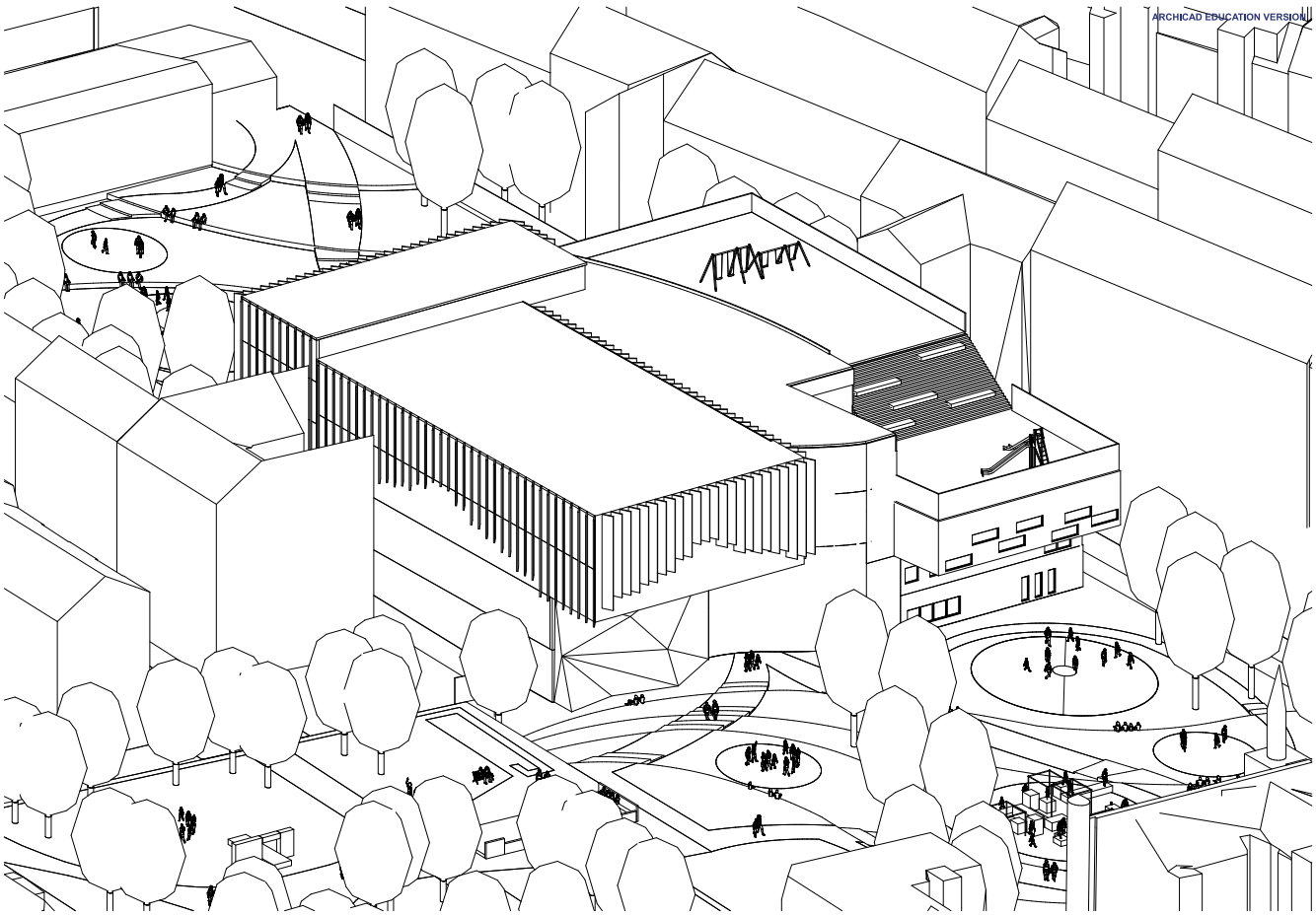
ARCHICAD EDUCATION VERSION



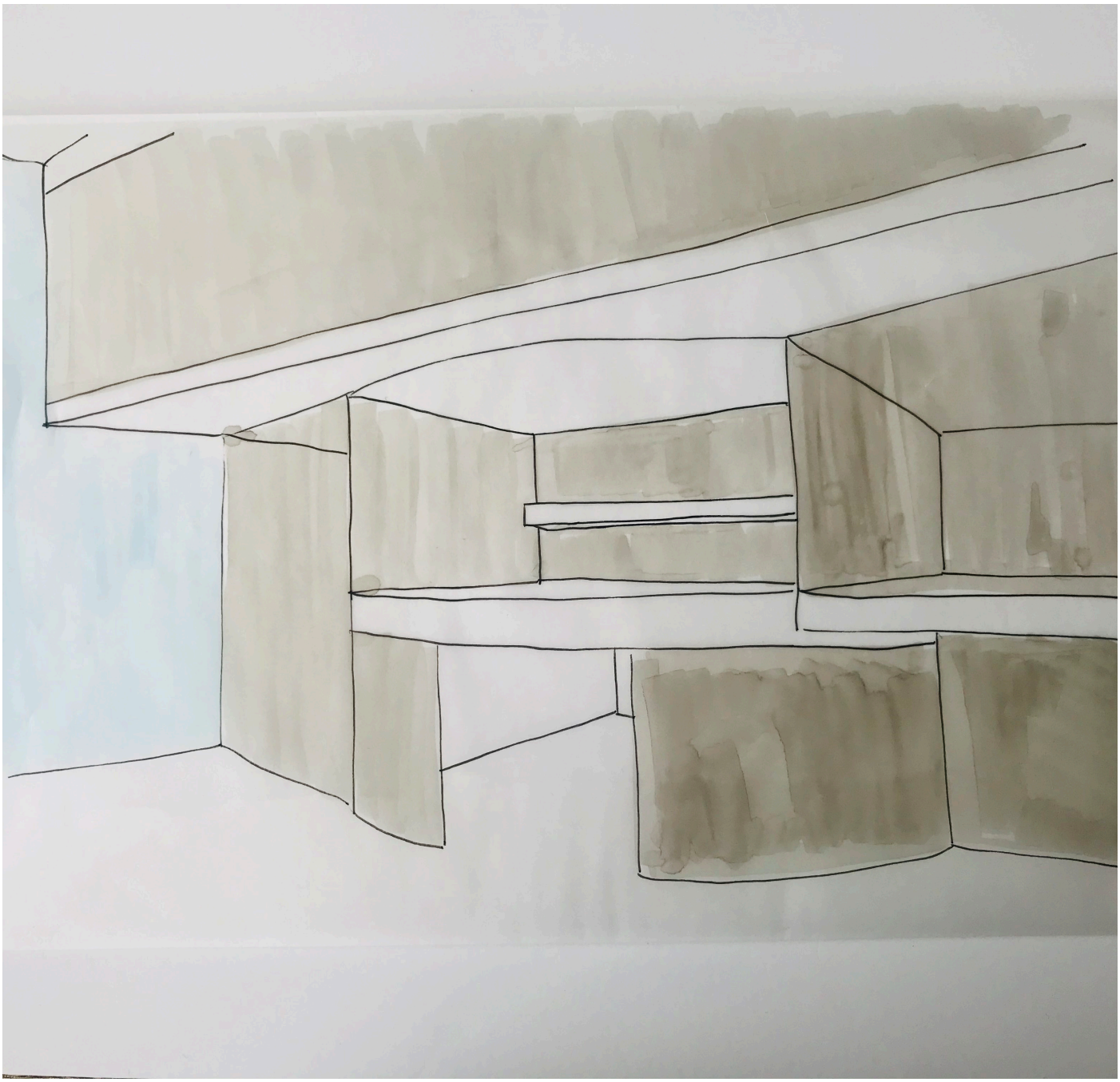
MODELS



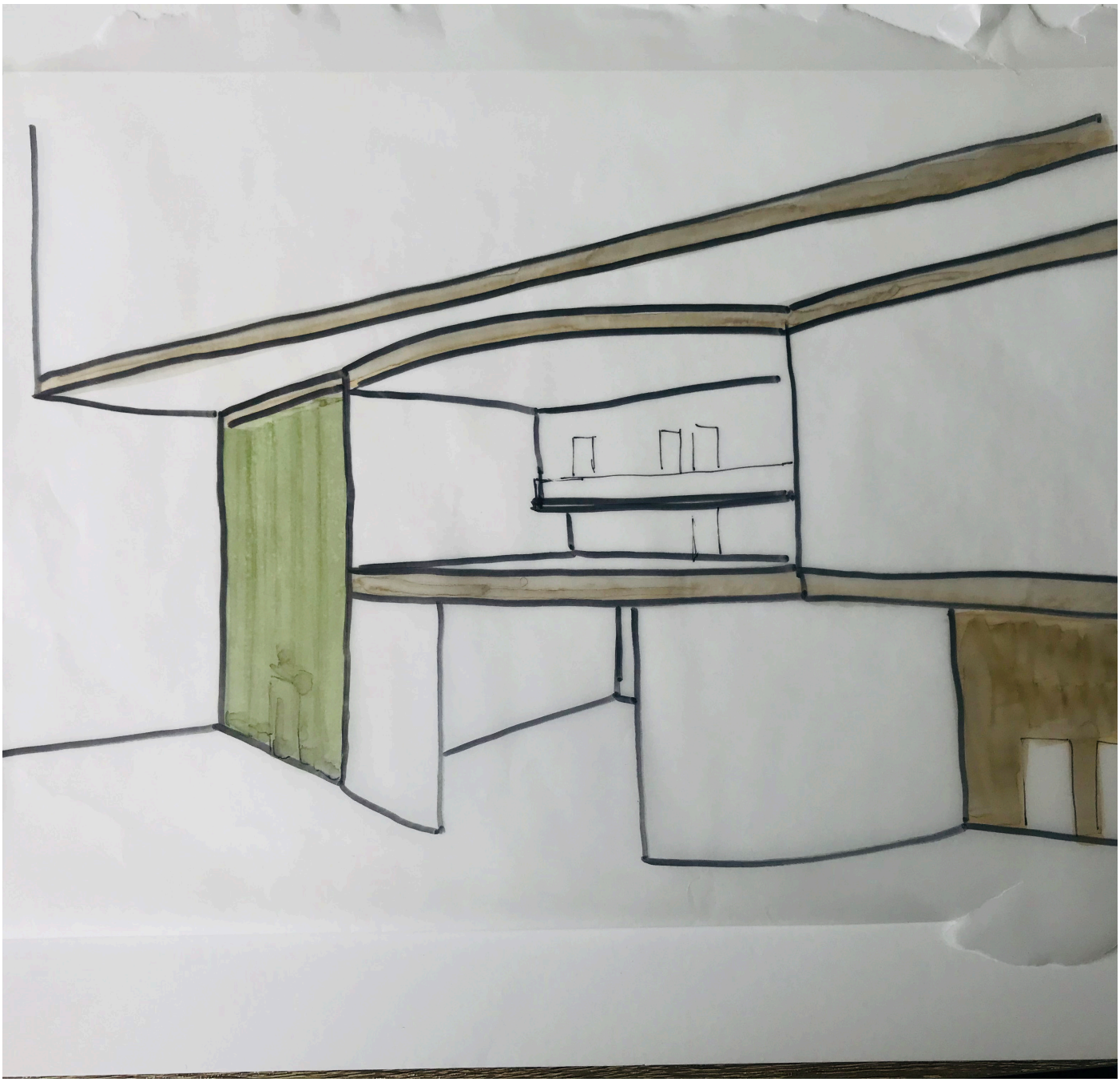
MODELS



VOLUMES OPENINGS



VOLUMES LINES



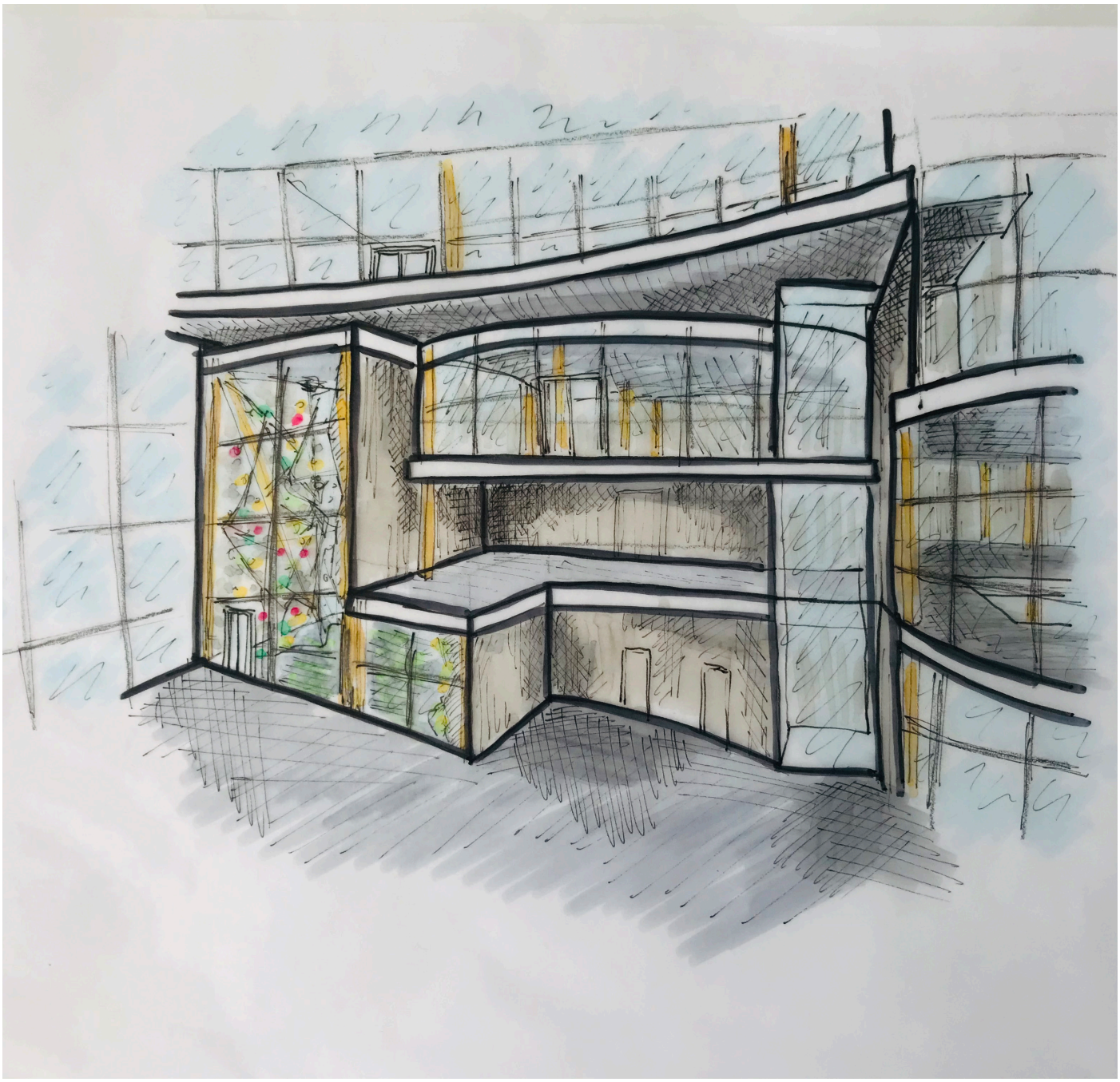
VOLUMES OPENINGS AND STRUCTURE



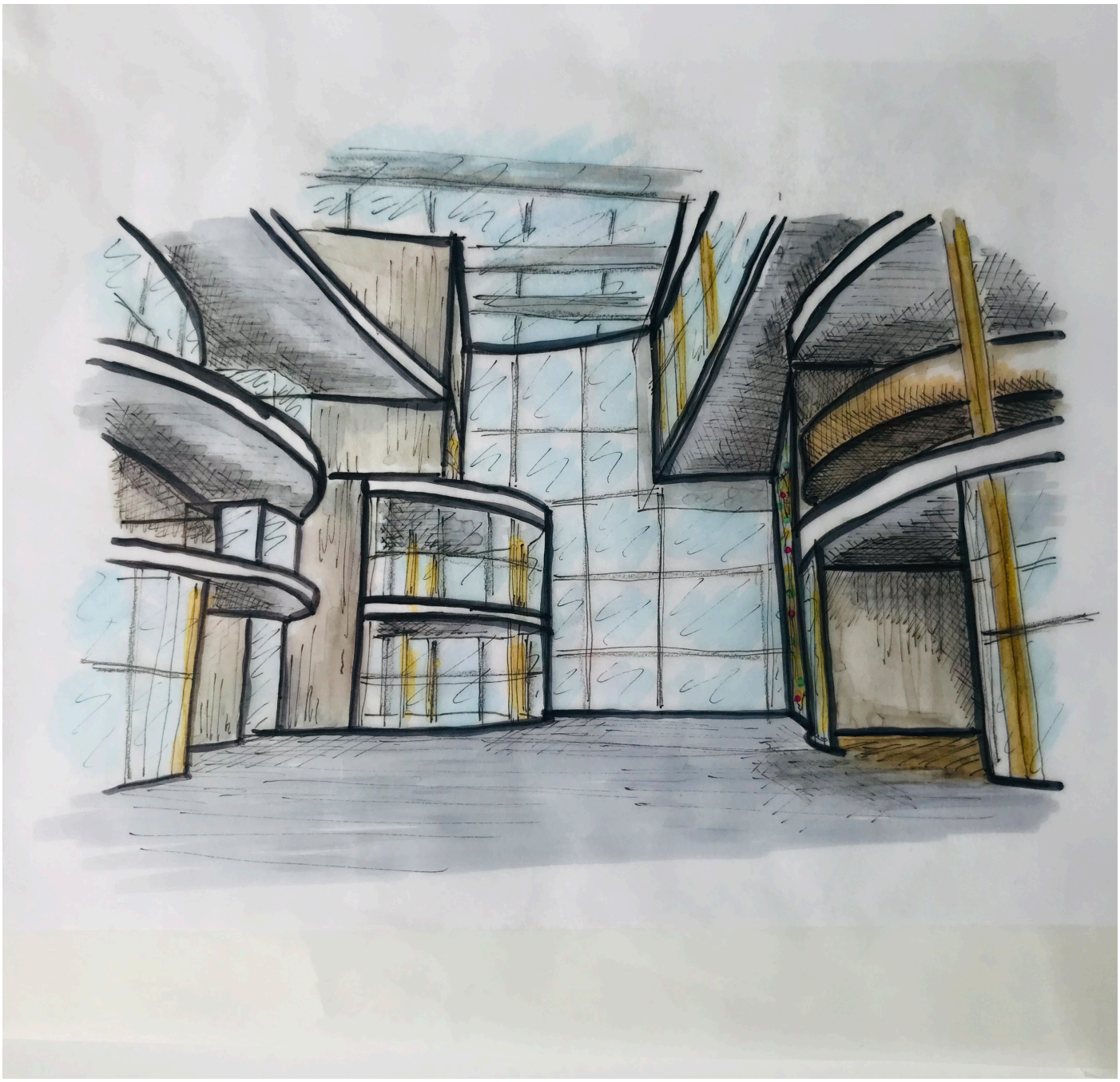
SKETCHES



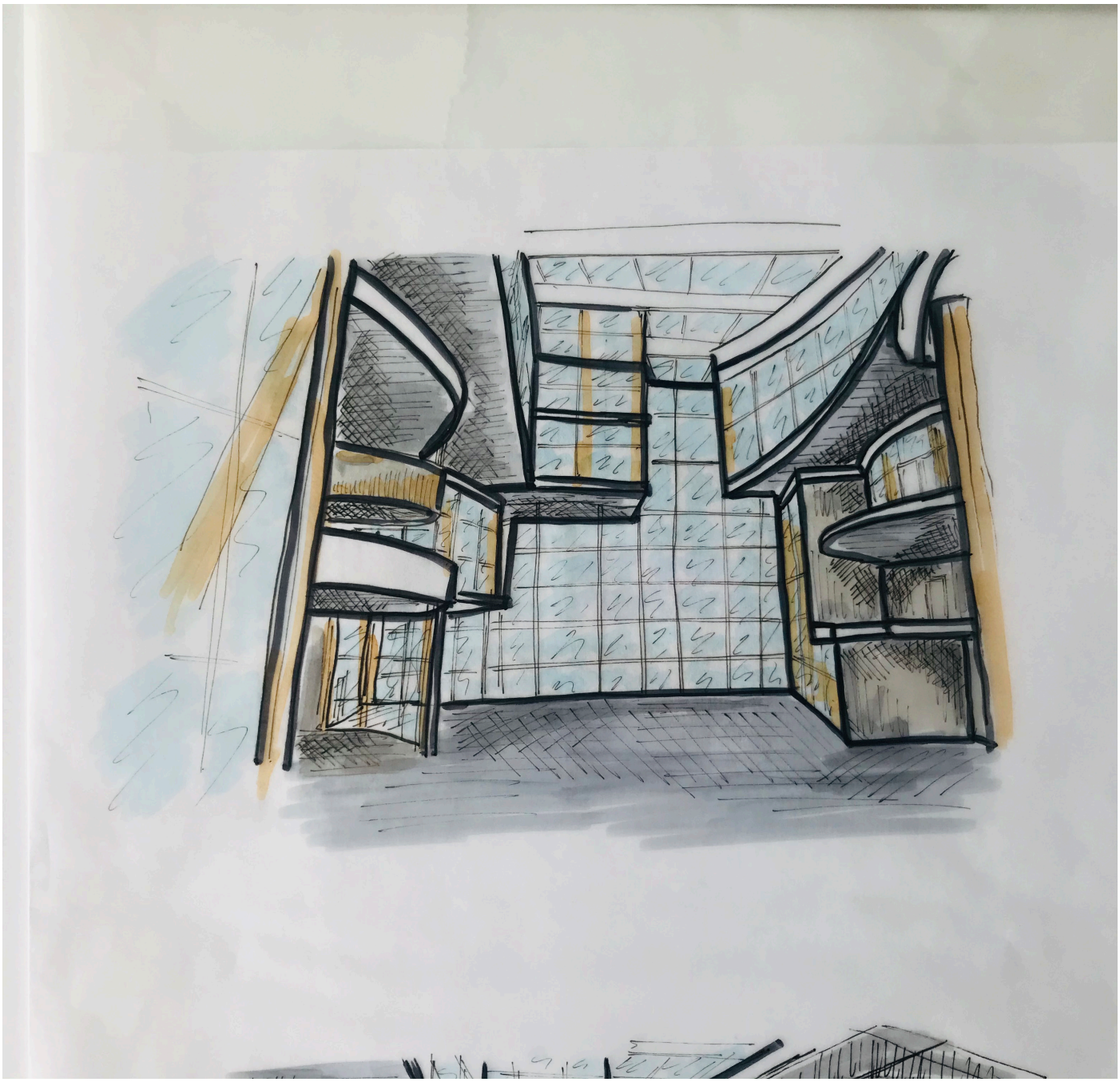
SKETCHES



SKETCHES



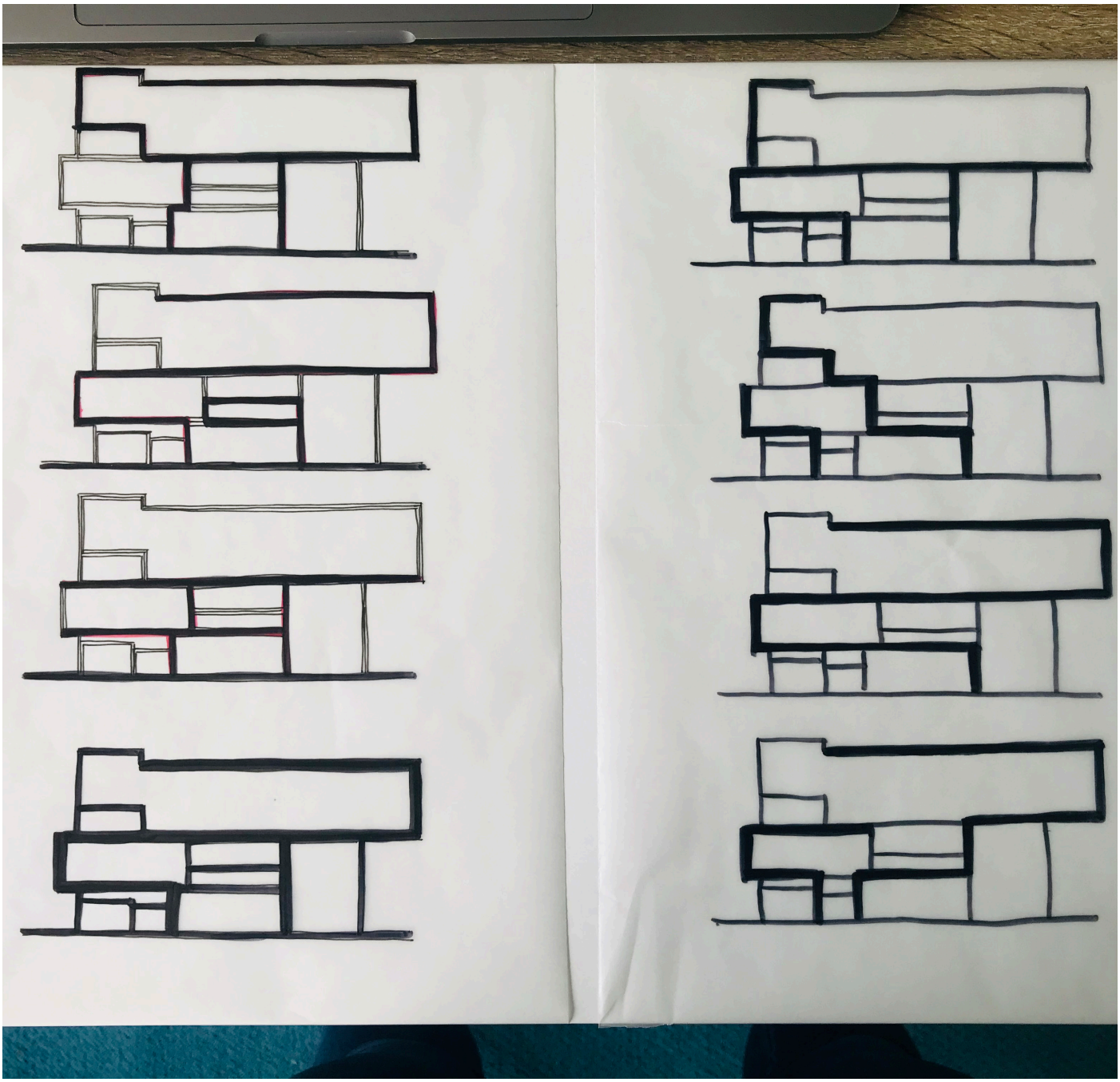
SKETCHES



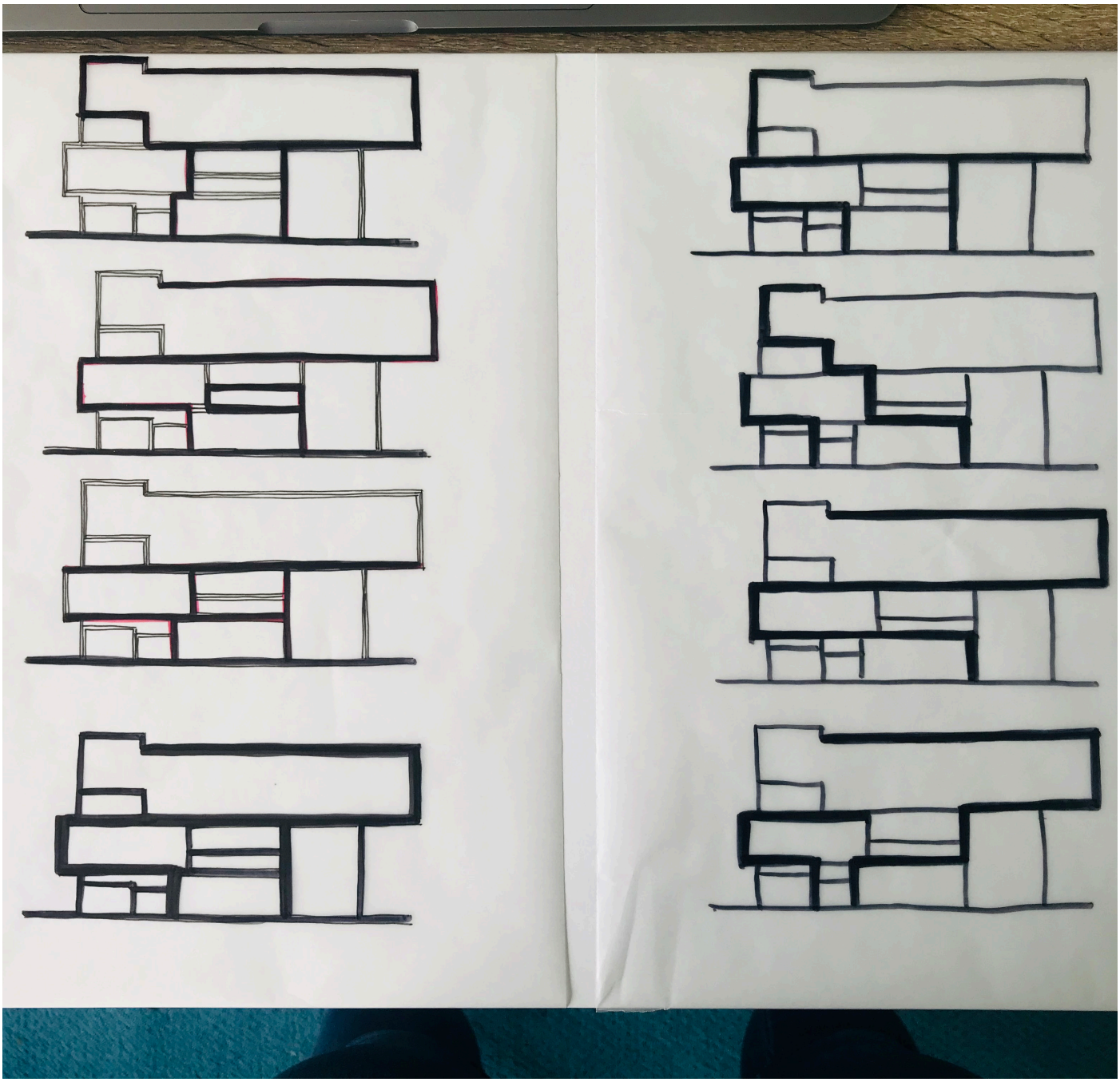
SKETCHES



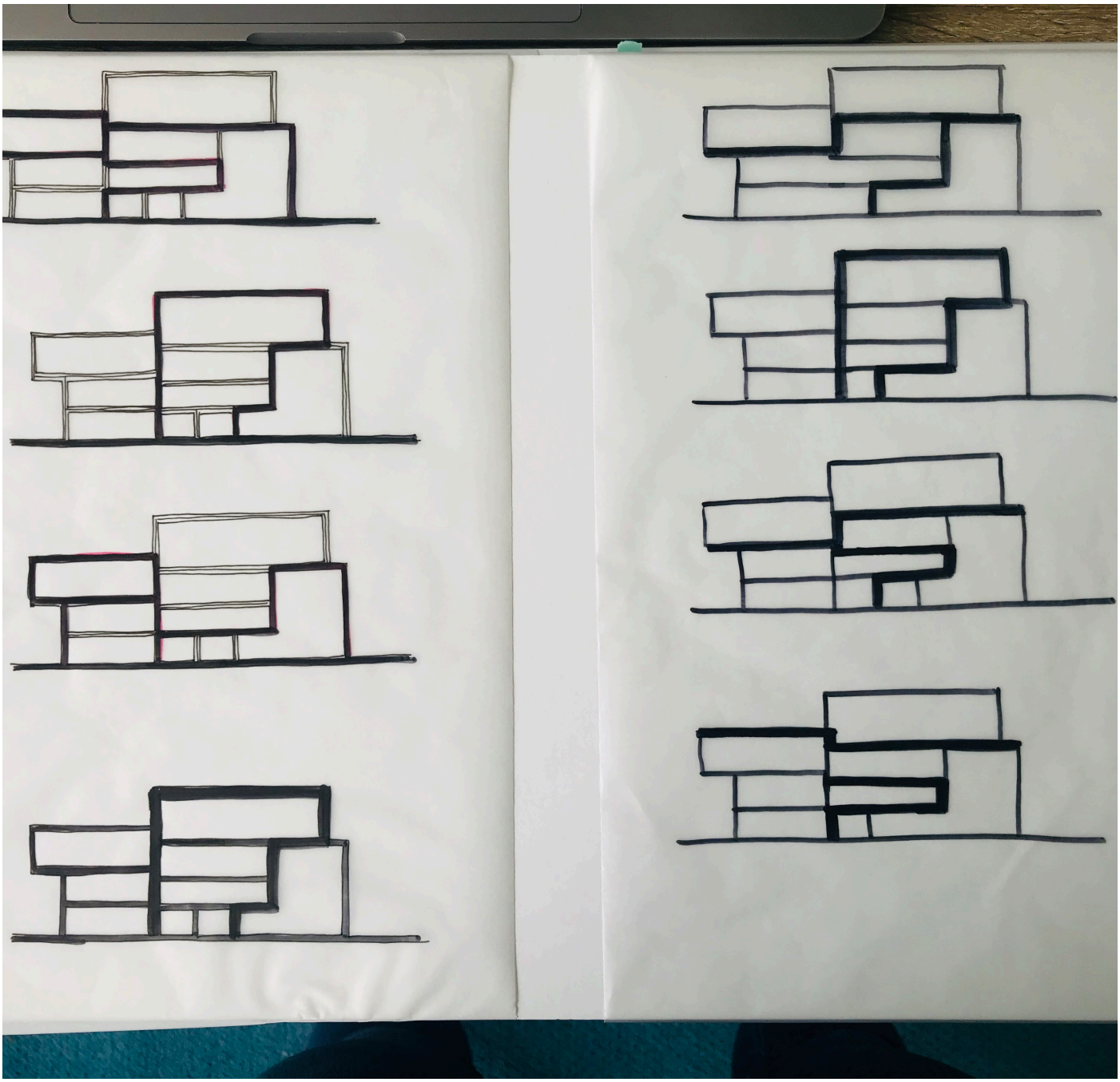
FLOORLINES IN FACADES



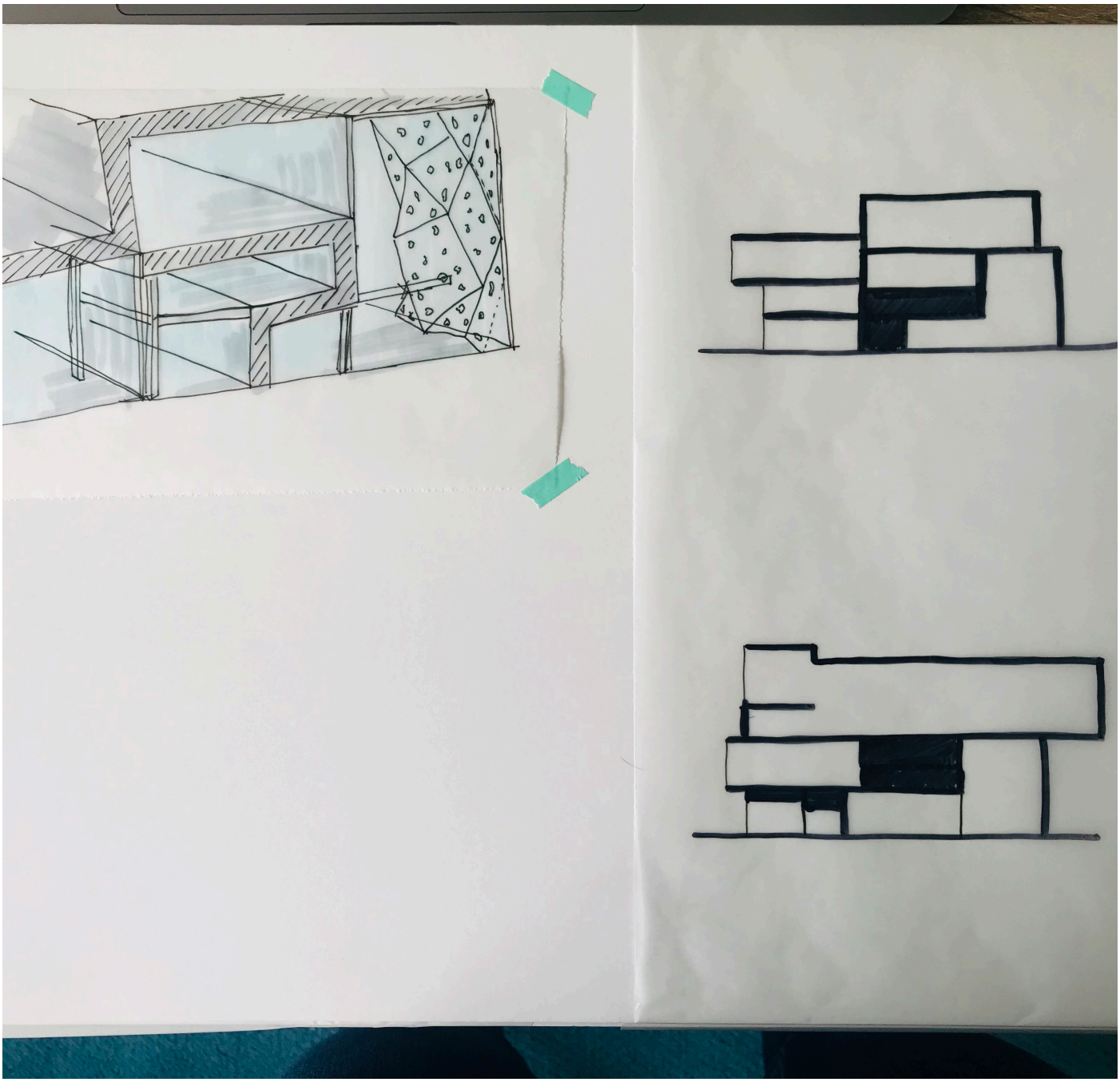
FLOORLINES IN FACADES



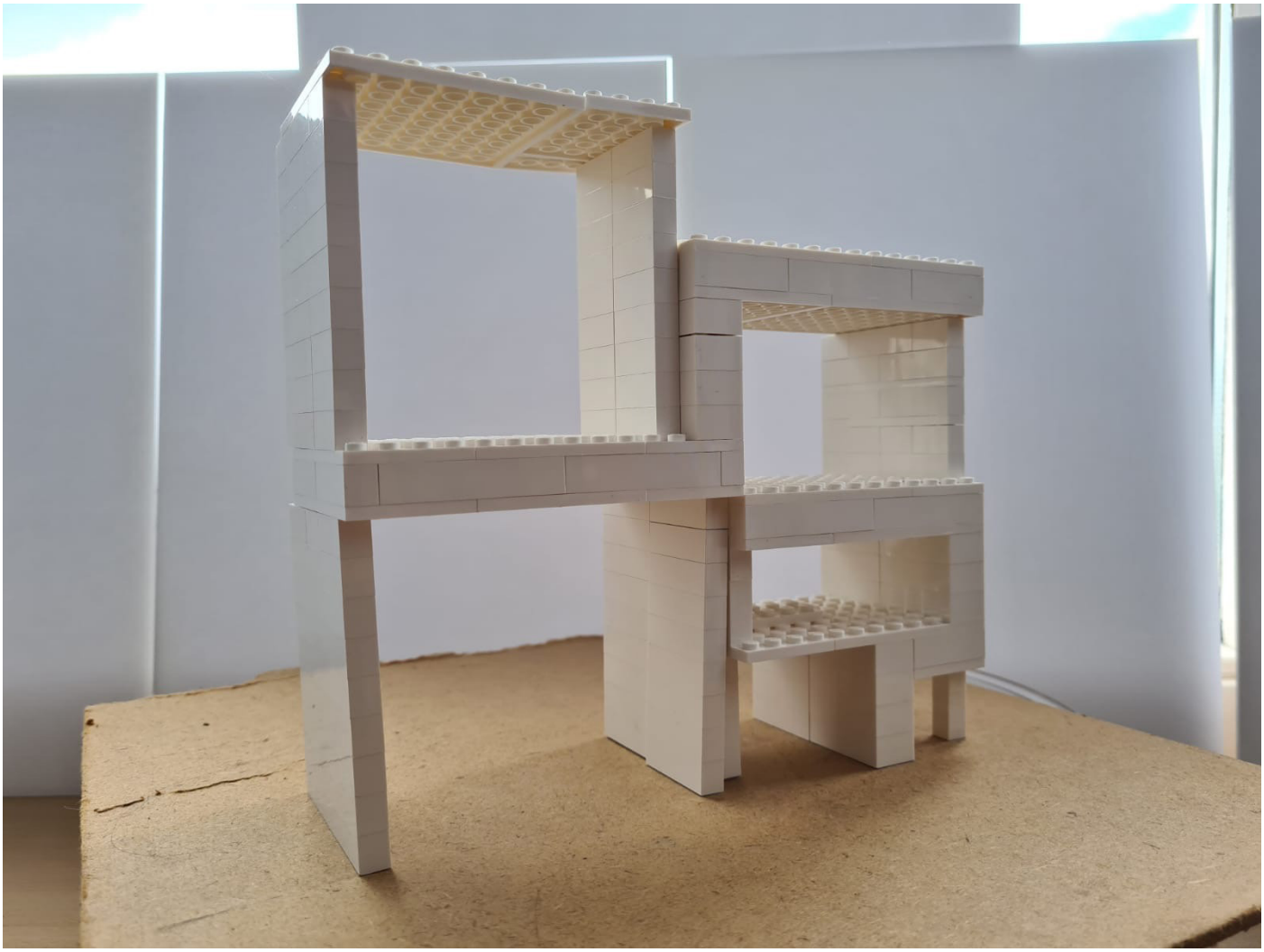
FLOORLINES IN FACADES



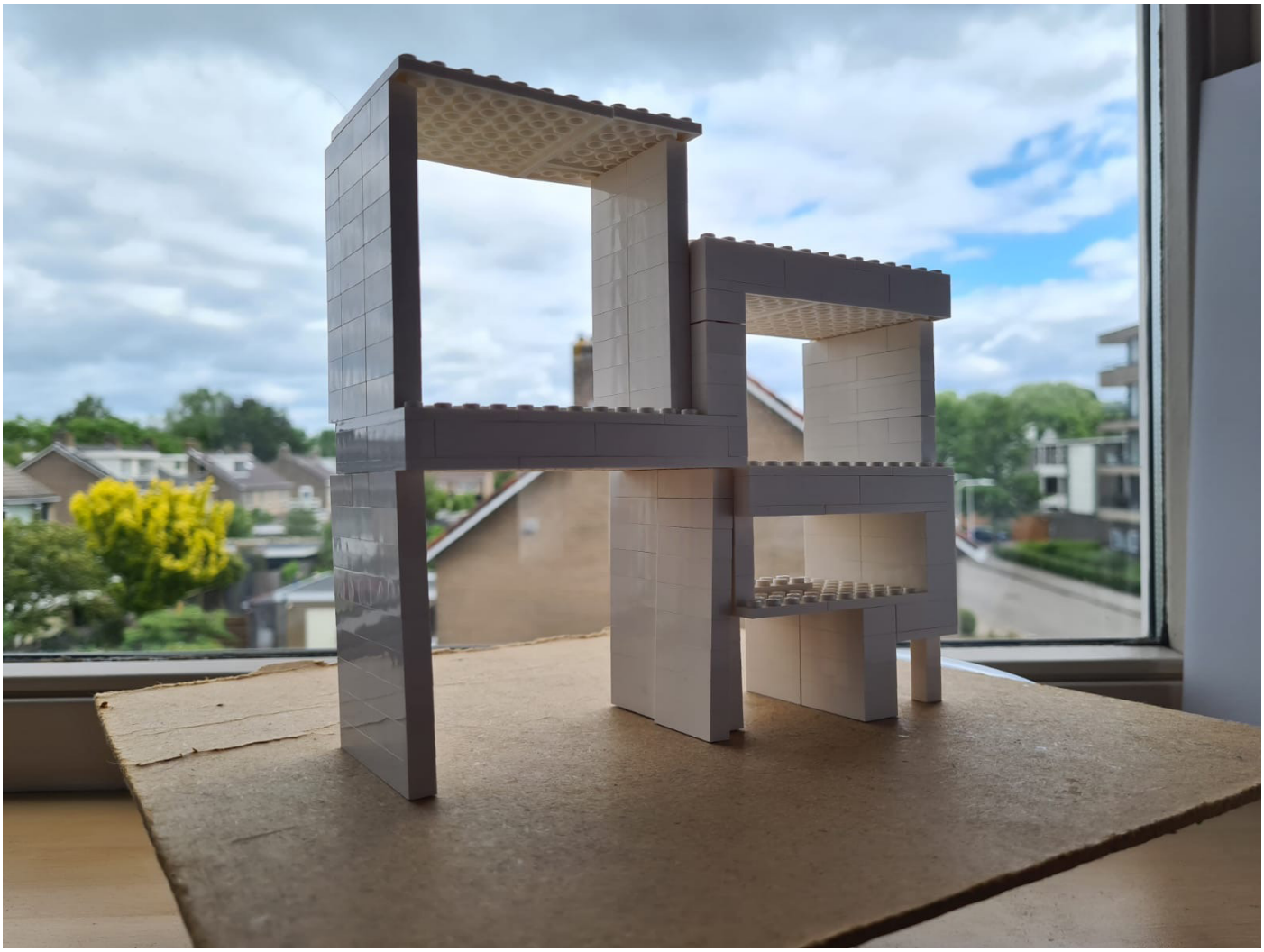
FLOORLINES IN FACADES



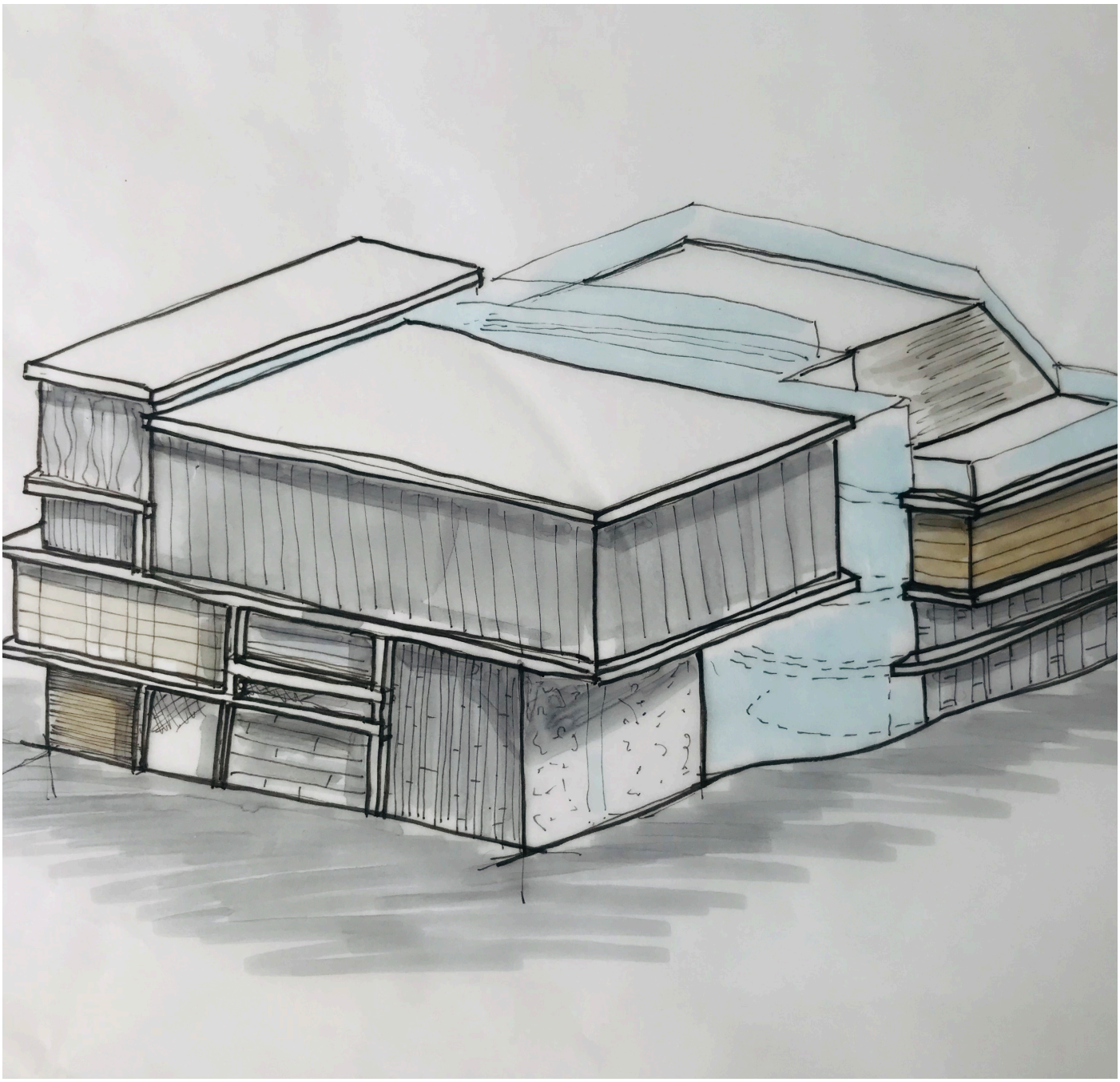
MODELS



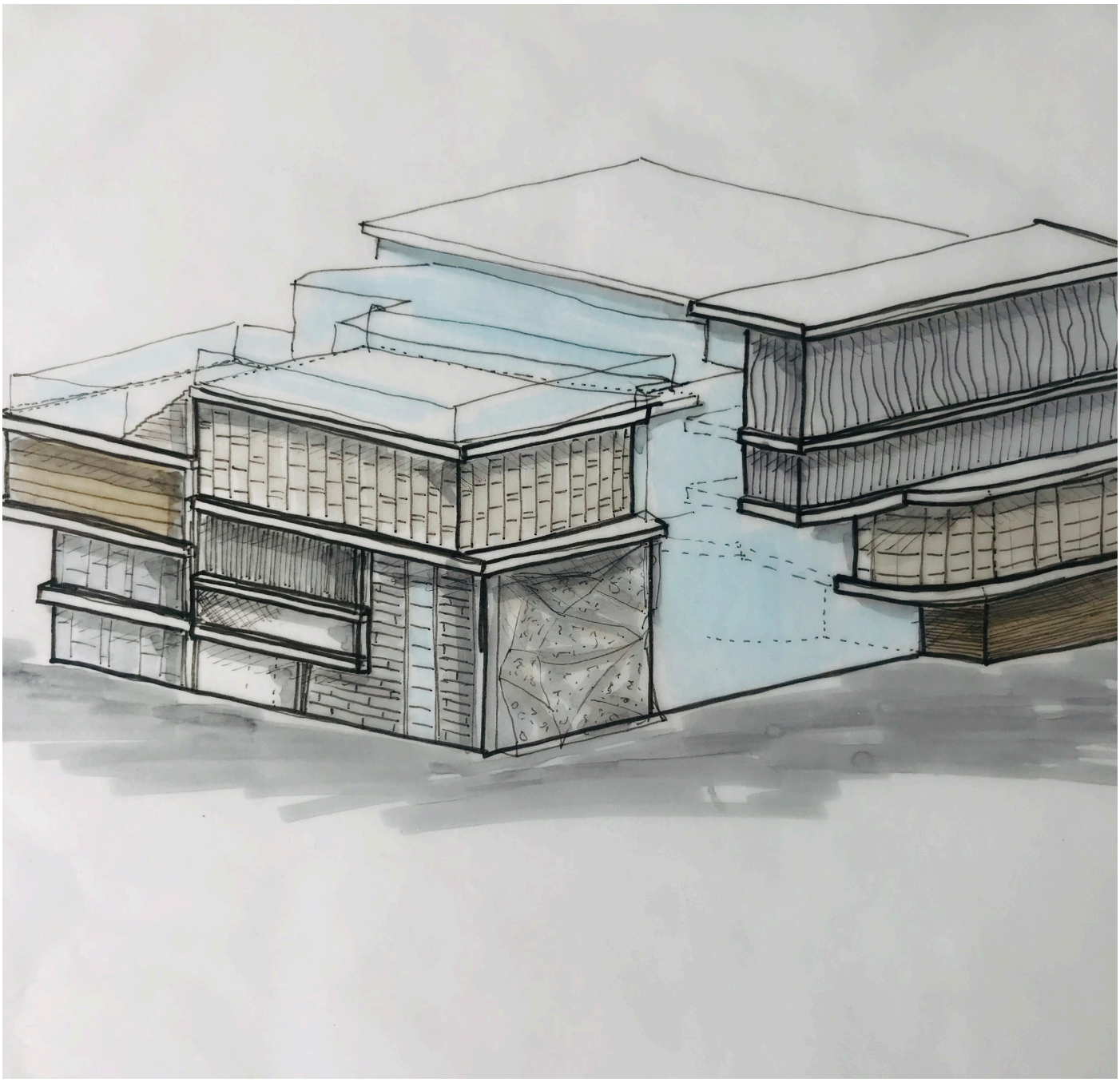
MODELS



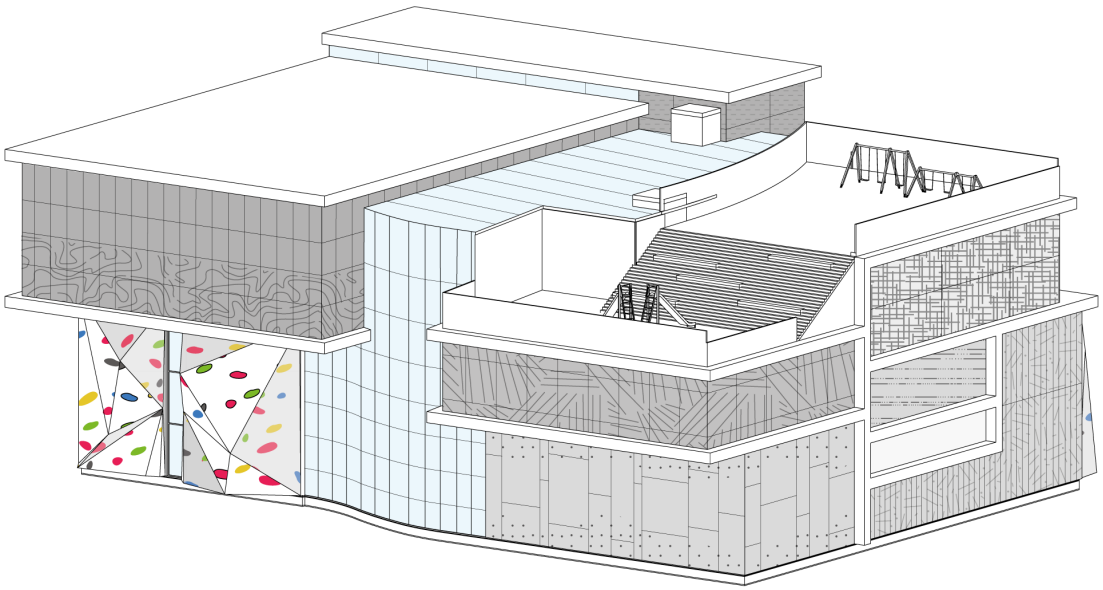
PANELS AND RELIEF

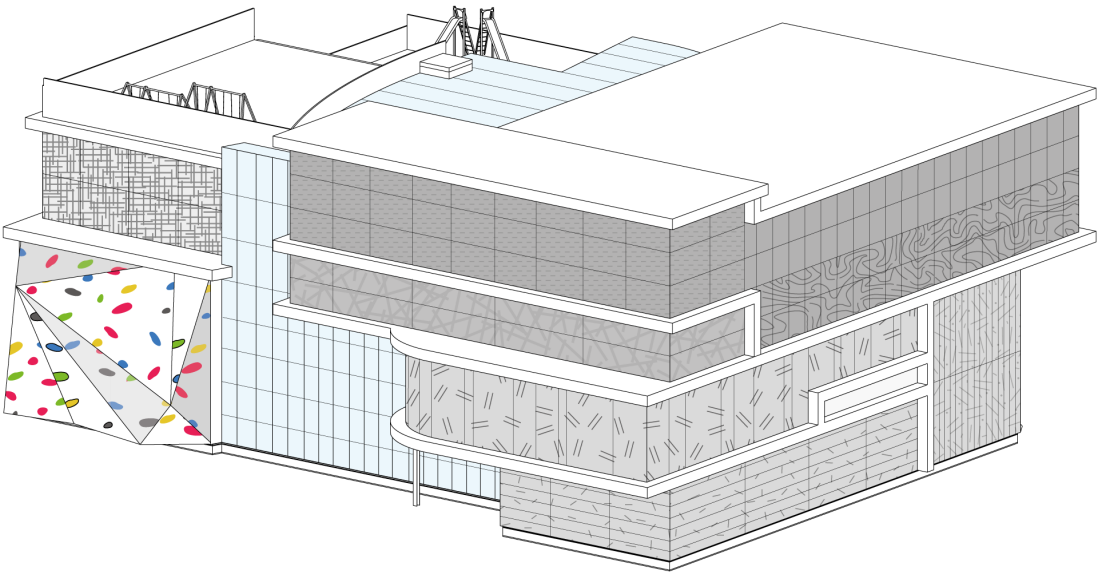


PANELS AND RELIEF



MATERIALS AND COLOURS



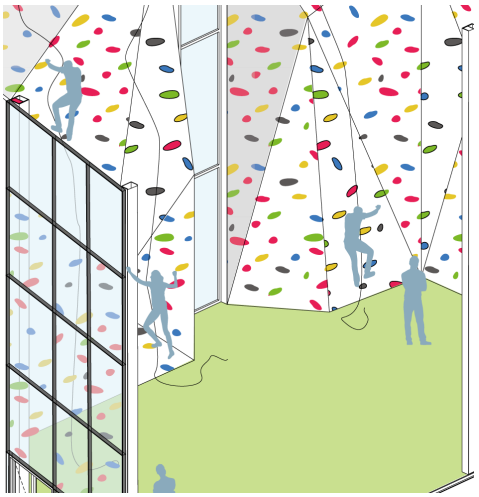


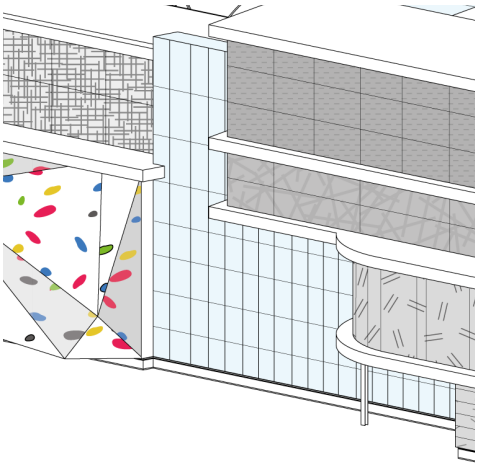
ACHIEVEMENT

Bringing back movement in Skydebanehaven is all about encouraging people to move in the area. To enhance this theme of movement, the materials and colours should speak 'move around'. Both the outside as the inside of the building should express movement. While different interpretations of moving can miscommunicate the inspiration for the building. The concept of the design for the facades (in and outside) is to have motion of materials and colour, even though the materials are motionless, static. The dynamics of the building will be translated with vibrant colours and relief in materials. Every volume has its unique function and their assigned dimensions, to make these volumes even more unique the facades will express the way of movement inside.

As for sustainability in this building, on its durarbility the building should provide the opportunity to change functions. The floorplans should have a flexibility to change the volumes inside to different proportions. Movement is the theme, as sports will be the largest function. Meaning that the span of some functions will be larger then 20 till 25 meters. As the structure of these spans will have a more permanent ability, the layout within has the ability to make alterations. As a changeable layout is one of the achievements of this project, the materials of the structure will uphold the same goal. A steel structure has the ability to demount if needed.

CONTENT





COLOURS INTERIOR

The colours in the interior should be emphaszing the movement of the function within, if that is colours that will encourage you to move and impress or a colour that will let you focus on the movement of the function.

MATERIALS INTERIOR

The materials of the interior should be environment friendly to not let people hurt themeselves while moving around, as in the sport functions.

COLOURS EXTERIOR

As all volumes have different functions the outside of these volumes will have an interpretation of movement. As every function has its own movement the interpretation of movement on the outside will be unique as well

MATERIALS EXTERIOR

As all volumes have different functions the outside of these volumes will have an interpretation of the movement, implemented in the relief of the same material. The overall look should be inviting into one building

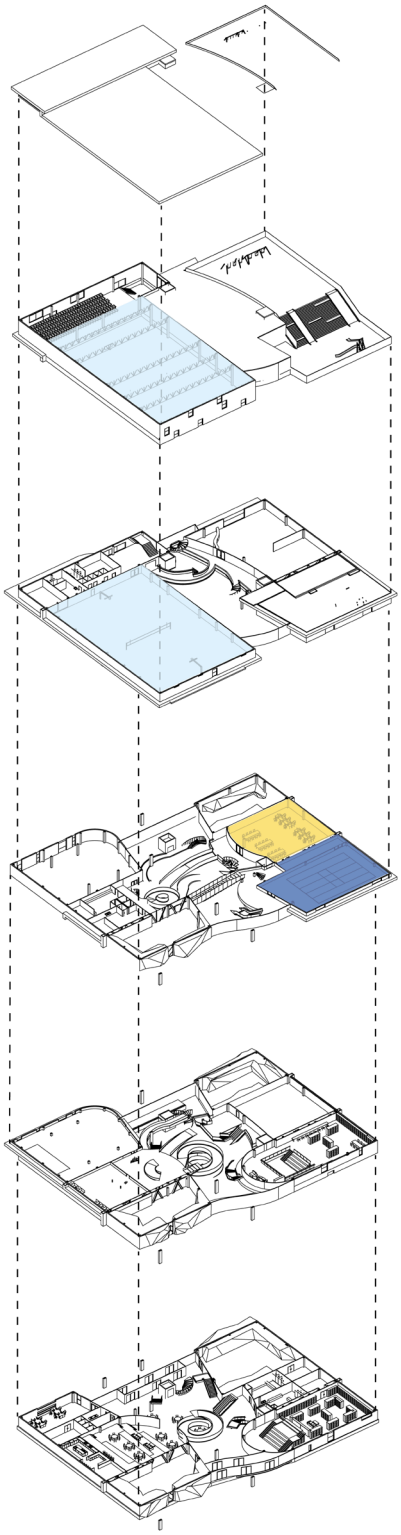
STRUCTURE MATERIALS

As the structure of big spans, as in 20 - 25 meters, combined with the possibility to demount will translate into a steel construction.

SUSTAINABILITY

As for sustainability the structure and materials will have to be demountable in a way. As is the reason for chosing a steel structure for large spans and chosing panels for facades to have them removed or changed more easily.

INTERIOR CHOICES OF COLOUR AND MATERIAL



BALL SPORTS

SOFT BLUES

Ball sports have specific measurements and often have lines implemented on the floor. These colours will have to pop in comparison to the floor itself. In my personal experience our floor went from a nice blue grey, a soft blue with several lines to a full red, terracotta colour floor, which was more screaming then keeping the calm in the hall. My gymnastics experience was to focus on the equipment, to not fall or be distracted by a colour. If you play ball sports, the lines are important because of that specific game. The rest of the focus goes to your team players, competitors and the equipement you use. To keep a calming effect in the big area, same as the focus of the fight sports, blue is a cool colour to keep calm and focus. Instead of using a bright popping blue, a soft blue complements the lines on the floor.

FIGHT SPORTS

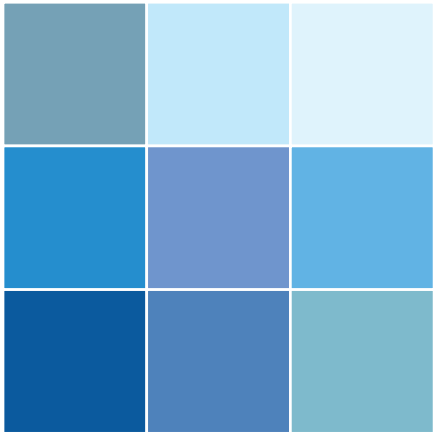
BLUES

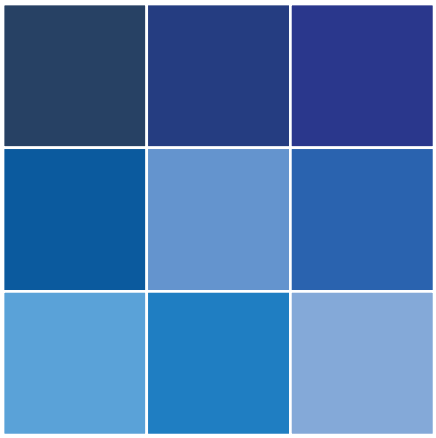
Fencing, judo, taekwondo and martial arts come to mind. These sports have special attirements, mostly white clothing is appropriate in the sports having an accentuate colour in their level of expertise. A cool colour is not a vibrant pop colour as a red for example, it is not distracting. The floor of this room has special measurements and material, the colour blue can be implemented to accentuate the equipment. To keep a focussed and calm environment the walls will have a softer colour of blue.

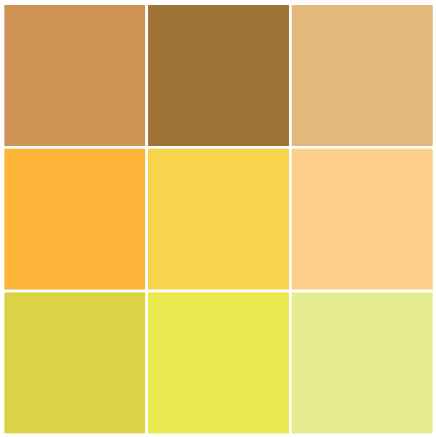
MIND SPORTS

SOFT YELLOWS / YELLOW-ORANGES

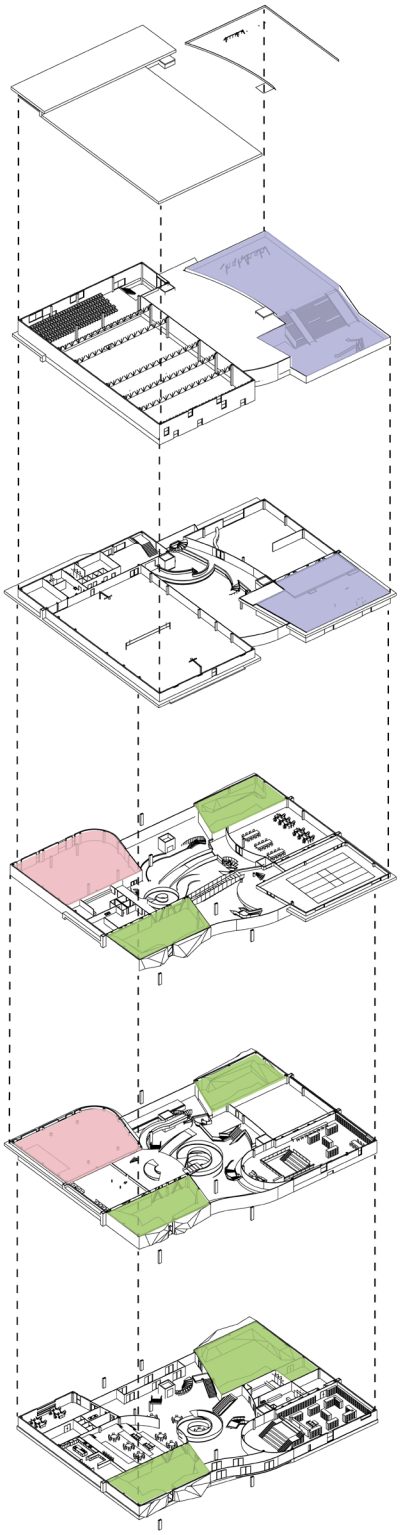
When thinking of mind sports, video games and online gaming comes as one of the first elements to mind. Checkers or chess, bridge and playing cards are also part of this function. As for a contrast towards blue screens of devices a soft yellow environment creates a calm and relaxing look for the eyes. When playing checkers, chess or other card games the yellow-orange is a vibrant colour to keep the movement in the room. Even a pattern on the wall, ceiling or floor are an option to keep movement around even if people are sitting and are moving with their minds.







INTERIOR CHOICES OF COLOUR



MONKEY SPORTS

GREEN (LIME/YELLOW)

Monkey sports is all about climbing up, a vertical sport where different angles of the body are needed. These climbing walls should have a general colour to make the different handles pop more. As for the function of climbing a parkour a softer colour should be used to not get distracted. A lime green, a soft green, even a yellow-green comes to mind. Green is still a pop of colour but can be soothing at the same time.

PERFORMANCE SPORTS

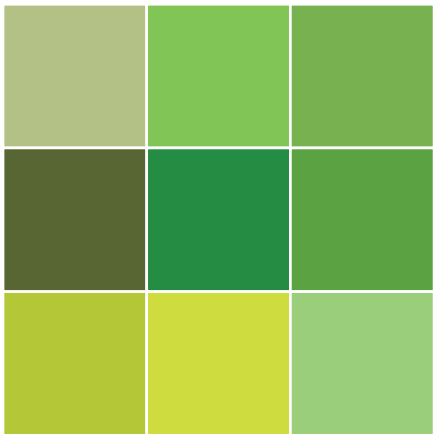
SOFT NATURALS / SOFT PINKS / BORDEAUX ACCENTS

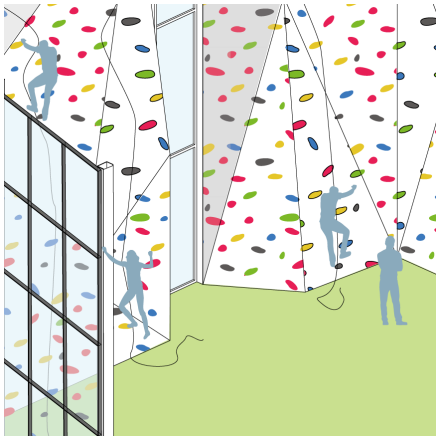
For a performance sport, to think of yoga, pilates or dance classes, maybe even an aerobics class, will have a space for a stage. A small podium to show the example of what to do within those classes. For the softer performances a environment of soft natural colours is welcomed. For more active classes a pop of pink or bordeaux are able to provide an extra boost. Still all these colours together can show a general space.

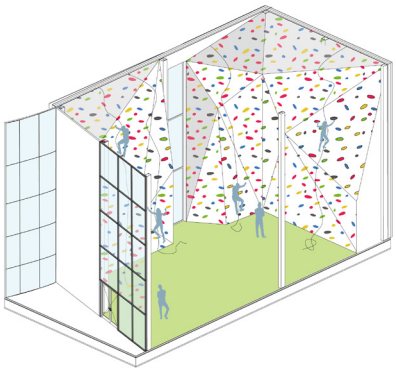
OUTDOOR SPORTS

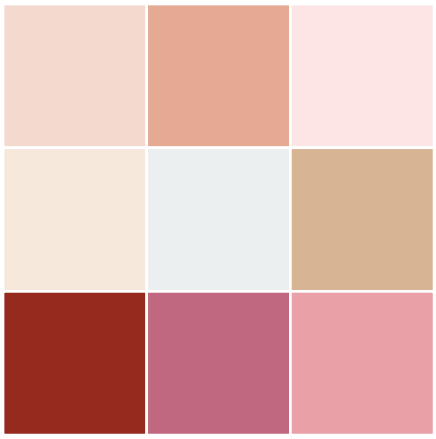
ALL COLOURS

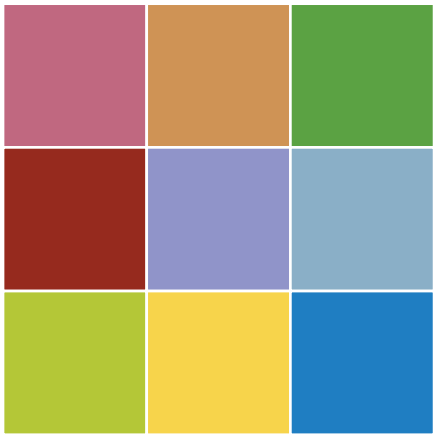
Bright colours, colours that pop, colours that are vibrant can be used in a playground. Joyful, moving and positive vibes on a playground is what is often used.



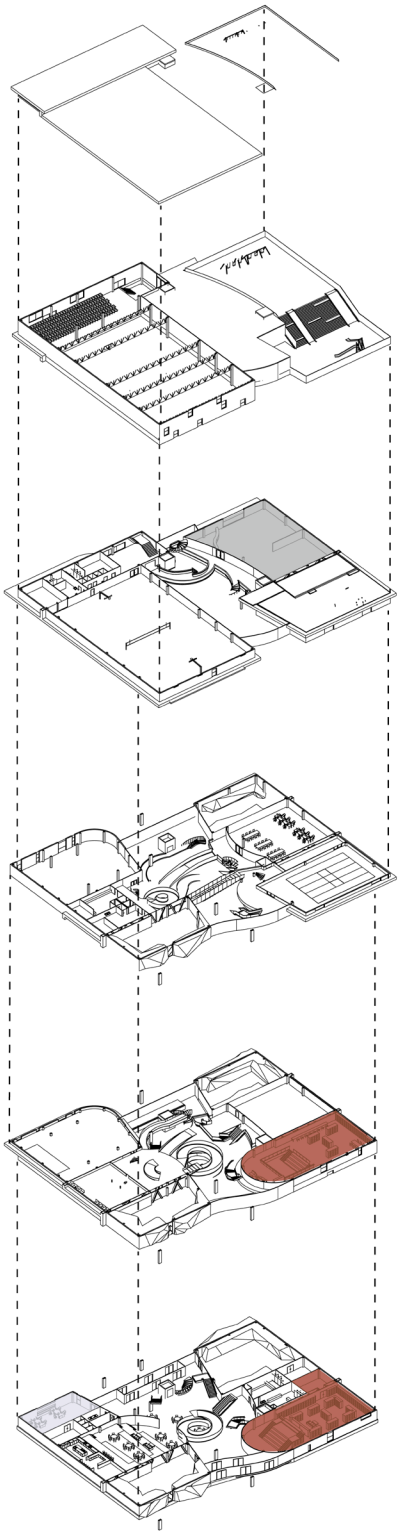








INTERIOR CHOICES OF COLOUR



LIBRARY

BROWN / RED

The library should have an overal natural colour to make sure it still has a relaxing reading vibe. The pop of colours should reflect in the furniture; bookshelves, chairs and tables. To create a movement of books, wooden shelves come to mind. To create shelves of mahogany wood or African Padouk can be considered to create a pop of brown/ red colour. If this will not make a distinguished difference or uniqueness in this function, the option of a colourful floor can be done.

MUSEUM

GREYS

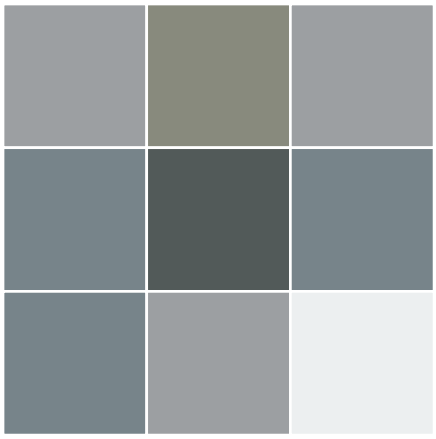
Warm, neutral or cool shades in grey will accentuate the moving art. The focus on the art is most important in this function. To keep the movement in this area arts that are hanging from the ceiling, or moving lights are preferred. Art where you have to move through are the exhibitions that should be the vibe of this function.

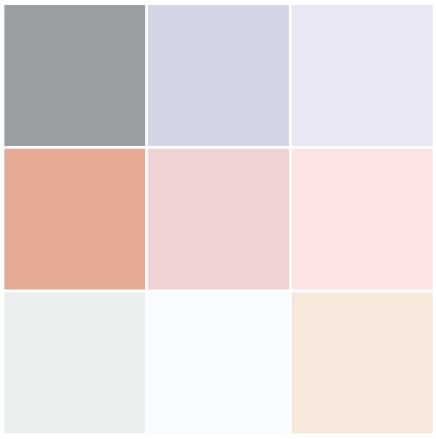
ADMINISTRATION

SOFT WHITES / PASTELS

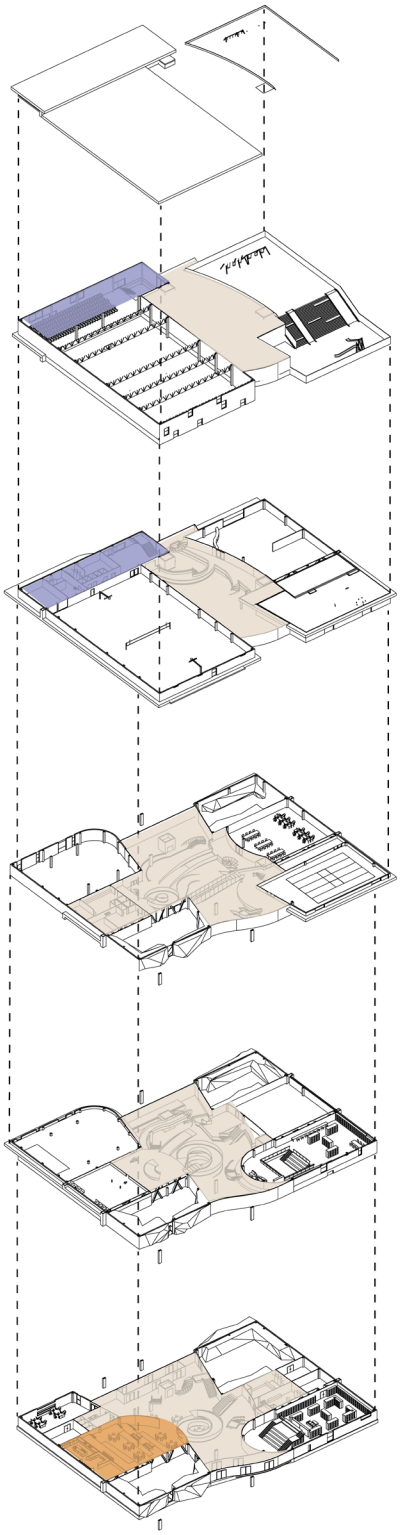
soft whites to keep a clean mind, a clean office, a clean movement of arranging and organising stuff. It can be decorated by plants as these have a positive vibe on people. If the space becomes too white a pastel palette will create soft colours and still have a clean affect. By choosing pastel blues, purples and pinks the space still has a calm vibe.







INTERIOR CHOICES OF COLOUR



CAFE

ORANGE

orange to give a warm welcome, a warm and vibrant colour to keep it moving even when taking a break. By having tiles (a pattern perhaps) on the floor the dynamics of the cafe will be enhanced. When taking a break before, during or after sports, a visit to the museum or reading a good book, moving should still be emphasised. To keep a movement around a light vibe should be around instead of darker colours. Orange is a warm colour, a vibrant colour and by keeping parts of the interior light, the space will still be welcoming to take a break and sit down.

ARRIVAL

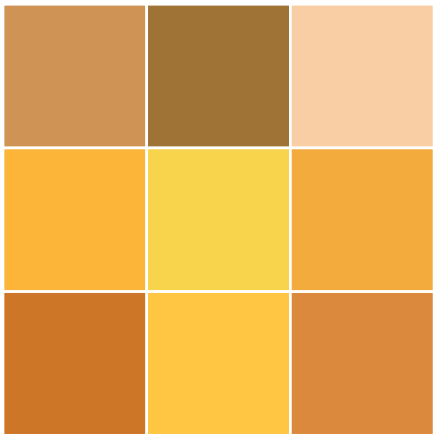
NATURAL SOFTS

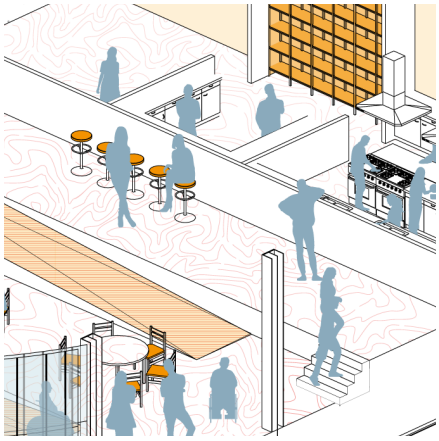
Movement of the different functions are important. Uniqueness is important to show all possibilities inside to move. The lines of the different heights of the floors are exposed to the outdoors (also indoors visible from within the atrium).
To keep a natural colour inside, as entrance, as staircases and ramps, different angles of volumes are dynamic already, it is to accentuate these functions with a pop of colour within their interior.

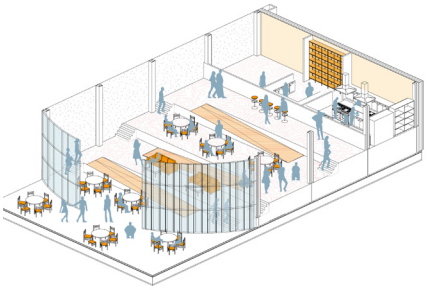
STANDS

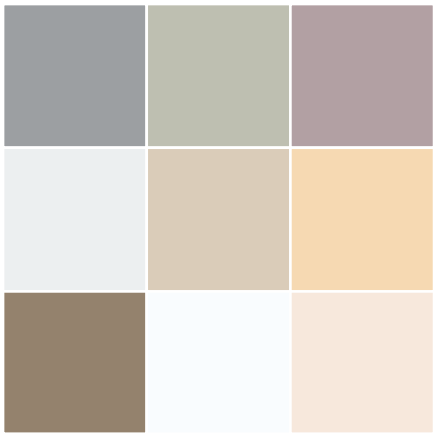
SOFT BLUES / PURPLES

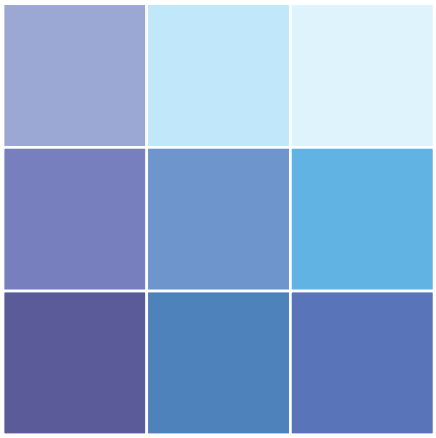
The stands are on a higher level then the sports floor. The focus from the stands towards the ball sports is to keep this area neutral and in combination with the ball sports area. To not distract the sport towards the stand where cheers already can be a distraction in a very focused game, if not motivating. To keep a slight difference between the functions a purple next to blue can be motivating.











EXPERIENCE EXTERIOR

EXCURSION TRIP

In October 2019, we as the studio of Public Building went to visit Copenhagen and The Hague. This because we had a choice to make between the cities to create a public condenser for. As already shown above Copenhagen became my city of choice.
All pictures coming are my own, it is my own experience and perspective on the city Copenhagen.

A few elements were very noticeable like paterns, colours and materials.

In every part of Copenhagen there are buildings with a distinct colour, even in pastel colours there is a distinct way of showing. As much as a bold colour is present in the palette of Copenhagen, pastel colours are just as much present. There is not one building 'sticking out', as every buidling has something. You could say every piece is unique.

As there might be overlapping in colours, a pattern or relief is a distinguished element for all uniqueness. Beside different patterns or relief in the same material, a difference between stucco and bricks or sheet materials in different proportion is also a distinguished element.

A fiew examples of various colours, patterns and materials are shown. As for all to show as well, all from different districts of the city. In a couple of views below, the overall streetview is visible. Showing all different colours and patterns, even though every building as an overall look and displays its uniqueness and being one building.

EXPERIENCE EXTERIOR



KASTRUP KØBENHAVEN K



ZEALAND



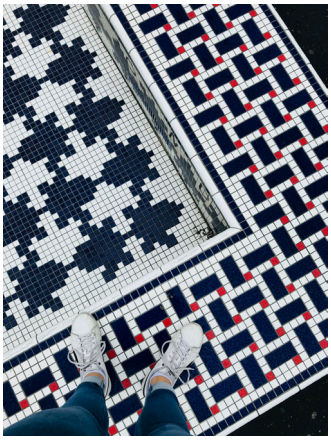
INDRE BY



ZEALAND



NØRREBRO



NØRREBRO



NORDHAVN



INDRE BY



VESTEBRO

STREETVIEW











STREETVIEW



















EXPERIENCE INTERIOR

EXCURSION TRIP

As the uniqueness is noticeable from the outside, it is also noticeable in the inside. In all details of every buidling, patterns, colours and materials are different and therefore every project is unique. As the Danish people are very keen on equality, not one of the interiors are dominant.

Just as the outside, elements on the inside complement each other and increase their concept. If colours, in bold and pastels, are able to be shown from the outside of a building, it is just as much shown on the inside. Not one colour, material or pattern is dominant to one another.

A difference between the interior and exterior is that most buildings on the outside have one significant look, in colour or material. While on the interior different functions and spaces have differences in their colours and materials.

A building from the outside shows one building, while functions on the inside show their functions and spaces in a same way. Creating multiple unique spaces on the inside and being one building on the outside.

Patterns

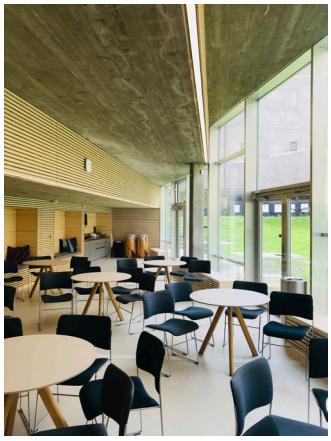
It does not matter which material or colour is used in a facade of a building, every facade as an element of a pattern (as shown below). In my opinion a smooth facade is also a pattern, it is a sleek or smooth pattern in that case.

Not only are patterns visible on facades, they are also implemented in public spaces on the ground. Or even within a building a pattern is visible.

EXPERIENCE INTERIOR



FREDERIKSKERK



RØDE KORS TØJCONTAINER



PRISMEN



BIBLIOTEKET



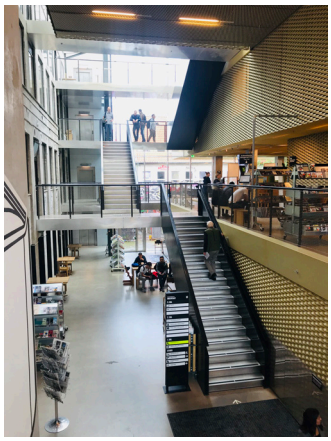
KVARTERHUSET



KVARTERHUSET



KU.BE



BIBLIOTEKET



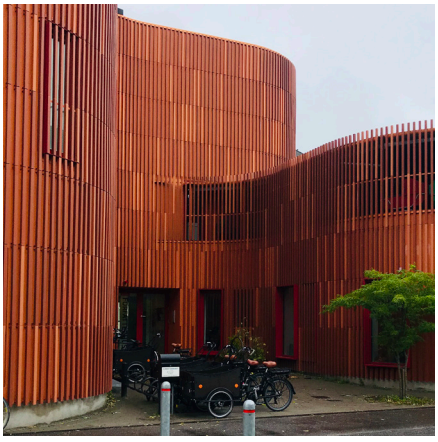
DAC

PATTERNS IN COPENHAGEN



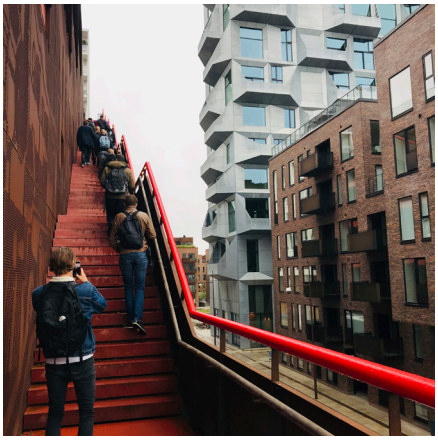




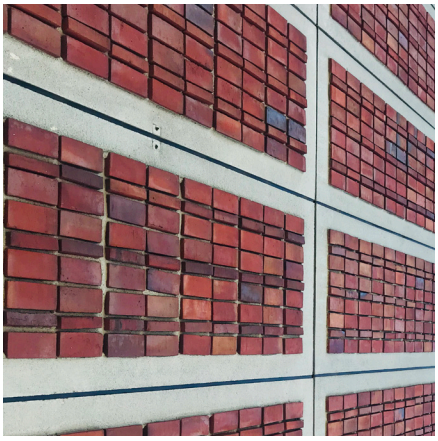


PATTERNS IN COPENHAGEN



















COLOURS IN COPENHAGEN













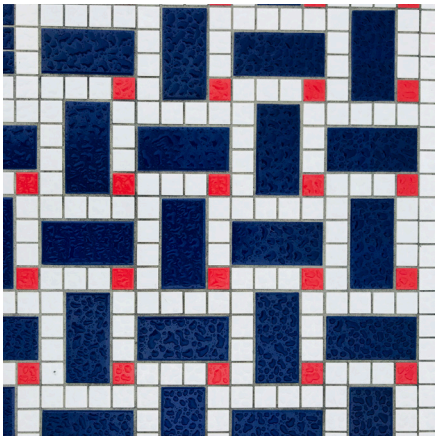




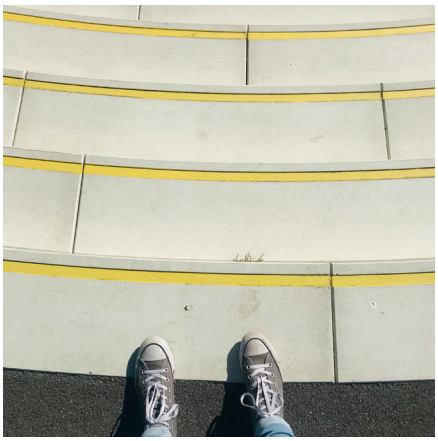


PATTERNS IN COPENHAGEN

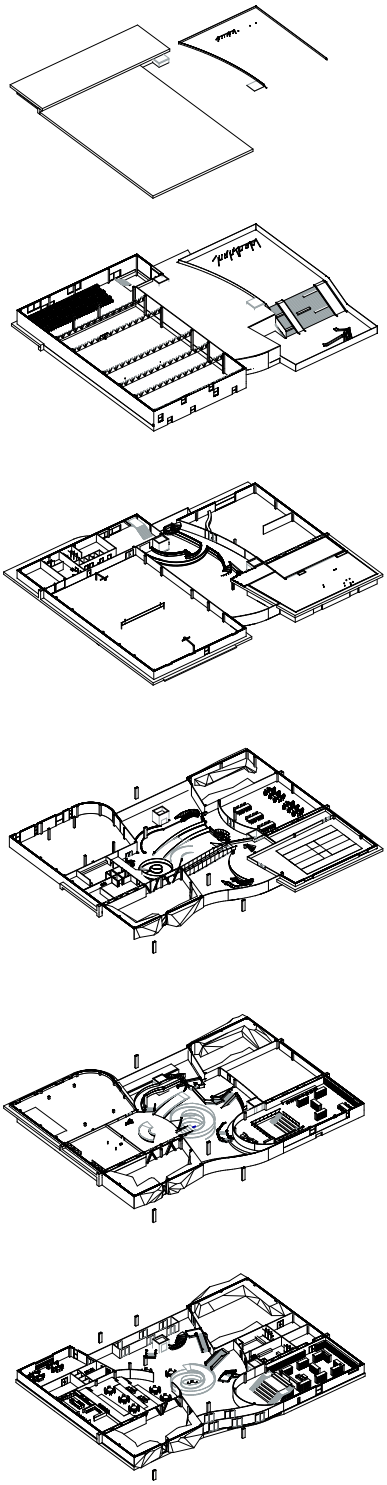




UNIQUE EXTERIOR



SHOWING WHICH FUNC-
TION IS WHERE

EXTERIOR

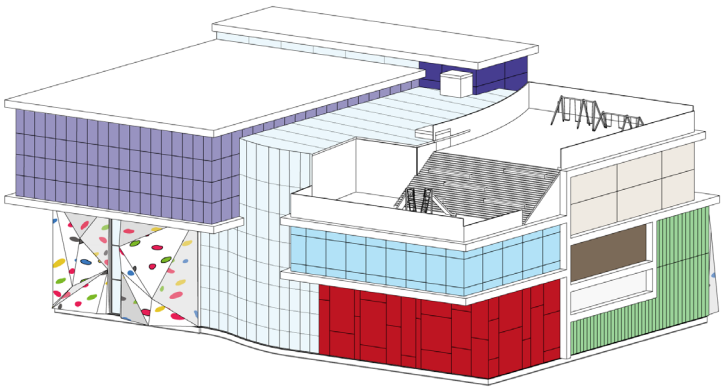
Movement of the different functions are important in this project, as movement is the theme of the design. Meaning that to create a public building, a public condenser, a space must be created to connect people and in this case it is through movement.

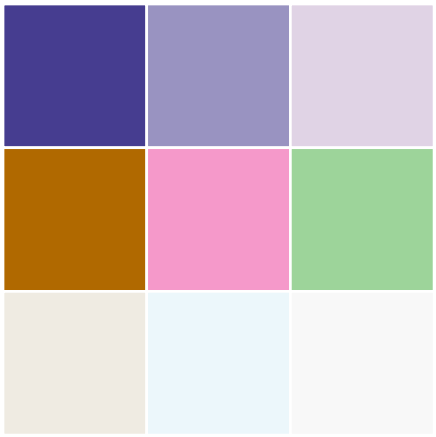
As all functions have their own measurements and dimensions, and all have their unique form and volume. Uniqueness is important to show all the possibilities inside for moving around. As for all different heights of all the functions this is shown in the horizontal lines of the floors. This creates a horizontal movement, while still having a dedication towards the vertical movement of the functions. This is visible in the interior as well as on the exterior of the building. The concept of the theme movement is connected from out- and inside the public condenser, as said before movement or the activities are within the building and within the park.

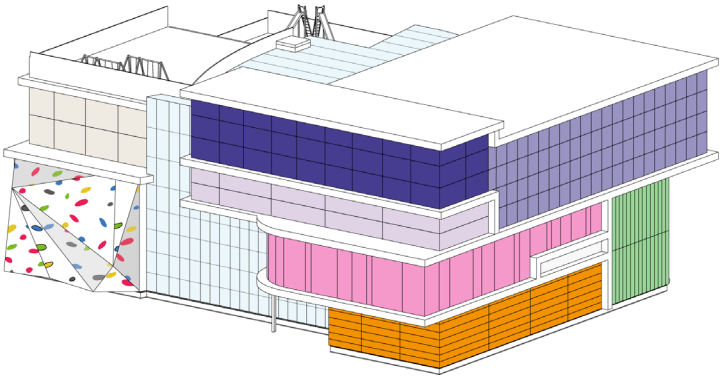
As seen in the section of the experience in Copenhagen I noted that buildings in the street have different colours and/or patterns. As for this building it now looks like several different buildings stacked together, while the concept is to bring people together in one building.

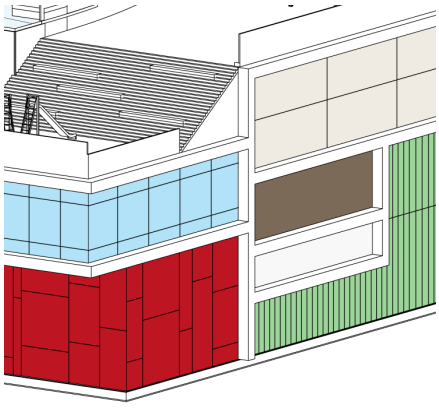
In this case the interior of different colours, or accent colours to distinguish the unique functions is more important than showing all different colours on the outside.

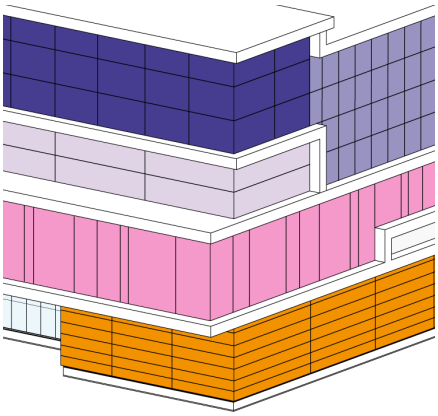




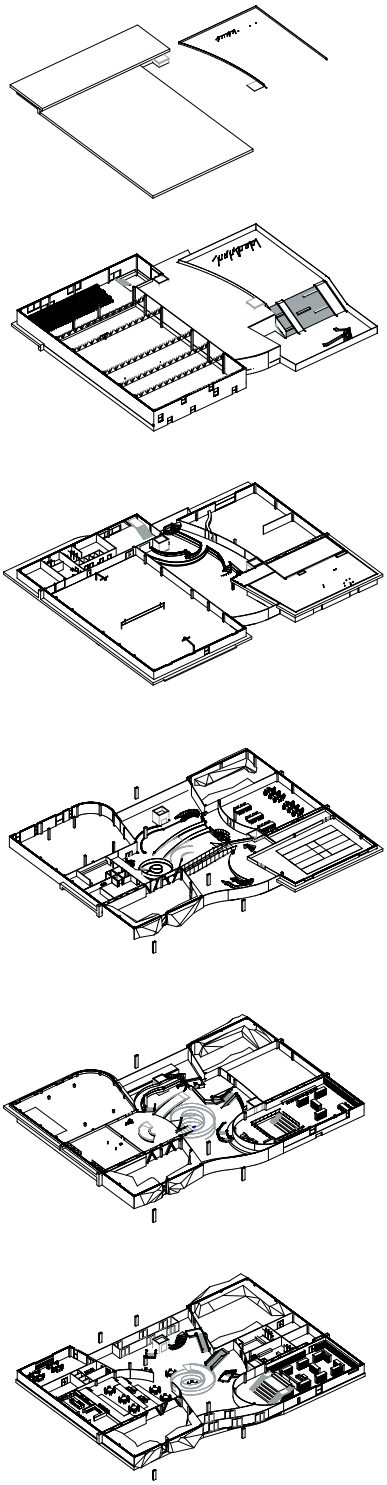








EXTERIOR CHOICES OF COLOUR



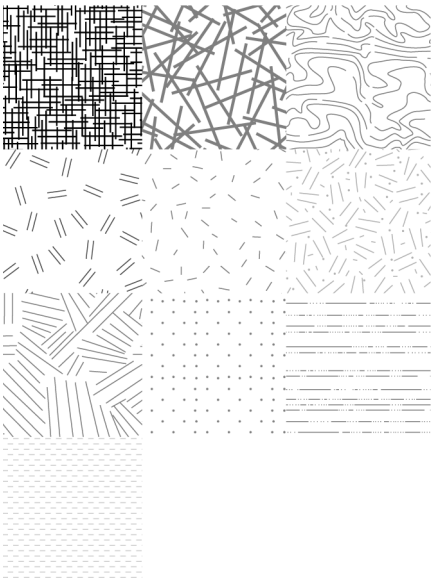
SHOWING WHICH FUNC-
TION IS WHERE

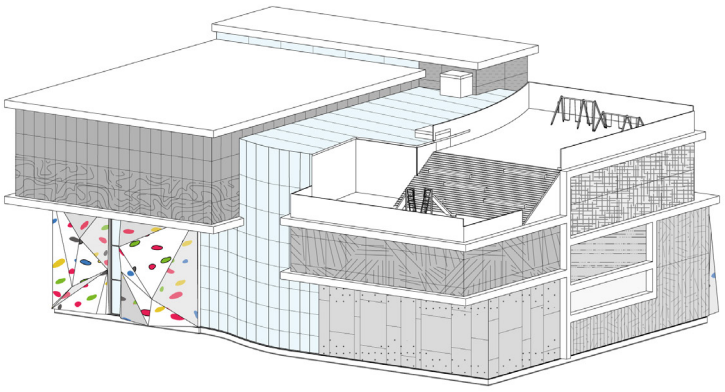
EXTERIOR

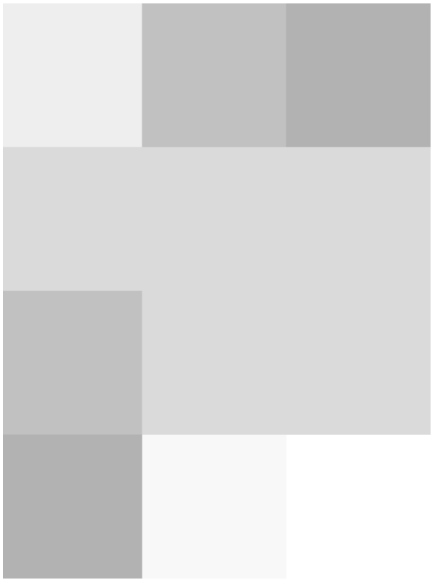
To create one building, one place where people come together and where they can connect, the horizontal lines towards the outside are a connection from interior and exterior.

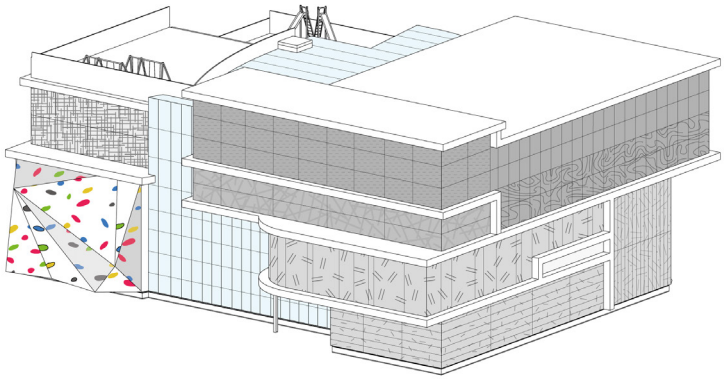
To still show movement on the outside and keeping the ‘one building, one place’ alive the materials should have the same look. To make every element between the white lines unique, a different shade of one colour and a pattern or relief is a unique movement. In this way the different movements from the inside will still have a movement on the outside, but it is more nuanced.

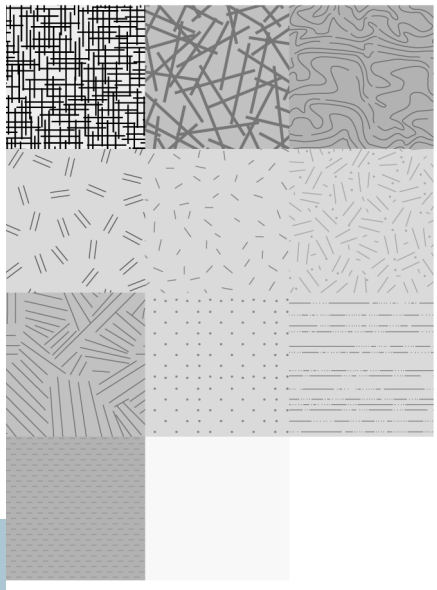
The building looks like one building, due to the grey concrete look on the outside, but as for all unique functions the difference is noticeable in the pattern of the panels and their relief.

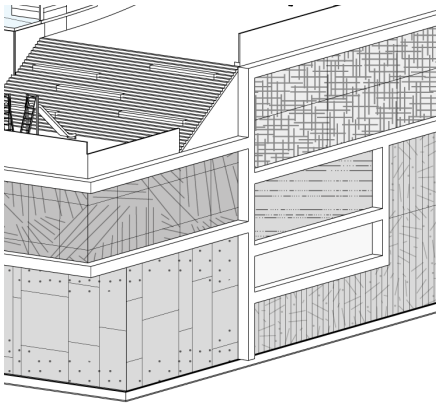


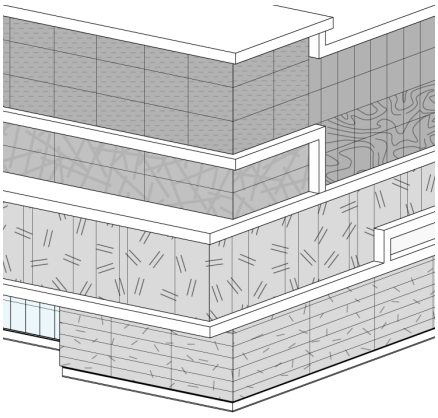












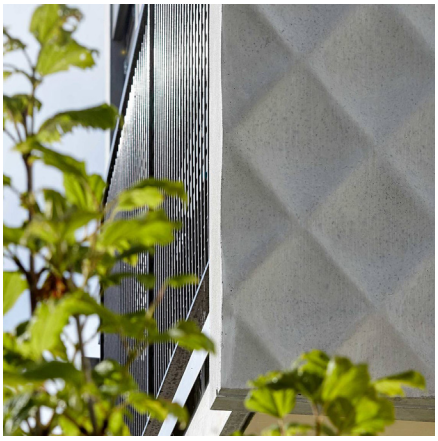
EXAMPLES OF RELIEF IN CONCRETE



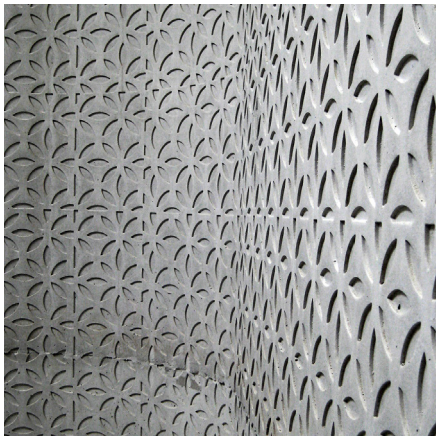


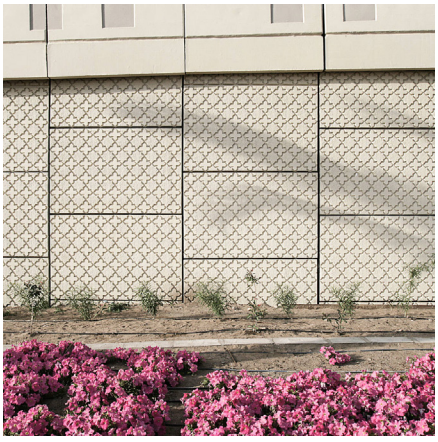










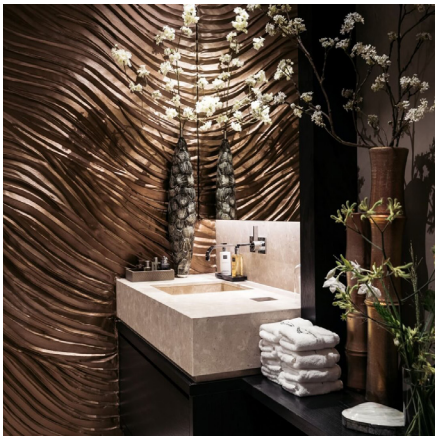


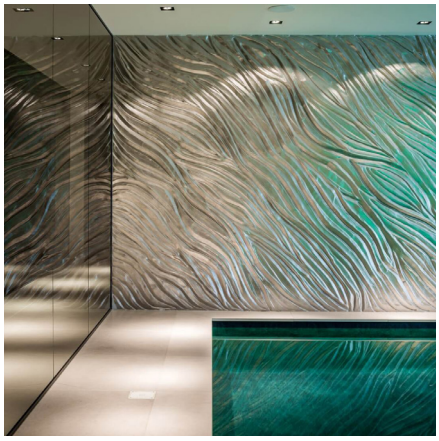
https://www.reckli.com/en/showroom/

EXAMPLES OF RELIEF IN STUCCO

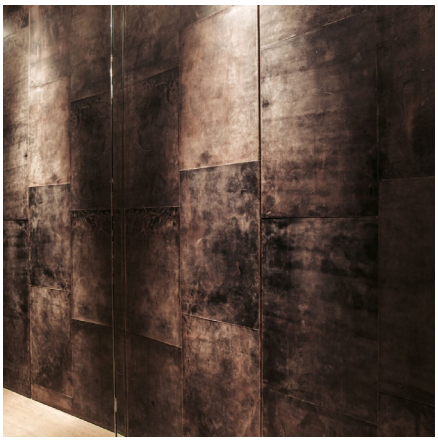














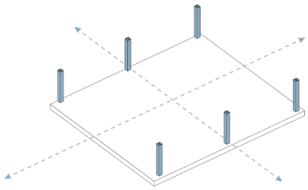


https://www.cmnt.nl/services/wandafwerking/

http://decoartenstuc.nl/modern-decoratief-stucwerk/

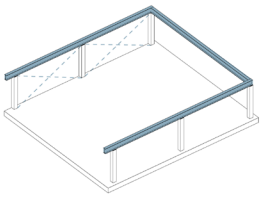
STRUCTURE

COLUMNS
- *MOVING FREE*
- *FLEXIBLE PLAN*

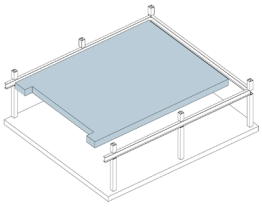


BEAMS
- *TO CONNECT SLIMLINE FLOOR*

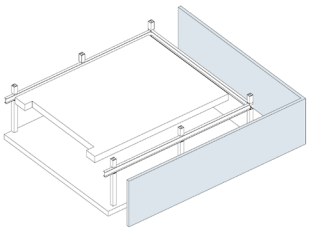
STABILITY
- *A BRACING, A DIAGONALLY CONNECTION ON A CENTRAL SPOT IN THE BUILDING*



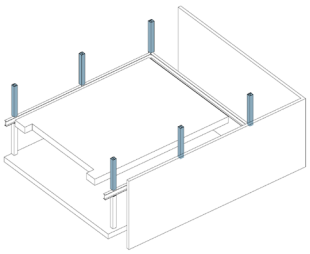
FLOORS
- *SLIMLINE FLOORS BETWEEN BEAMS*
- *HOLLOW FLOOR FOR INSTALLATIONS*



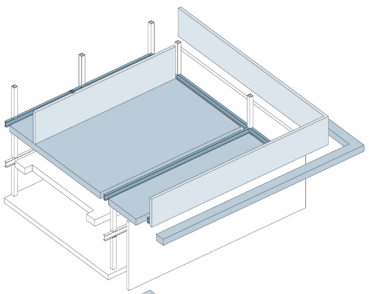
TIMBER FRAME FACADE
- *SURROUNDING STEEL STRUCTURE*
- *LIGHT WEIGHT STRUCTURE*
- *STUCCO FINISH (CONCRETE LOOK)*



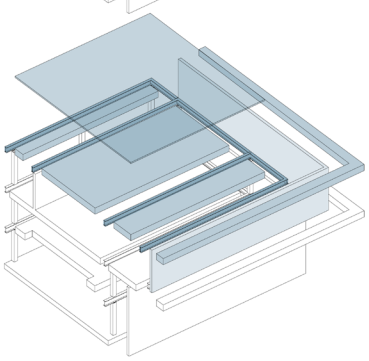
COLUMNS
- *STEEL STRUCTURE MOVING UP*



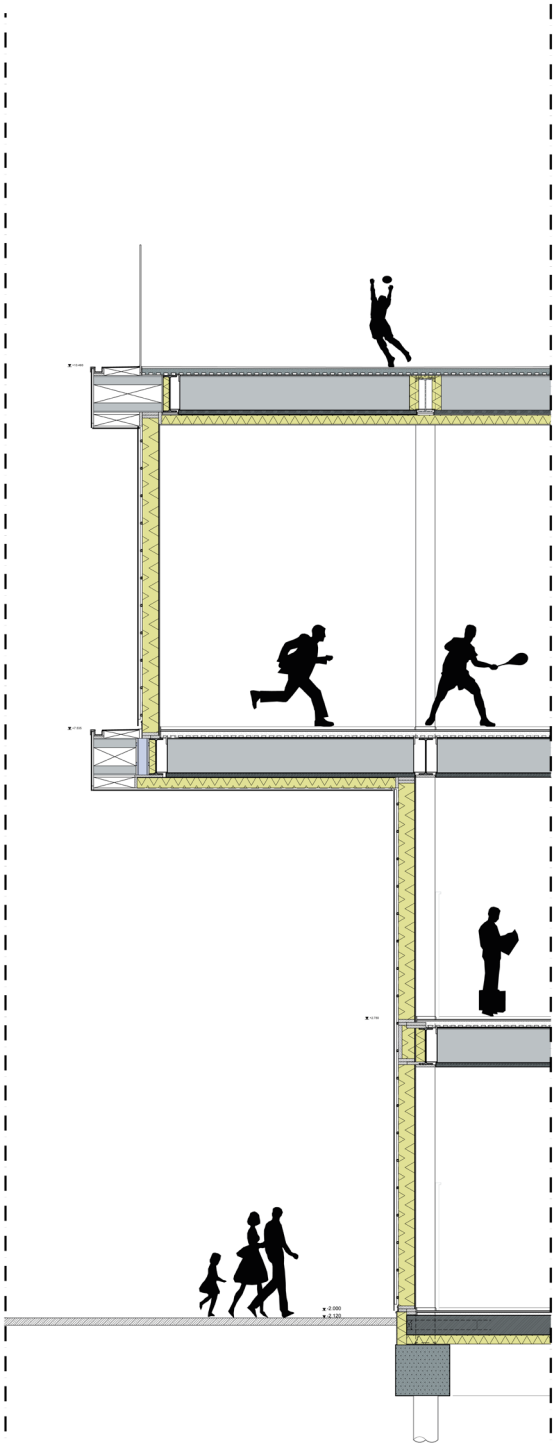
BEAMS, FLOORS AND FACADE
- *SAME STRUCTURE UPWARDS*
- *FLOOR LINES OUTSIDE (ISOKORF STRUCTURE)*
- *TIMBER FRAME CONSTRUCTION*



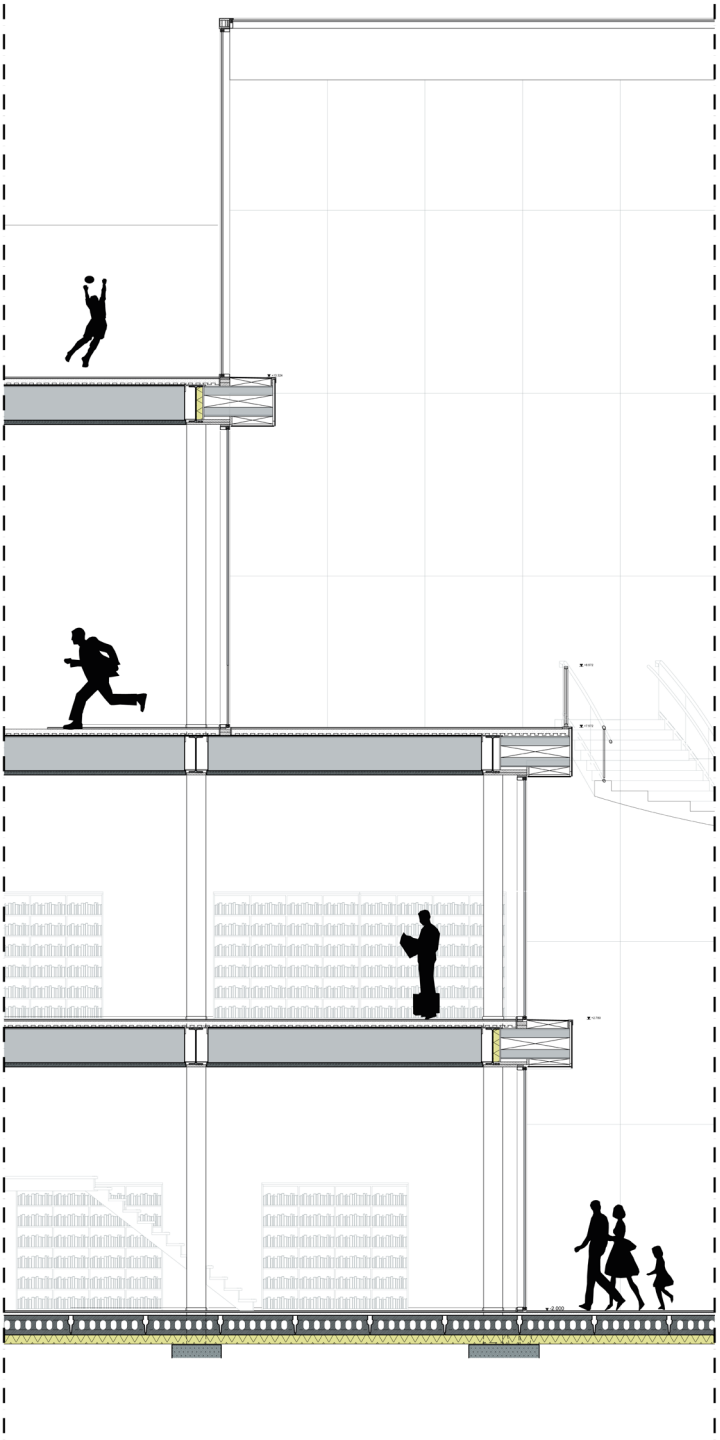
BEAMS, FLOORS AND FACADE
- *SAME STRUCTURE UPWARDS*
- *FLOOR LINES OUTSIDE (ISOKORF STRUCTURE)*
- *ENDING WITH FINISH ON TOP*



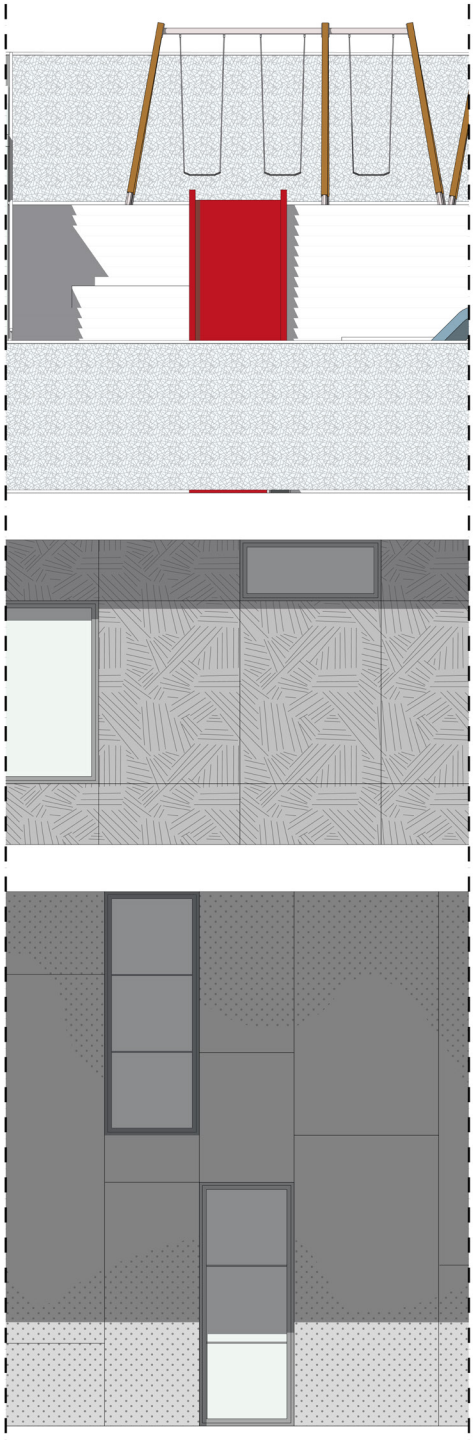
STRUCTURE



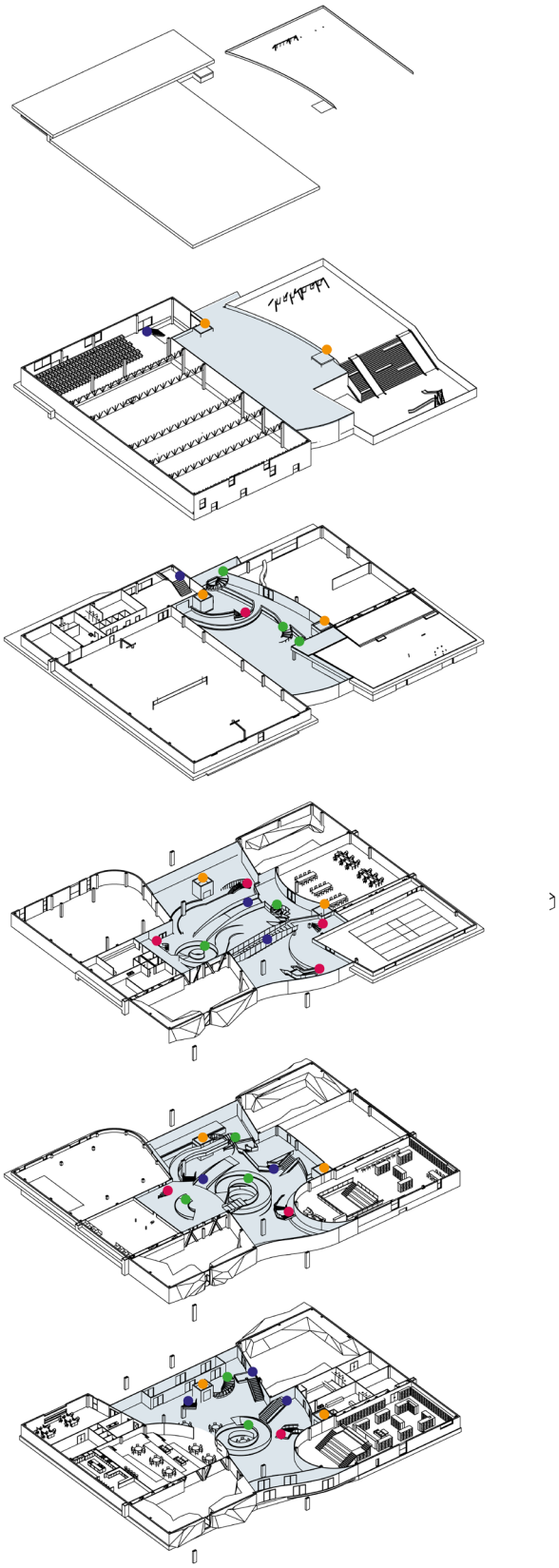
STRUCTURE



STRUCTURE



STAIRS



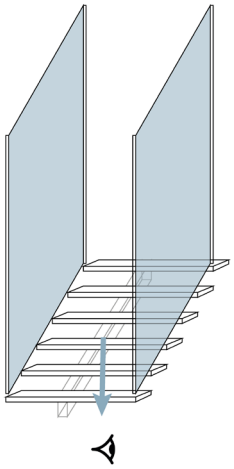
LINEAR RISE BY LIFT
- A DIRECTIONAL ONE WAY VIEW
- LIFT OF GLASS FOR A PARTIAL VIEW TO OTHER SPACES

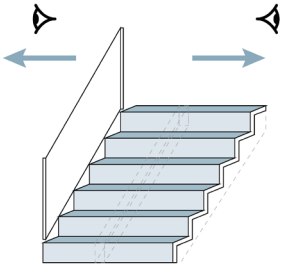
LINEAR RISE BY STAIRS
- A DIRECTIONAL ONE WAY VIEW
- LINEAR IN ONE WAY OR TWO BY AN ANGLE IN STAIRS

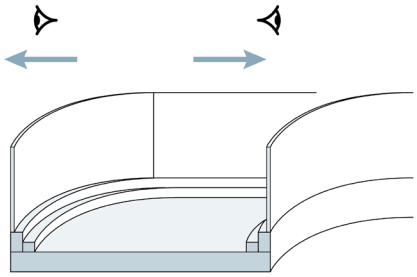
CIRCULAR RISE BY STAIRS
- A DIRECTIONAL VIEW OF 180^{0} DEGREES
- MOVING CIRCULAR

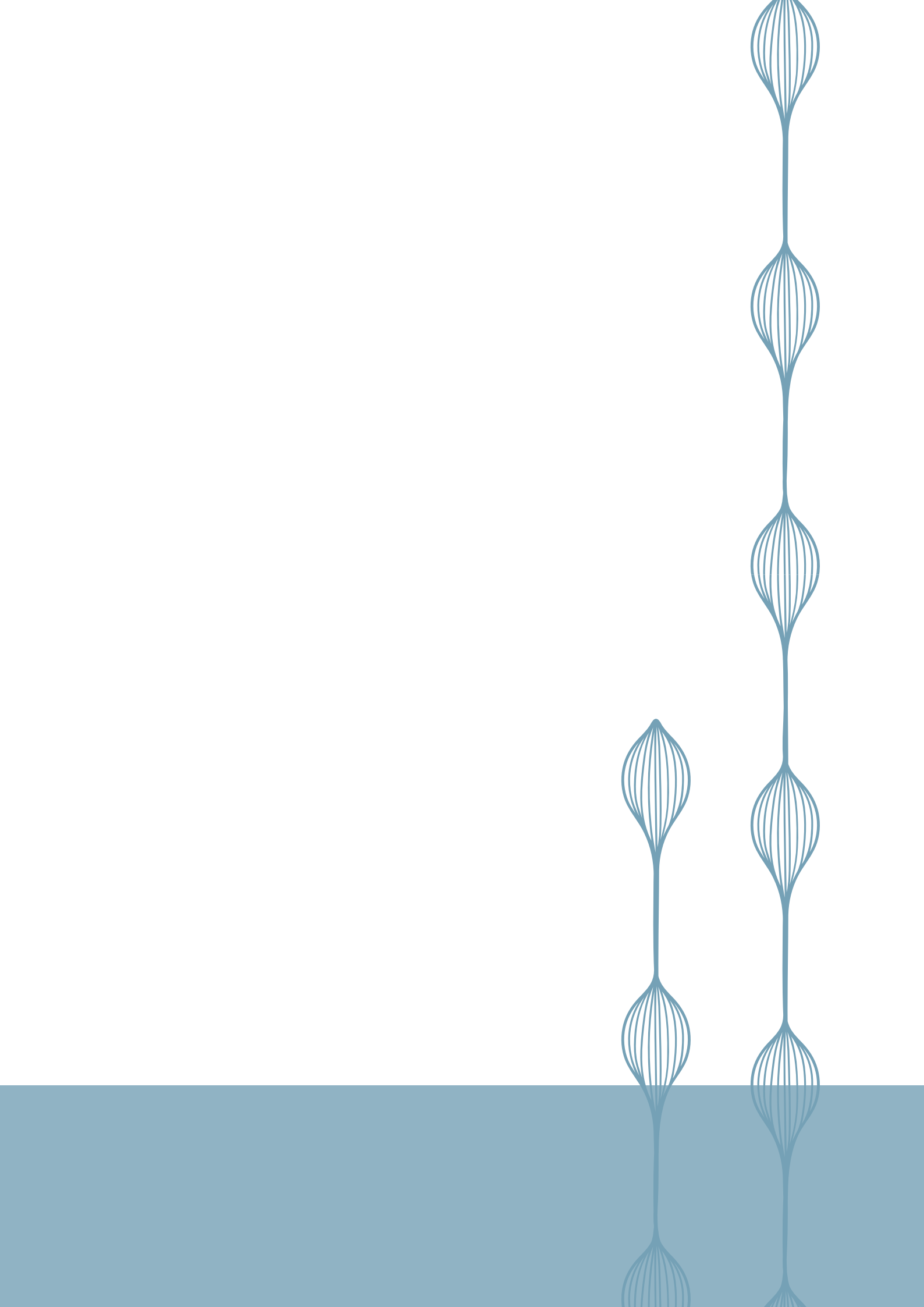
CIRCULAR RISE BY STAIRS AND RAMPS
- A DIRECTIONAL VIEW OF 360^{0} DEGREES OR MORE
- MOVING CIRCULAR, VIEW IS OPEN WIDE

STAIRS



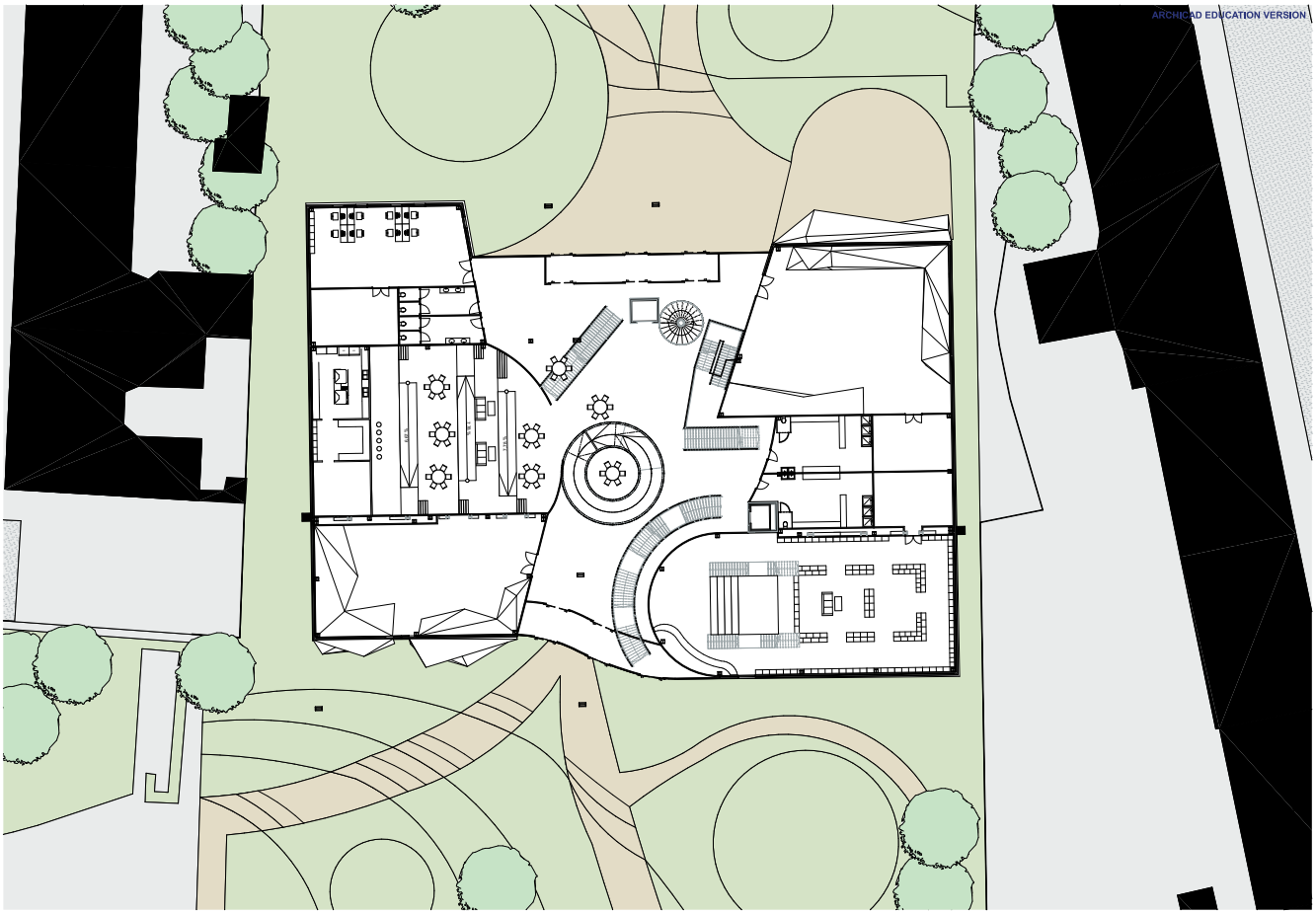


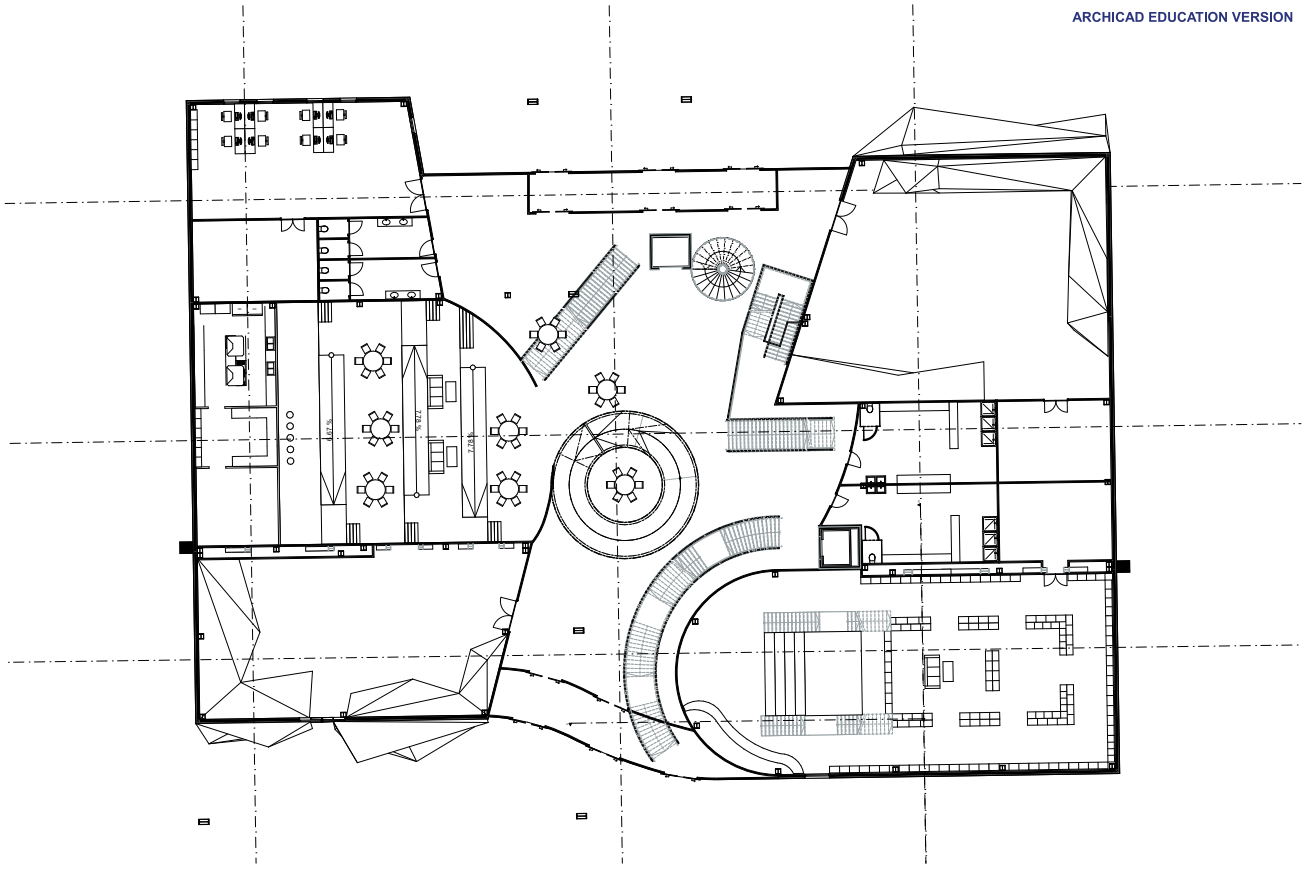


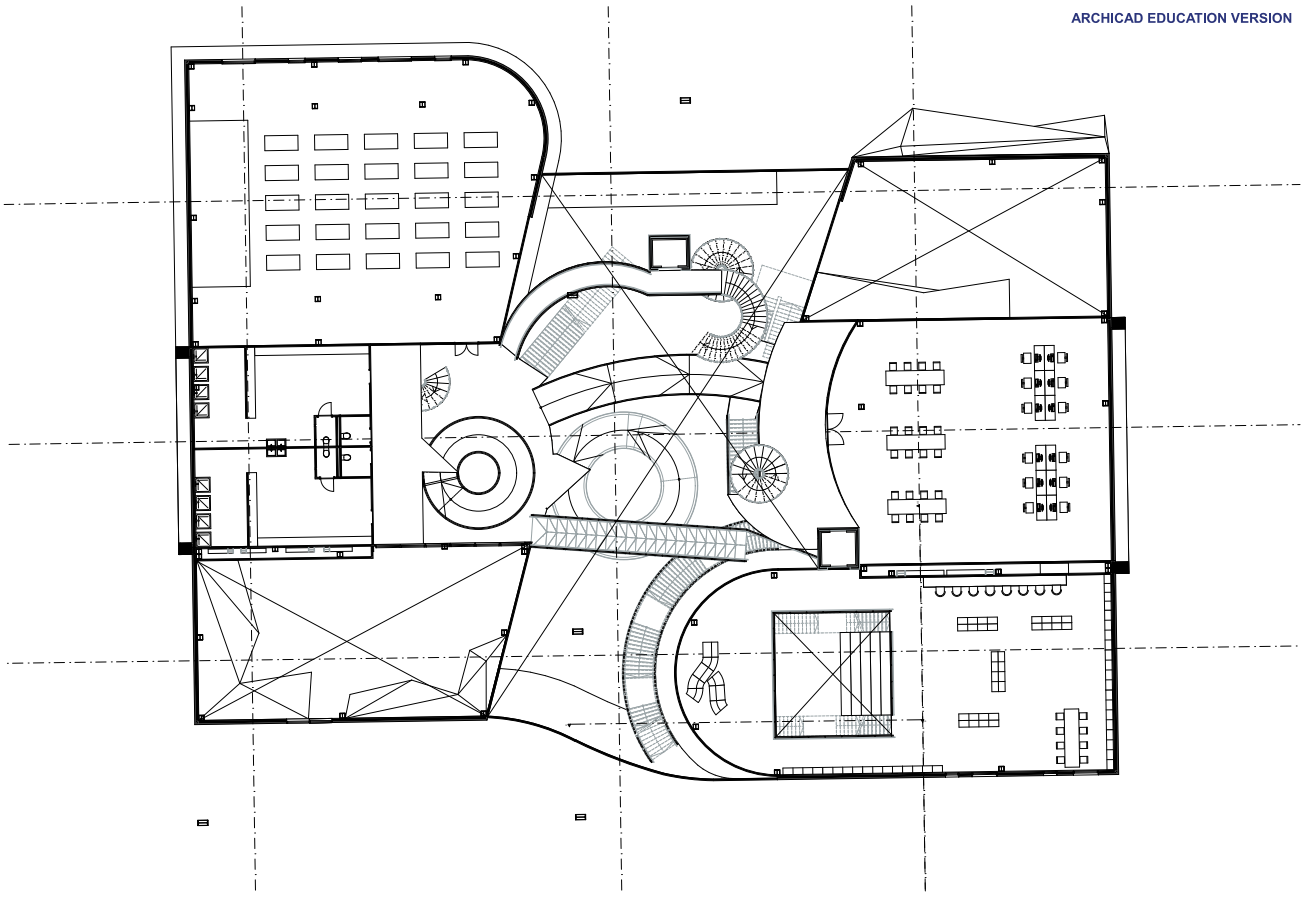


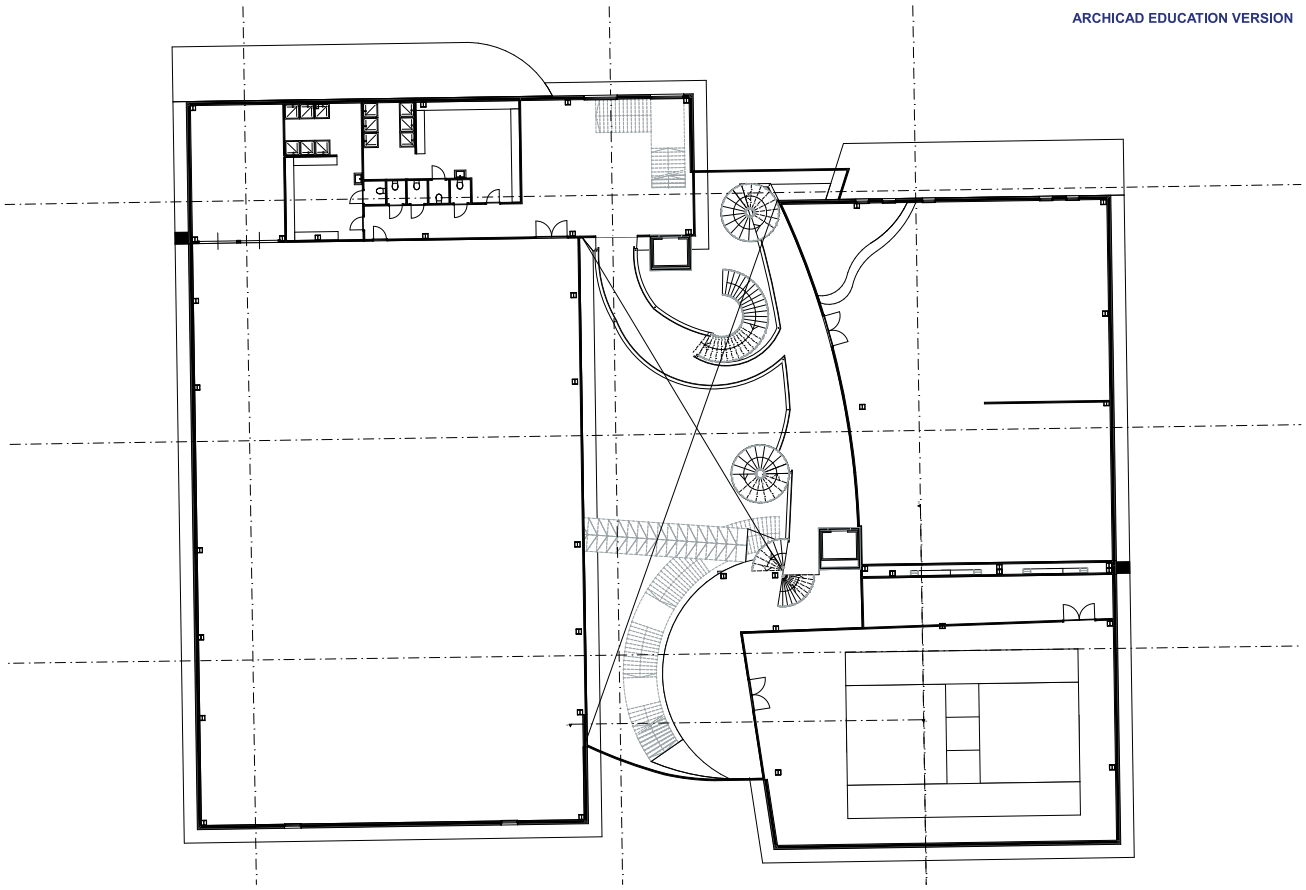
FINAL DESIGN


AUTOCHICAD EDUCATION VERSION

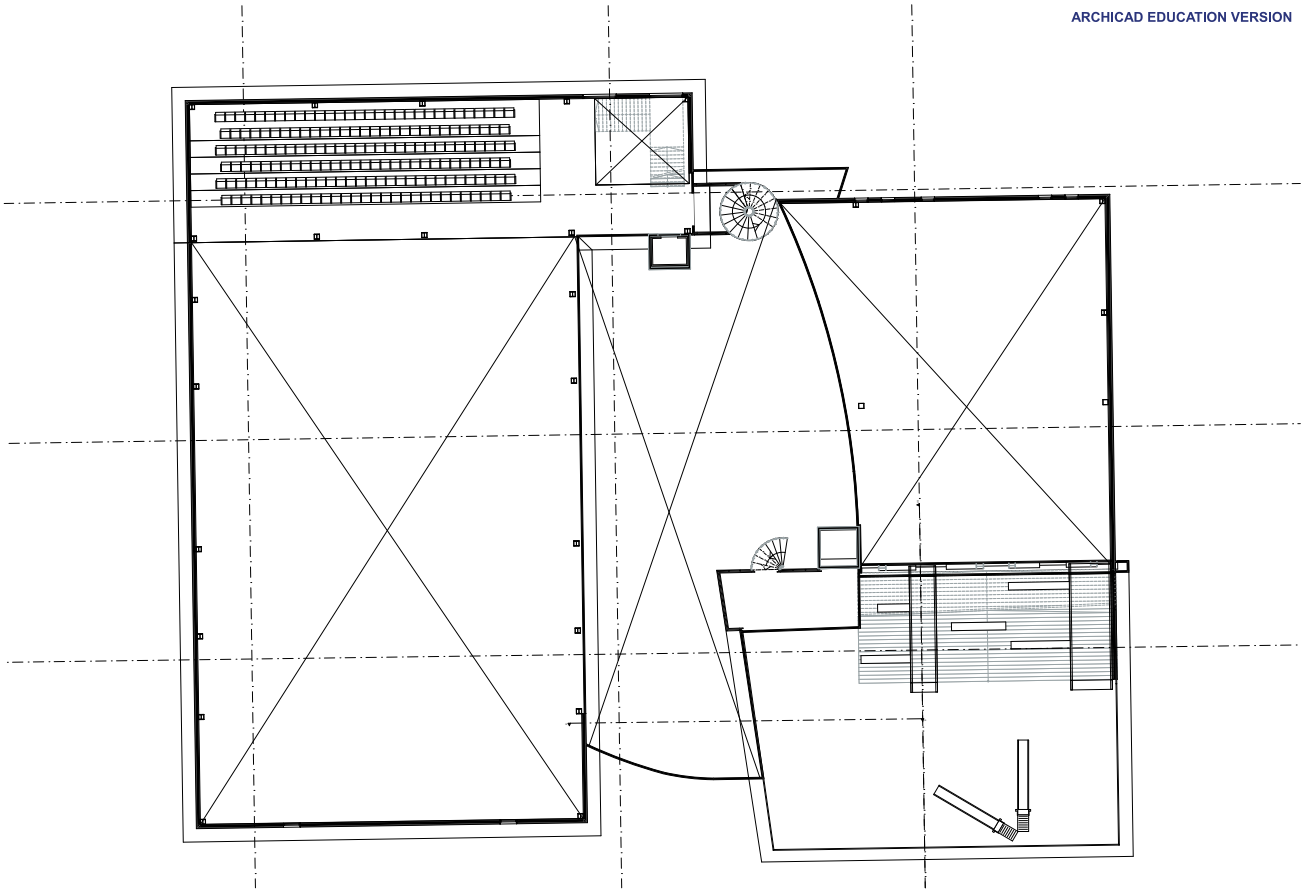

ARCHICAD EDUCATION VERSION

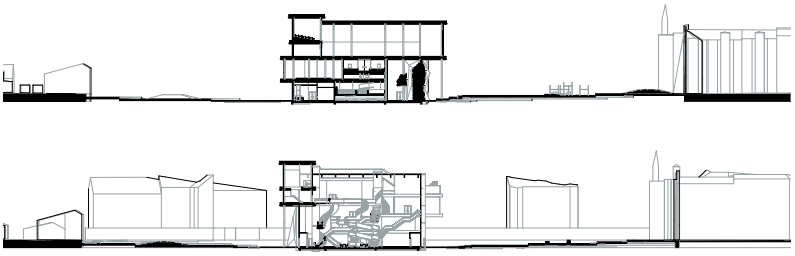



ARCHICAD EDUCATION VERSION



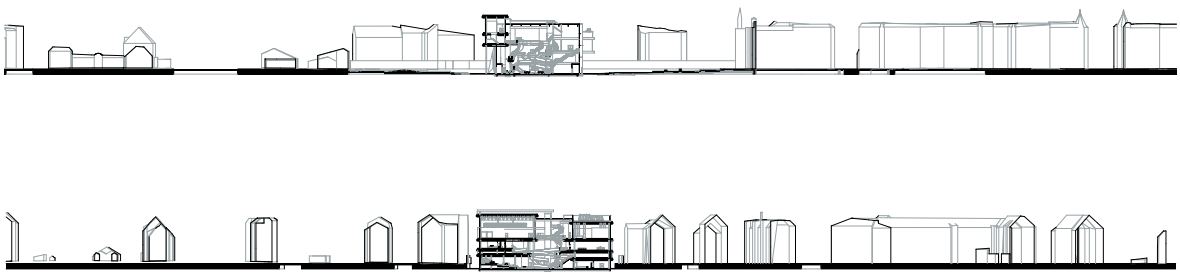
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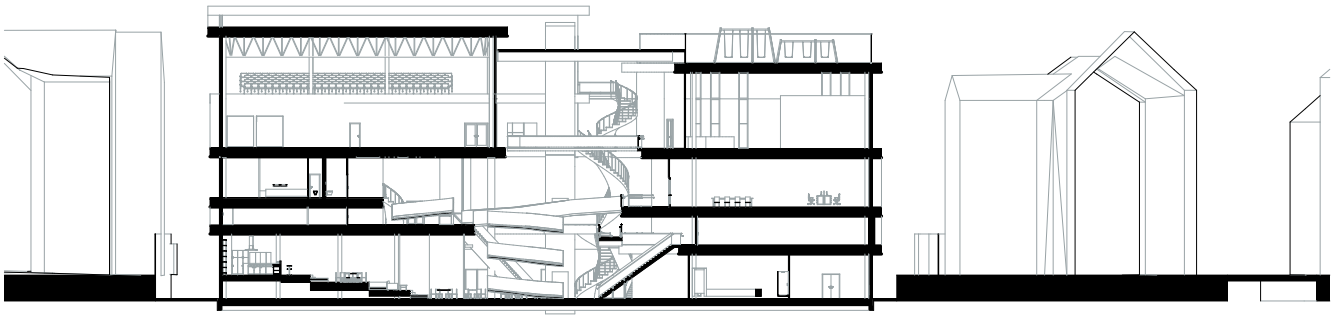






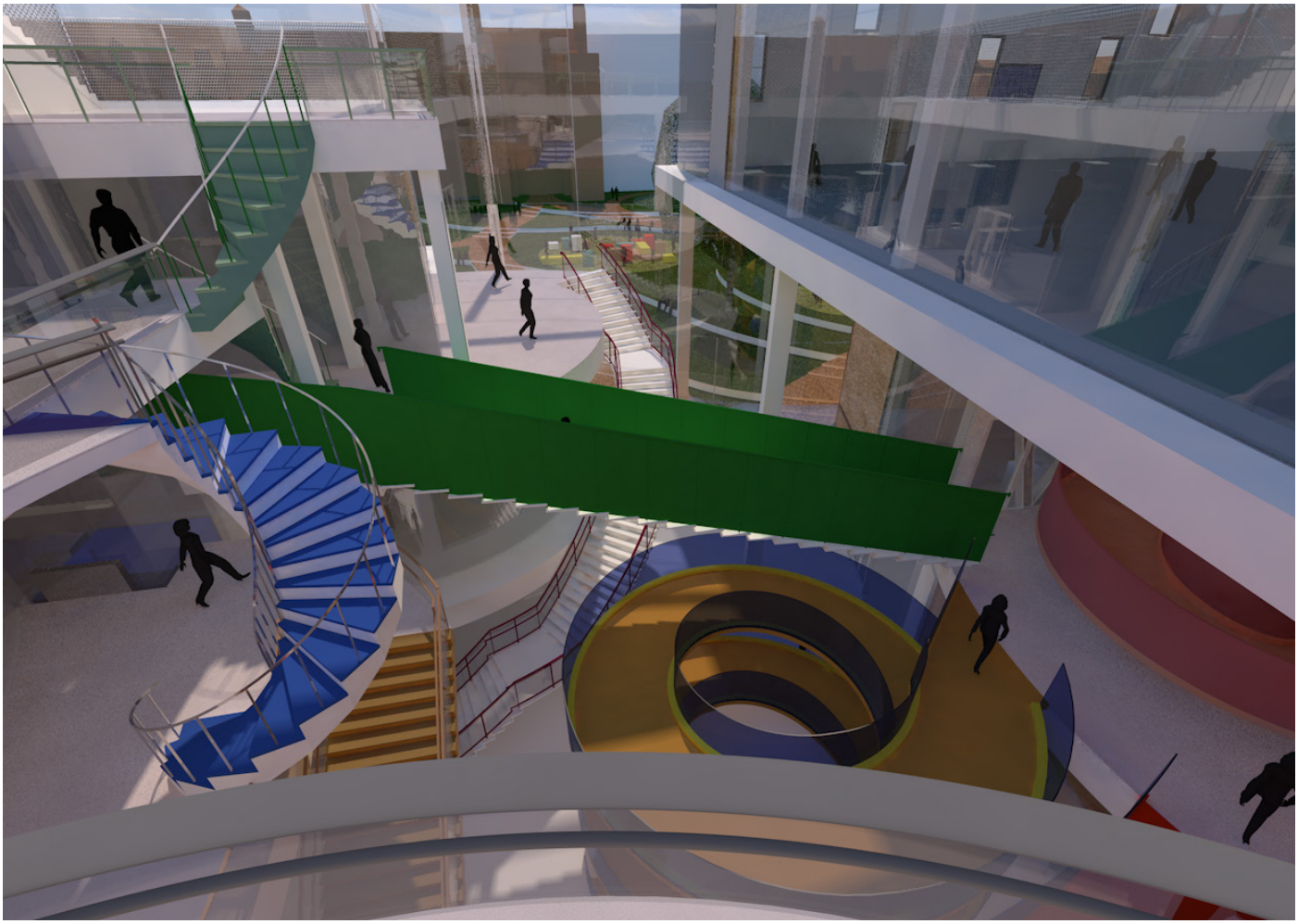
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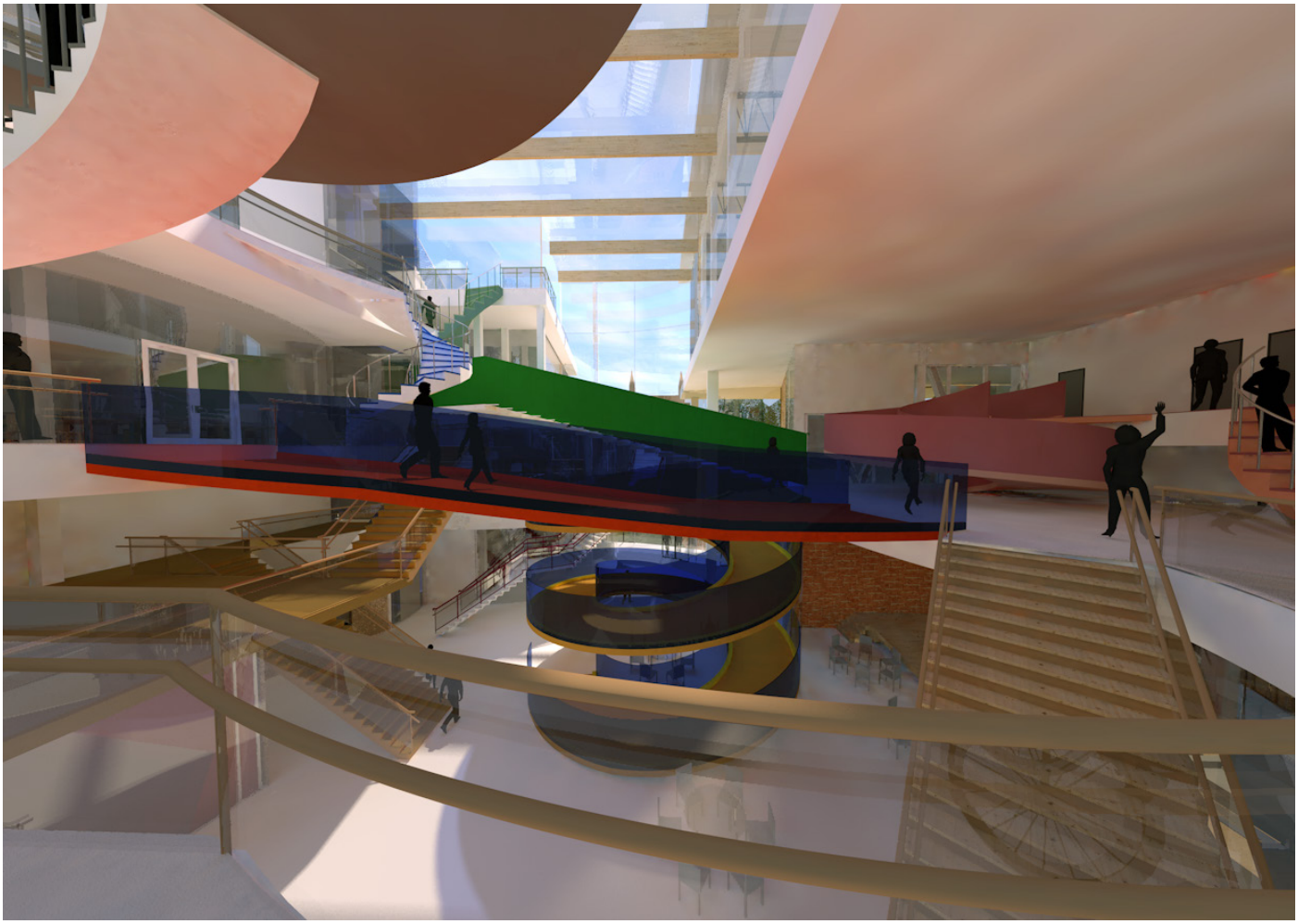


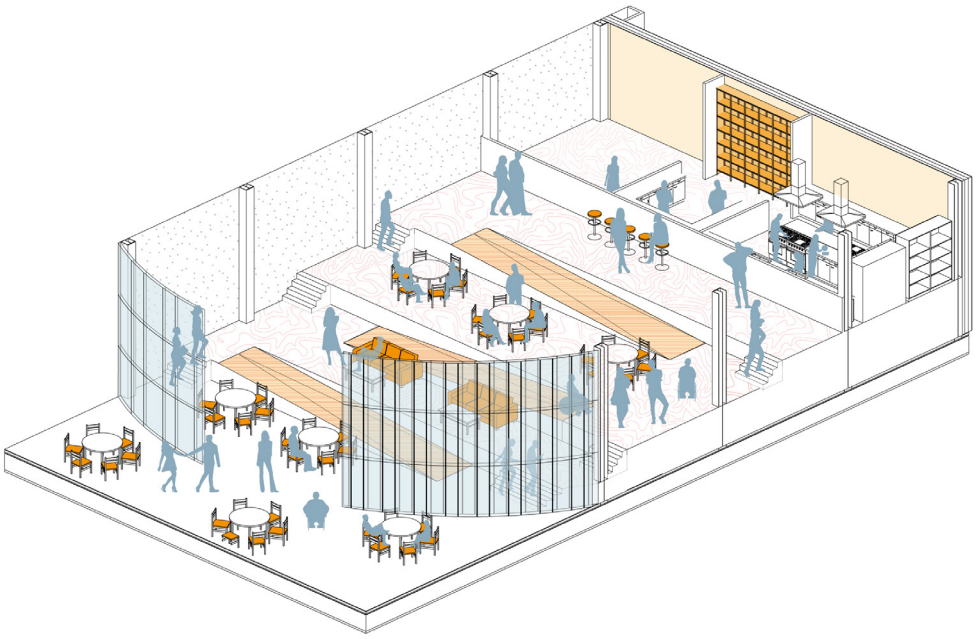


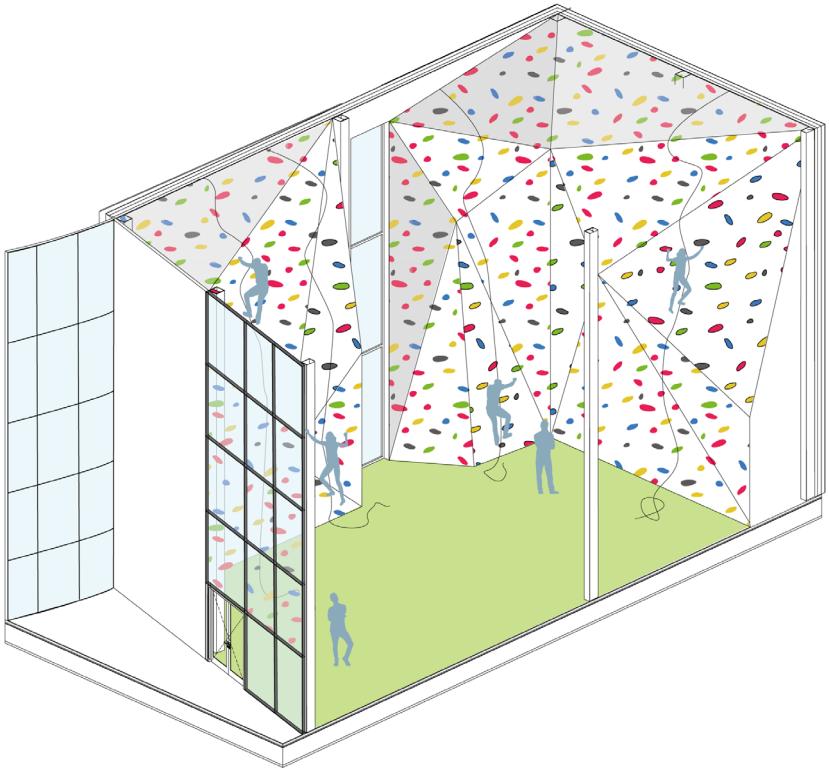


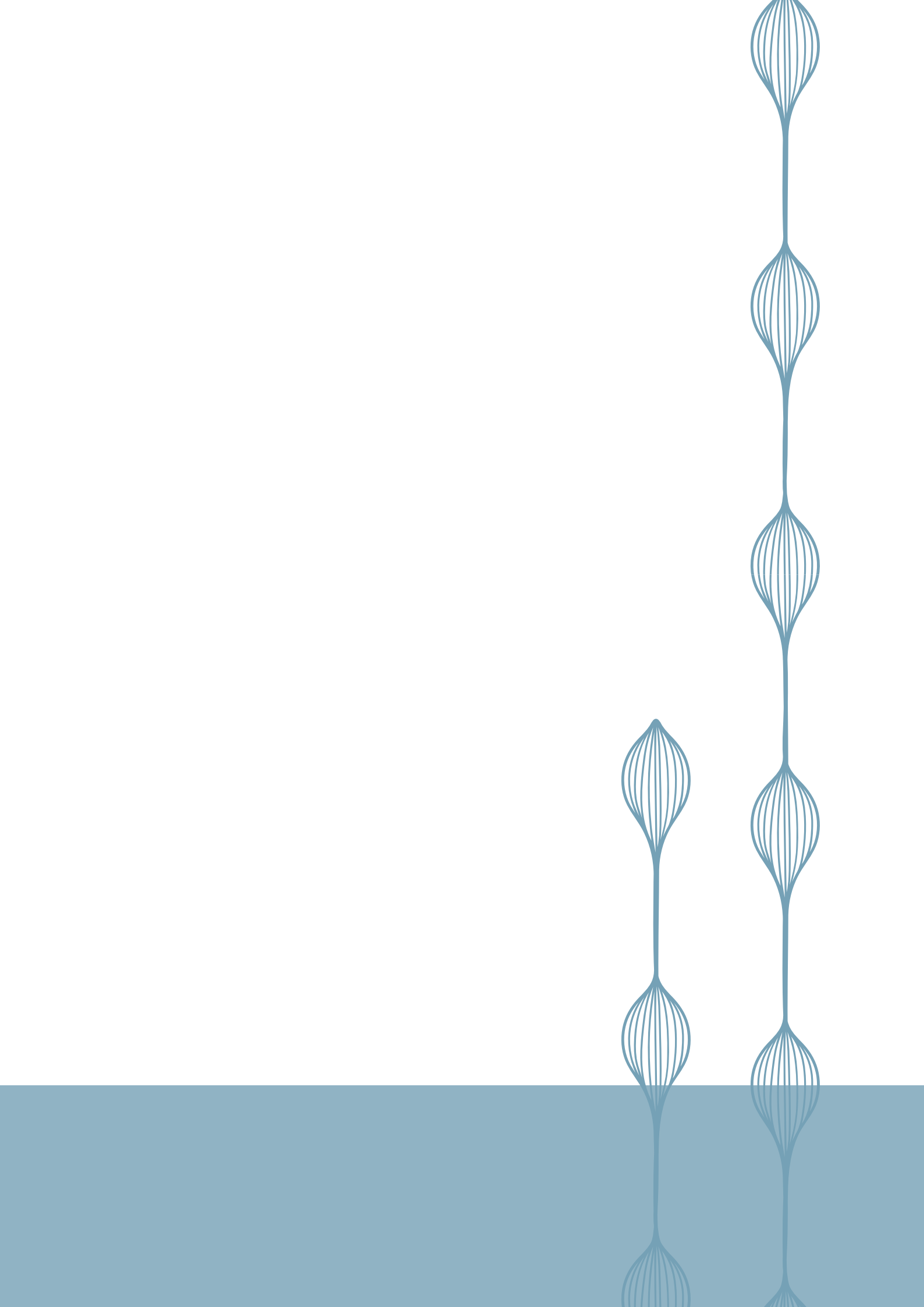












FINAL REFLECTION

BRINGING BACK *MOVEMENT* IN SKYDEBANEHAVEN

ANNE CHANTAL BRAND | 4725840 | PUBLIC BUILDING GRADUATION STUDIO | AR4AP100 | TU DELFT | 2019/2020

Reflection

In the beginning of the graduation studio, research was needed and we, as students, were divided into groups to work on several topics as; city, connection, people and power. The research was for both cities; The Hague and Copenhagen. In my group we worked on the topic 'power'. Before we started getting into designing this research was done, and in my opinion every group was starting to create something influenced by their research. My project will be developed in the city of Copenhagen. As not only the research on Copenhagen was on influence of a method or idea, the comparison between Copenhagen and The Hague was also there.

This previous research influenced a little bit of creating a plan on how to work on things for this project. In my graduation plan a method description was asked in how to approach the studio and its project. In this description, I noted to use technomic, socio-technic and ideological icons elements as an approach. These elements were mentioned in one of the other courses in this studio, also one of the influences on the method to be written. The approach in first was to consider the multiplicity of functions, to find out how a socials system would work and how several elements together could transform into an icon.

Reflecting on this approach now, it was not an approach as directly used or tried in its literal form. The example used by this method description was to look at the projects of Herman Hertzberger and Jan Gehl. This approach I literally did follow, which also led to a typology to use in the building. The start of this project was focused on connections, connections between people, and spaces. As in the further process this focus shifted to what was becoming more and more important to me.

As the research in the beginning led to four elements (of the four topics of the research book), one of these elements took a high priority. Reading into approaches and visions of Gehl and Hertzberger, designing for people became more important. The approach to find elements to connect people was not helping, it got my progress slowing down. After reading into these architects the realisation started to kick in, and the theme for movement came into sight on the right time. Besides the realisation of the inspiration of the architects and the realisation of the theme, I also looked at the other three topics of the research book more carefully. The most interesting and most important looking, in my opinion, conclusions were taken out of these topics to connect with the new upcoming theme.

As the process slowed down at some point, this theme made progress in making plans and a different approach into getting a design. The potential of this theme 'movement' was appreciated on all levels, as moving is also a passion of mine. The personal aspect of this theme and therefore project is large. In my gymnastics career, for 15 years, where of approximately the last 7 to 10 years I had practice in a gym for 6 hours in a week. The personal experience in a space where everybody is moving around created a sports family. You make friends, you get to know people and you have a connection with everybody, as in all ages and cultures. The idea of bringing back movement into an area to bring people together, the connection between people that I really wanted to pursue, is therefore a personal passion.

Thus, in the beginning the approach planned in advanced helped looking into elements that were goals to accomplish, while that approach in working towards a design concept did not work in the process. After searching for literature and projects of architects the process started up again (Hertzberger and Gehl).

At the moment I can appreciate both outcomes, because I learned to open myself for other approaches to try. Some of these elements gave an insight in a unique way of looking towards architectural elements. While at the same time the process slowed down, the realisation of creating movement to bring people together became more personal. As for the process in this moment, the statement by choosing a theme helped a lot towards defining a project.

Combining this overall perspective of my experience, tutoring and feedback of several tutors and students also helped in creating progress. As we in Dutch say: *"Door de bomen het bos niet meer zien",* translated in: *"Can't see the Wood for the Trees"*. This meaning that sometimes we lose ourselves in details or something that we forget the importance for the whole. As my perspective is one way, a students' or a tutors' perspective is another way. As they help to you see it in another light is very helpful to create a better design and making the process more elaborate.

As to reflect on the latest period of time, especially when we had to work from home due to the Covid-19 virus. The communication with other students became less as well, which made it harder to focus on the whole, as said before to lose yourself in details more. Relying on technical aspects became a bigger concern and as for that I am grateful that our tutors created a platform to still discuss our projects.

In the process further on the ambition is to keep a hold of the theme and to emphasize the important elements for the design. Creating a place where people can come together and move around, to connect with others is the most important element of this project. When the project comes to a finish, the reflection at that moment will be a better and more complete view, but when is architecture actually finished..?