PORTFOLIO | FARASAT MIRZA

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Hey There!

Thank you for taking the time to have a look at my portfolio. This portfolio was created to show you who I am as an architect and designer. I aim to show not only my work, but how I work, my thought process and workflows that I have developed while attaining my Bachelor of Architecture at Abu Dhabi University and by competing in architecture competitions.

I also encourage you to visit my website, FarasatMirza.com. There you will find more detail on each project mentioned in this portfolio as well as the most updated list of projects.

I hope you appreciate the time taken to craft this portfolio and my website. Most importantly however, I hope you enjoy going through this portfolio!

Best wishes,

Farasat Mirza

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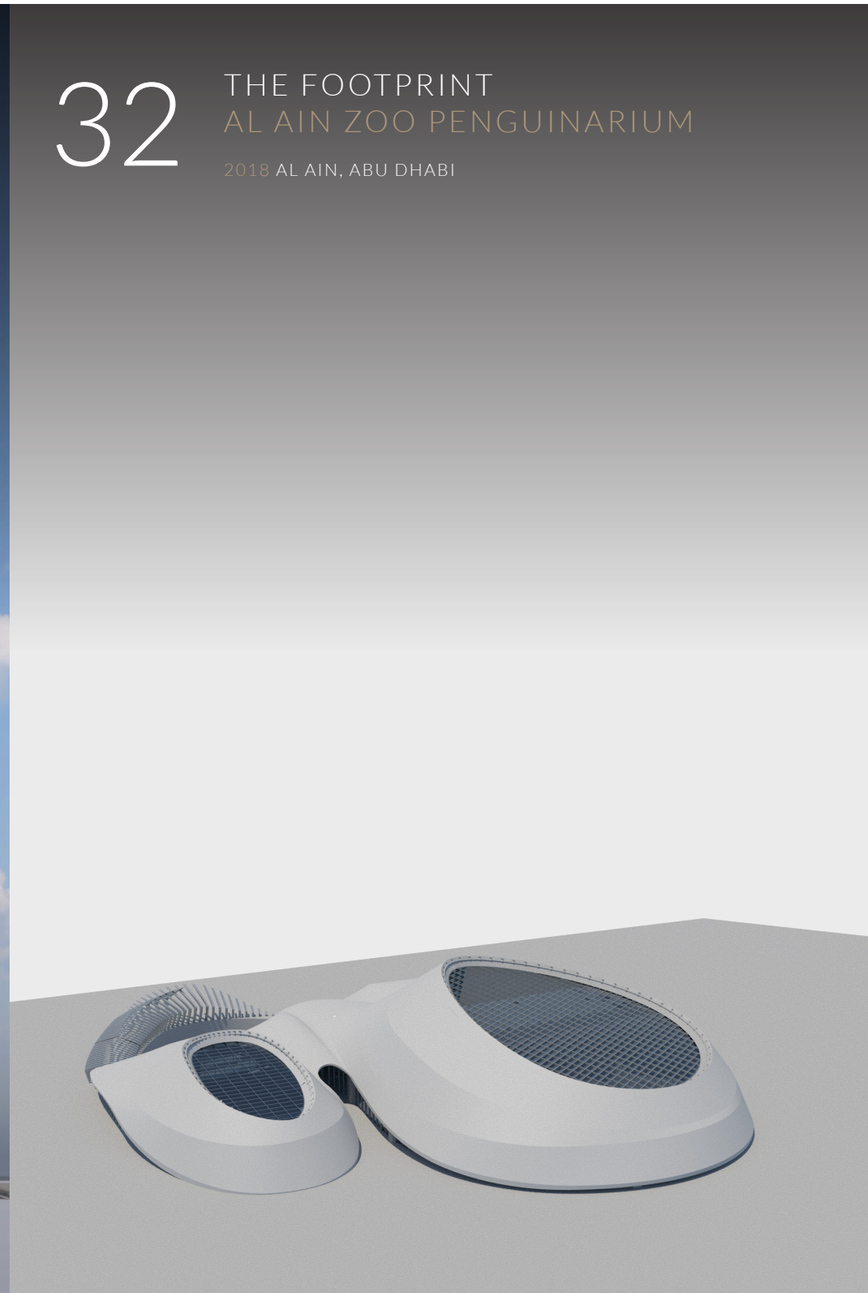
24 THE FRAGMENTS TOWER
2019 CORNICHE ROAD, ABU DHABI



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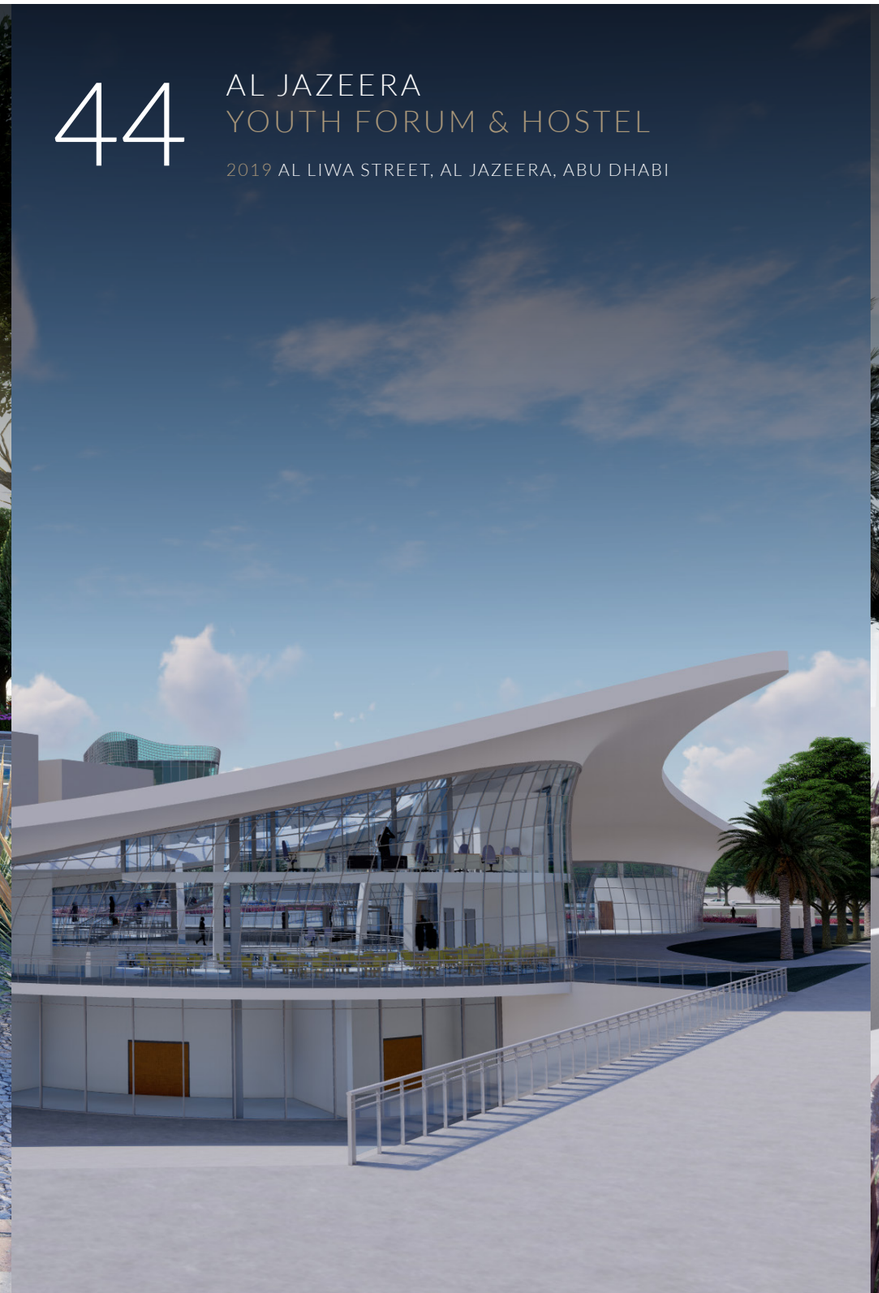
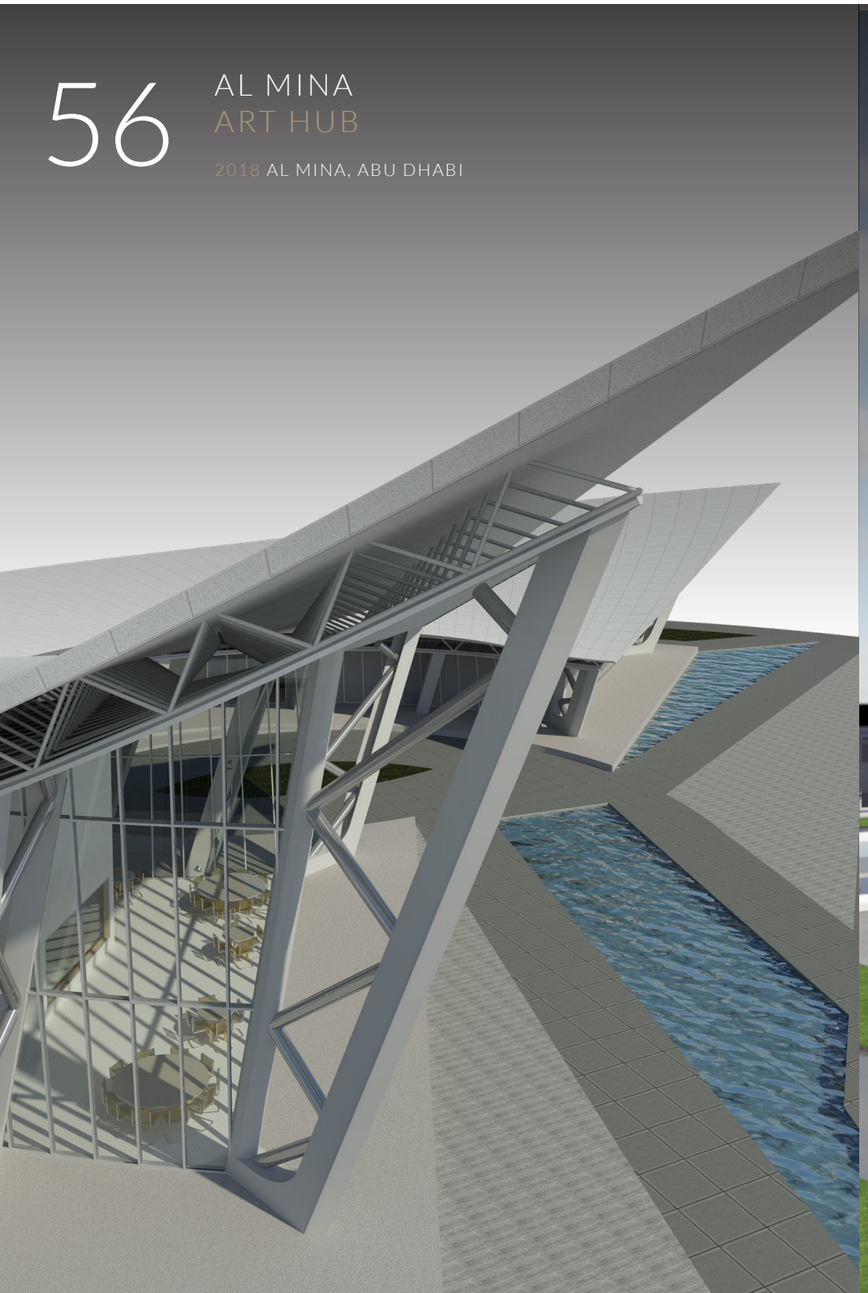


50 URBAN DESIGN & LUXURY COMPOUND
2019 S'ADIYAAT MARINA DISTRICT, ABU DHABI

DESIGN STUDIO



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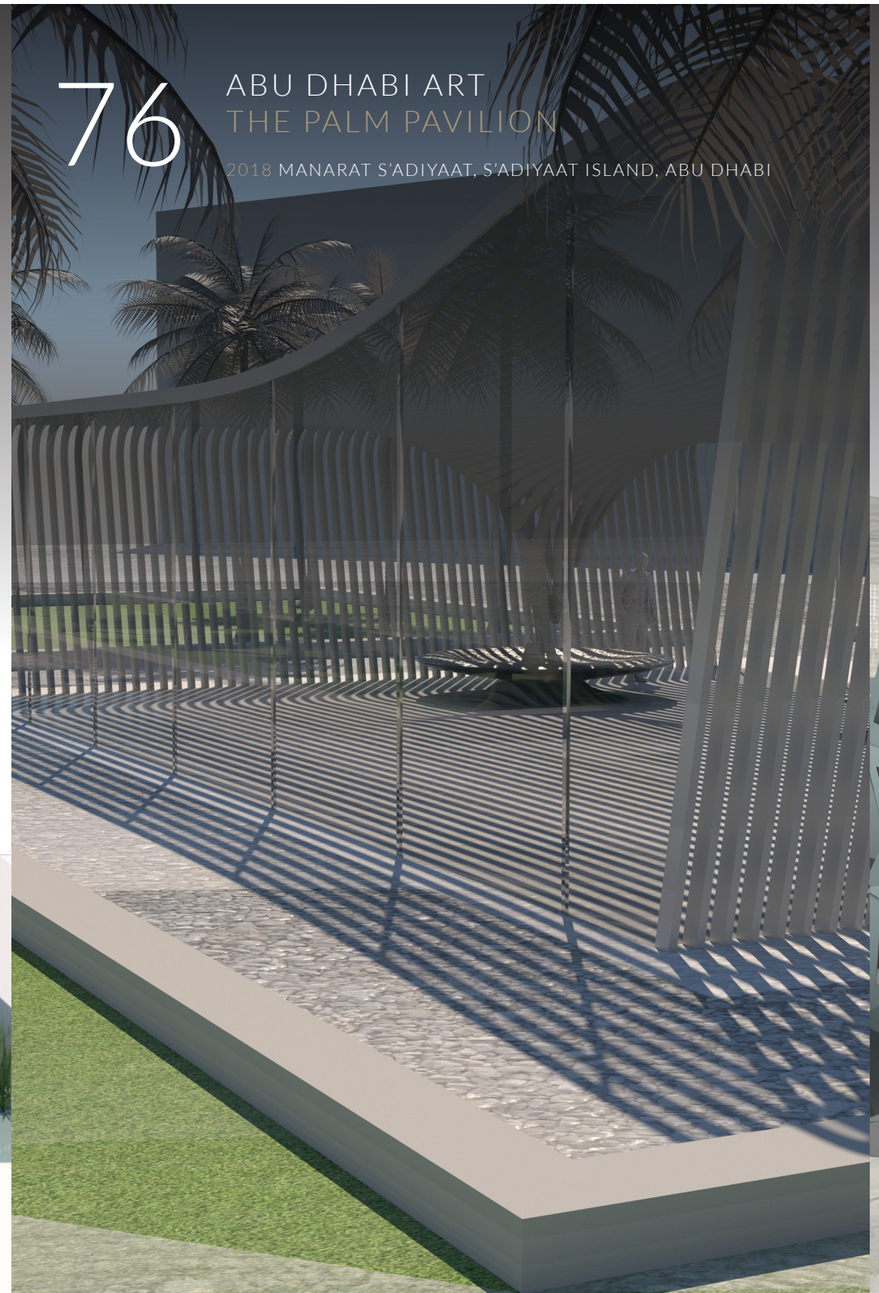

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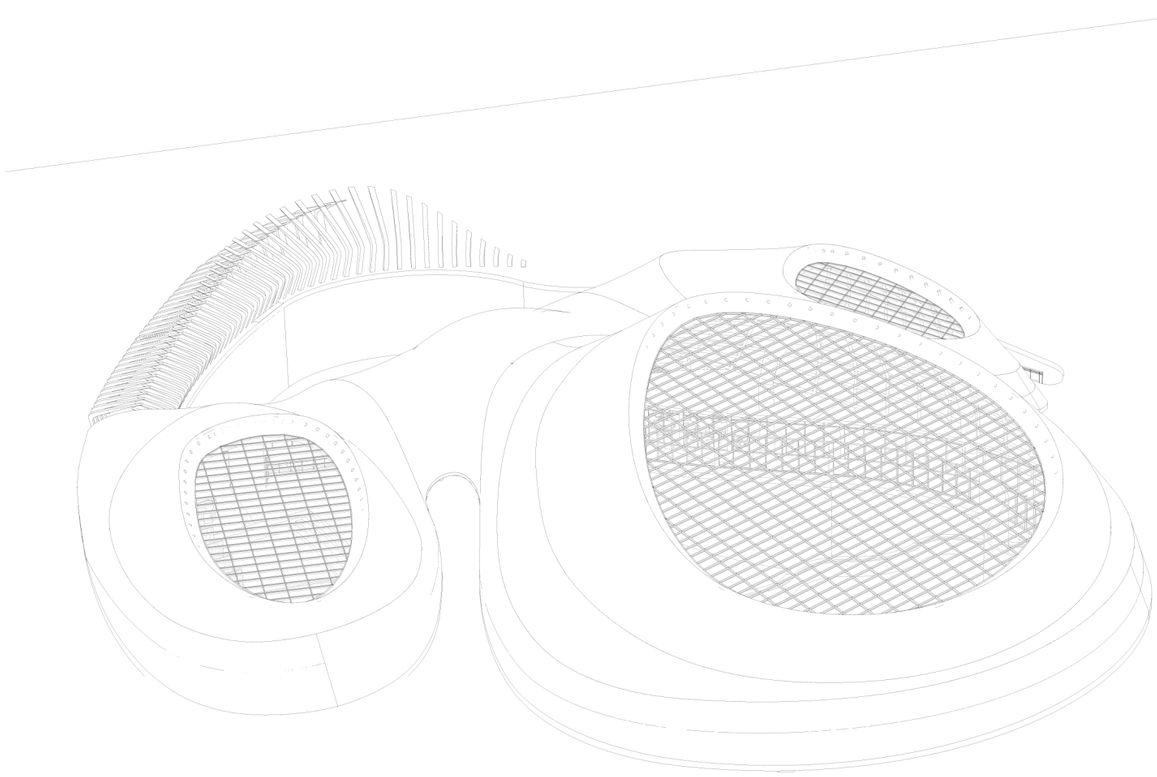

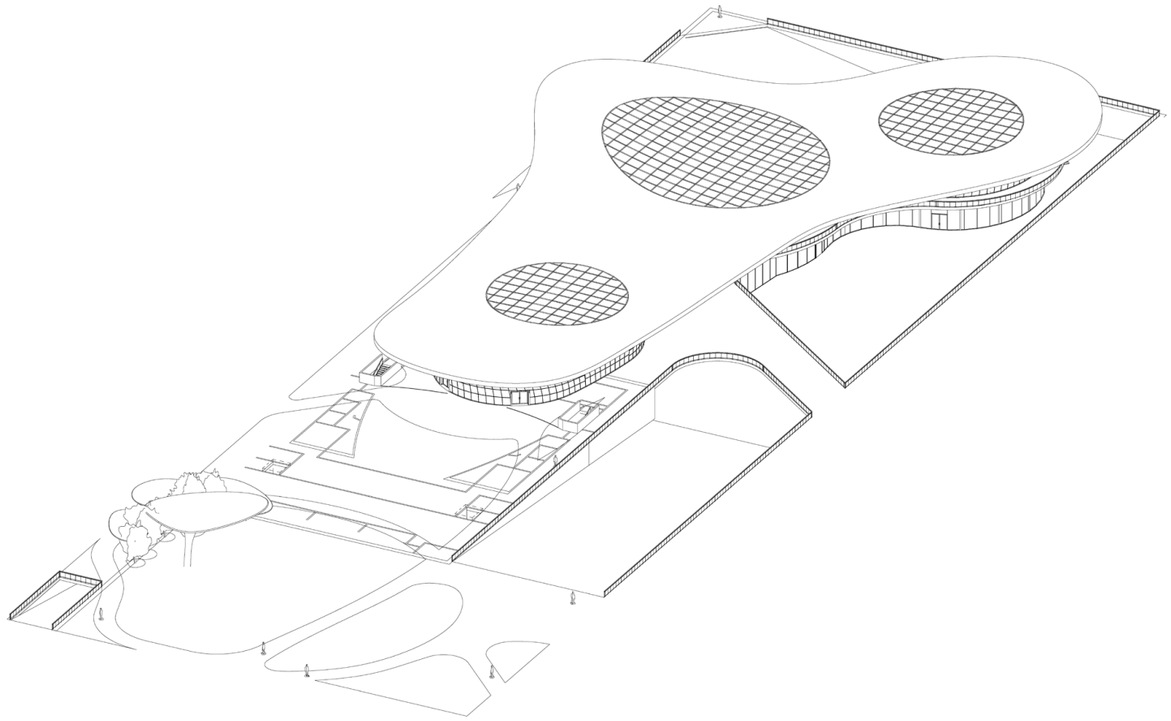

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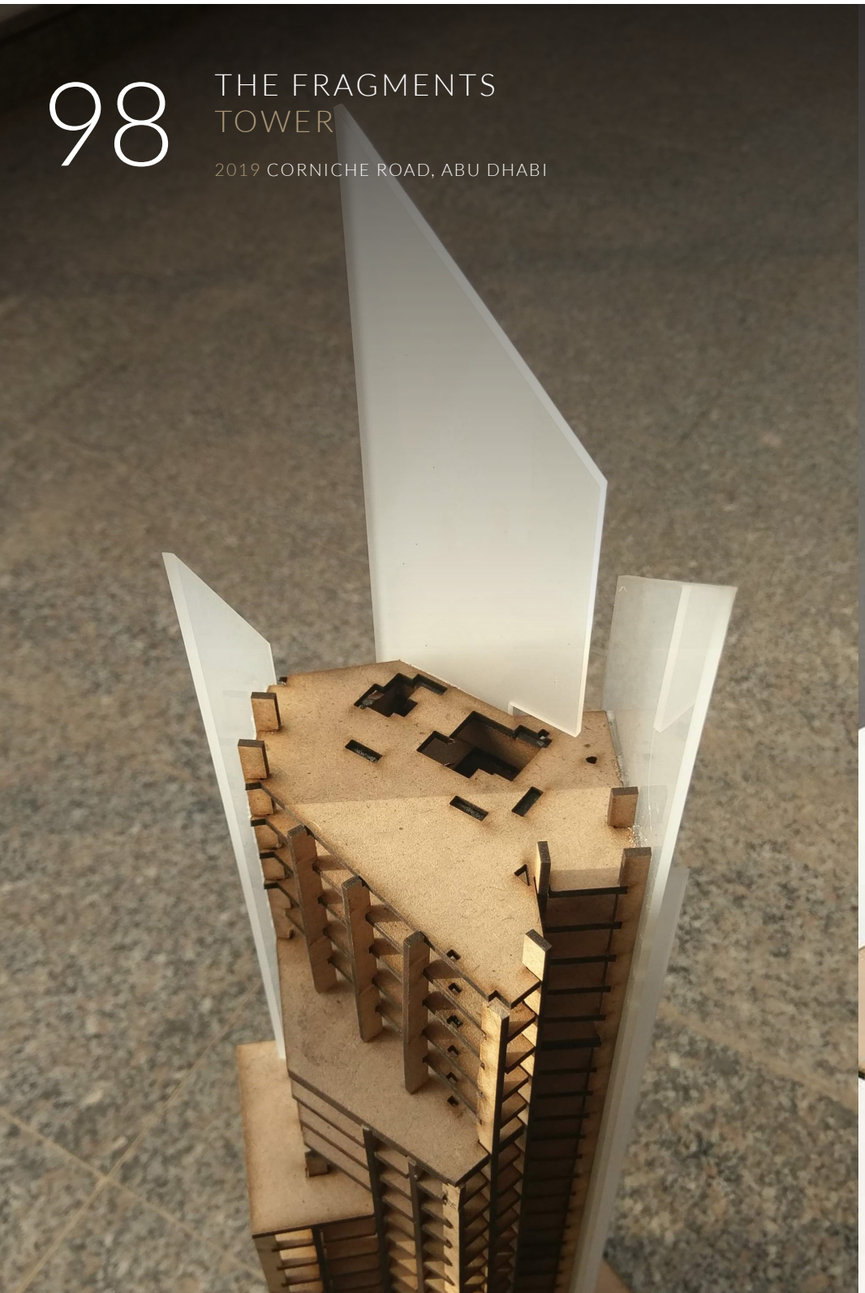

98 THE FRAGMENTS TOWER
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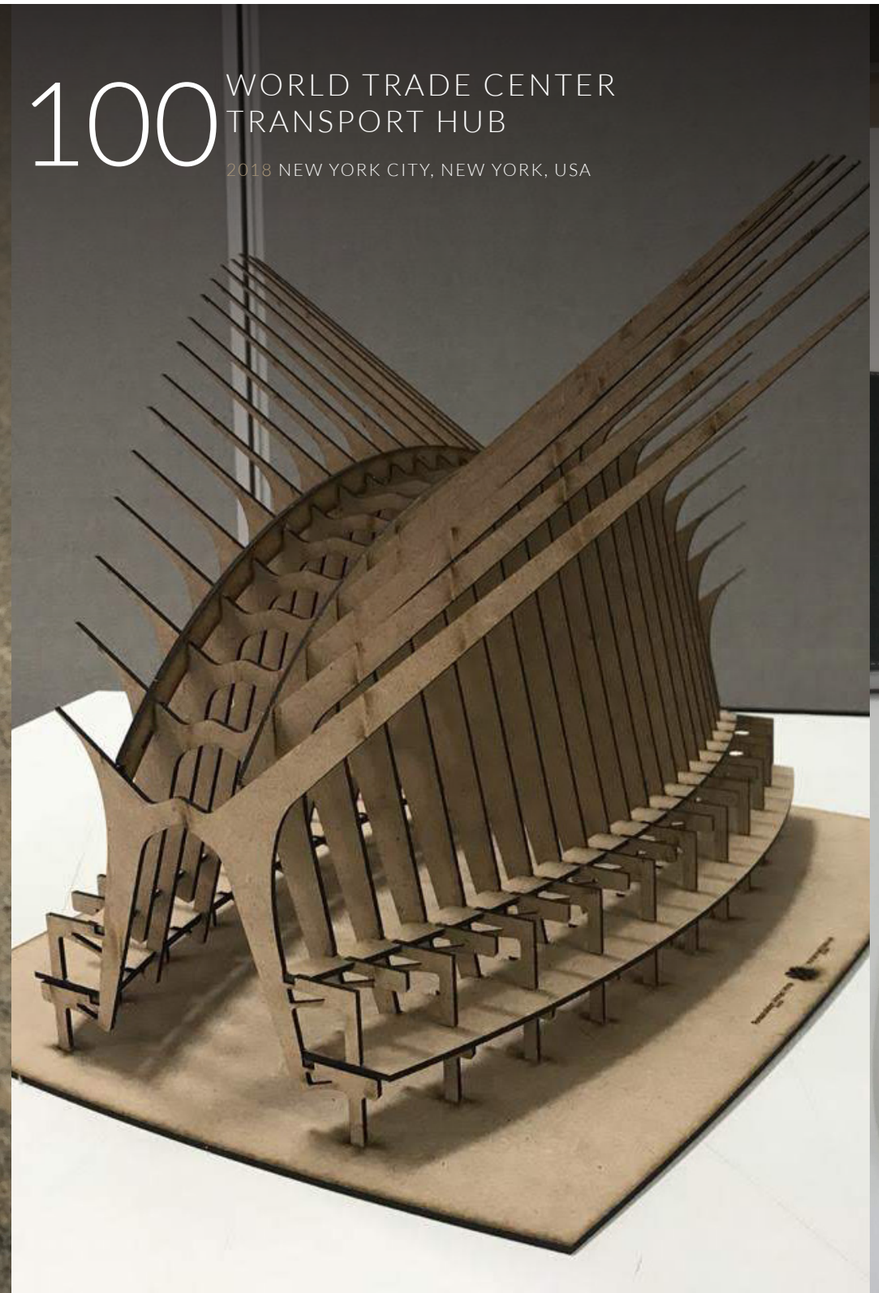

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ENV DESIGN 2: ENERGY AND SYSTEMS

DESIGN STUDIO

2020 AL BATEEN, ABU DHABI

AL BATEEN LIBRARY

CONCEPT AND BRIEF

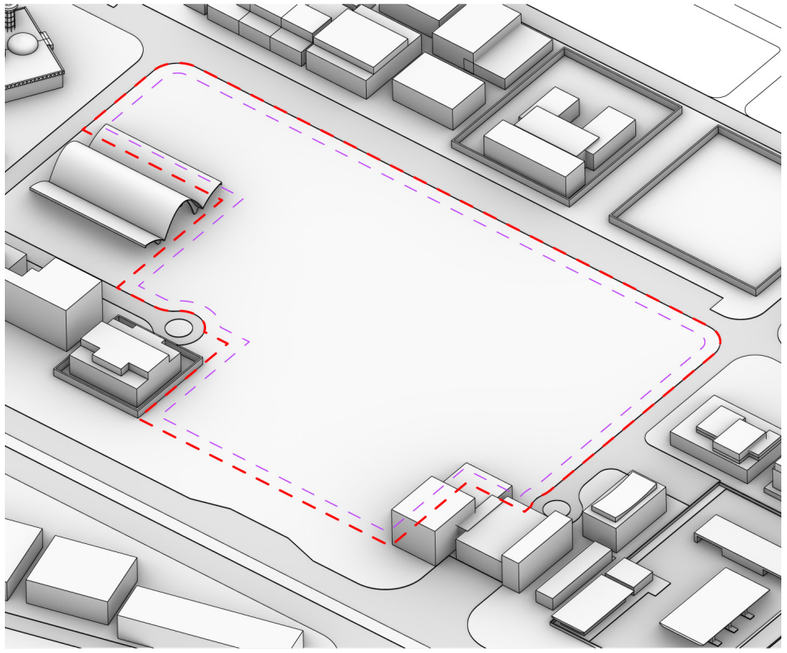
Al Bateen Library was the final Design Studio project. It is meant to be preparation for the graduation or capstone project. As such the project must include everything learned in past studios and courses to end with a sophisticated design that shows that the student is ready for graduation projects.

The site was located in the Al Bateen Area on Abu Dhabi Island. It is right next to the architectural landmark Al Bateen Mall which is known for its concrete shell.

By projects end a beautiful library inspired by Islamic architecture and the site context was produced.

The building has a total built area of 12,500m^2. The library has a capacity for over 54,000 volumes on the public stacks and a further 110,000 volumes in the archives. In addition, its auditorium can seat more than 530 people.

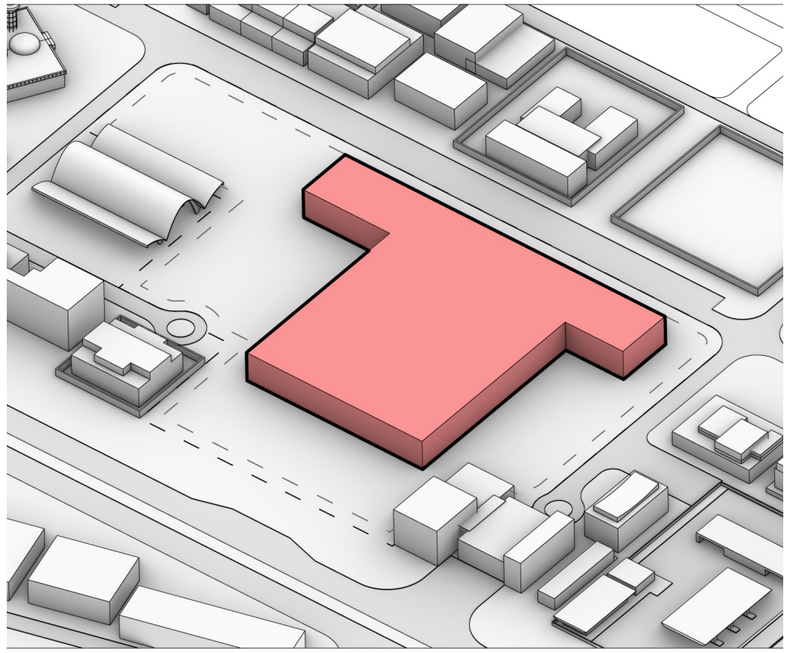
PROCESS AND FORM



CONCEPT, CONTEXT, SITE

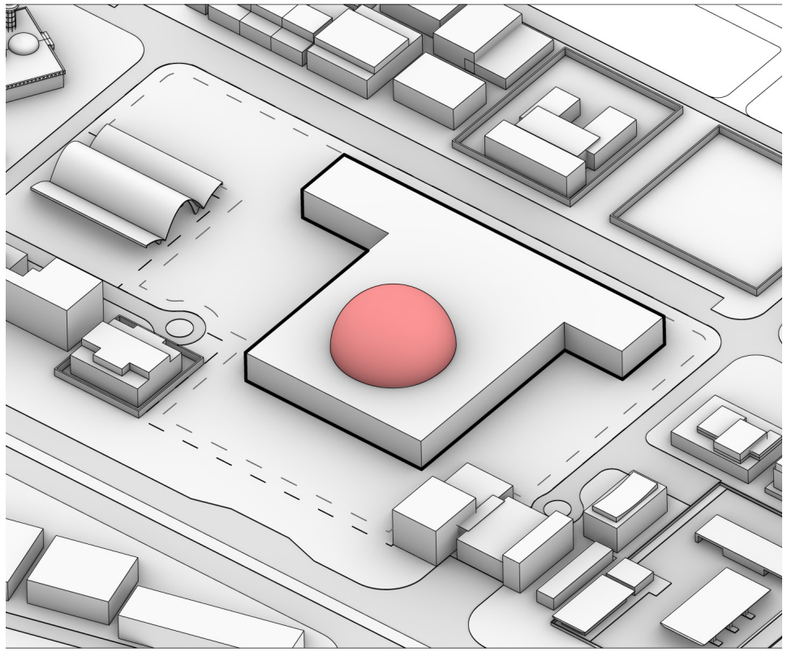
The idea for this project is to create a building that fits in with the local context in terms of the site and the UAE and region. The building will follow traditional and vernacular traits found in buildings in the area.

It will also take inspiration from Islamic architecture which also plays a huge influence in the region. In addition circulation around the site had an influence on the placement and circulation inside the building.



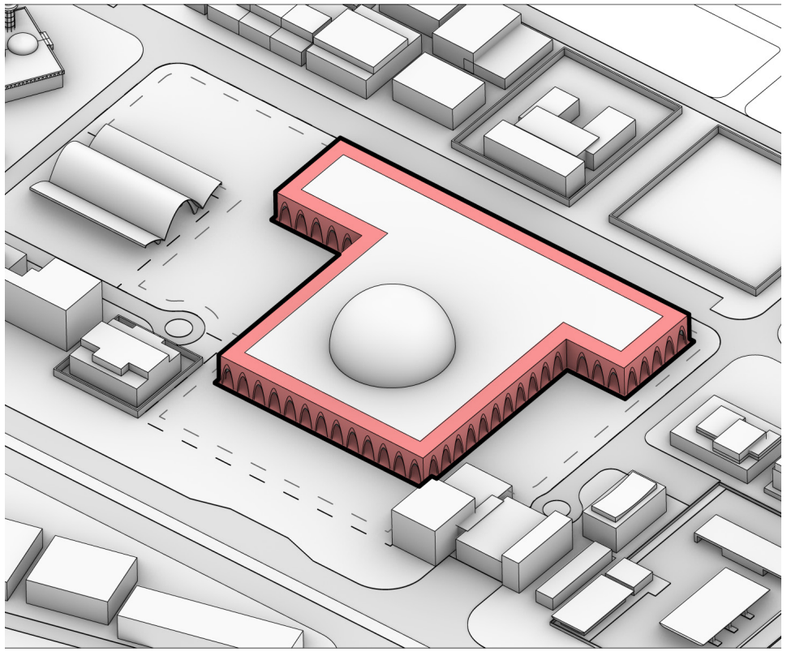
THE PLAN

A schematic plan was created to help understand the relationships between the various functions and their relationship to the site. This plan was the basis for the initial massing created for the library.



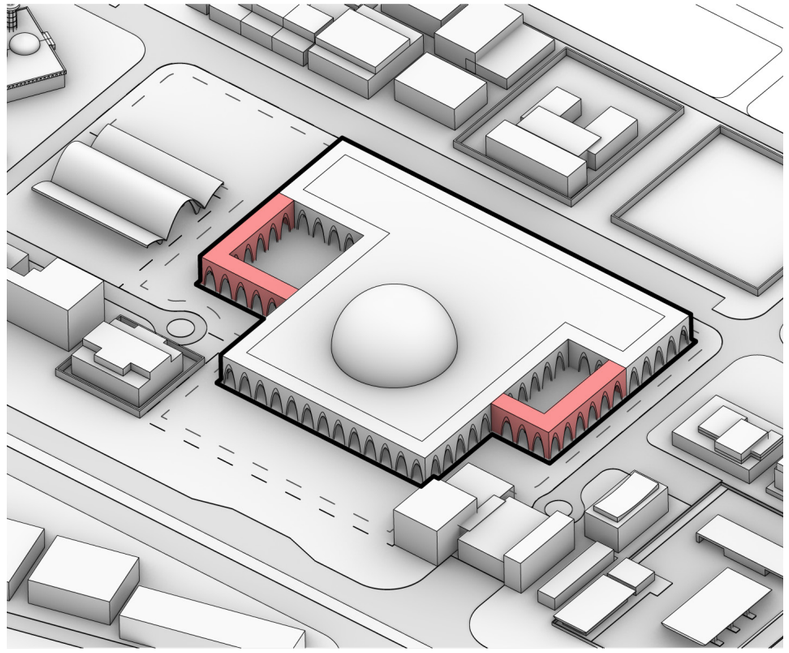
THE DOME

The dome's purpose is to provide daylight to the main stack and reading areas located directly under it. Its secondary purpose is to reduce cooling load by acting as a sunshade throughout the day.



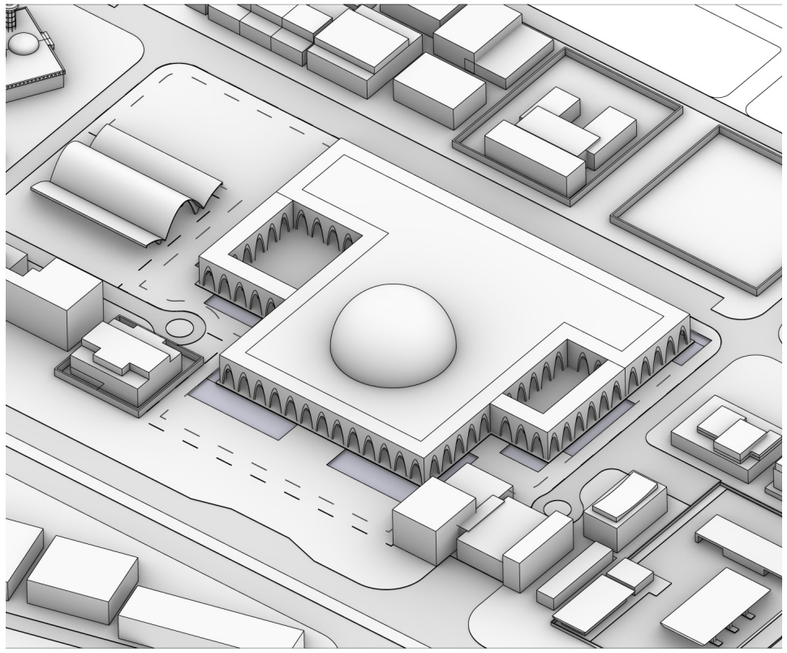
THE ARCADE

Arched arcades were added to the outer edges of the previously extruded mass. These arcades bring traditional Islamic and Arabic design into the proposal better integrating the building into the site. The arcade also acts as a thermal buffer between the building and the Abu Dhabi heat.



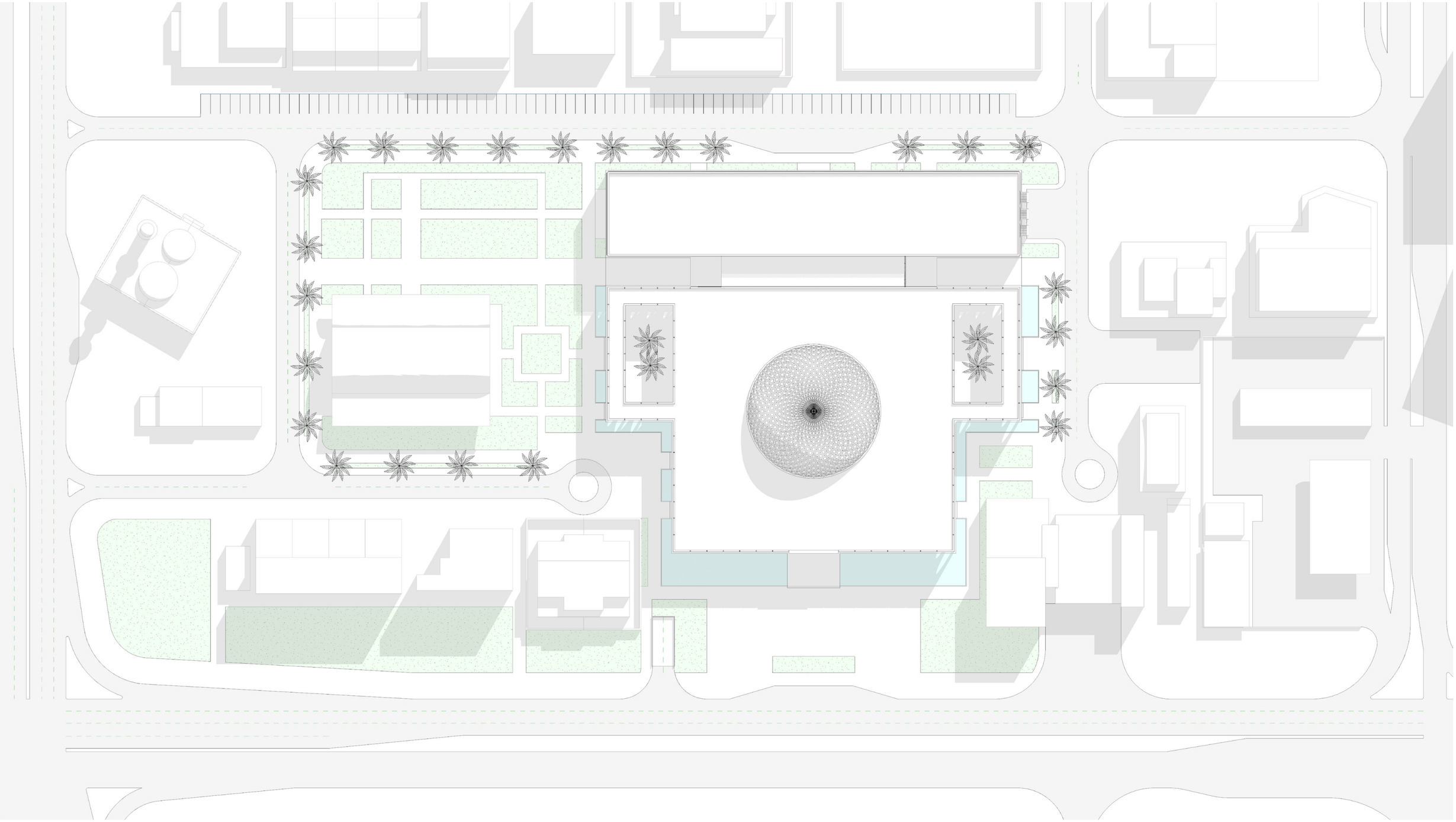
ADDING COURTYARDS

Two courtyards were added to either side of the building to create a social area the accessible by the public. The courts will lure people from Bateen Mall, the Mosque and clinics. The court is also linked to the community area and can act as an outdoor attachment to the area. In it's final form building was made to have symmetrical courtyards.

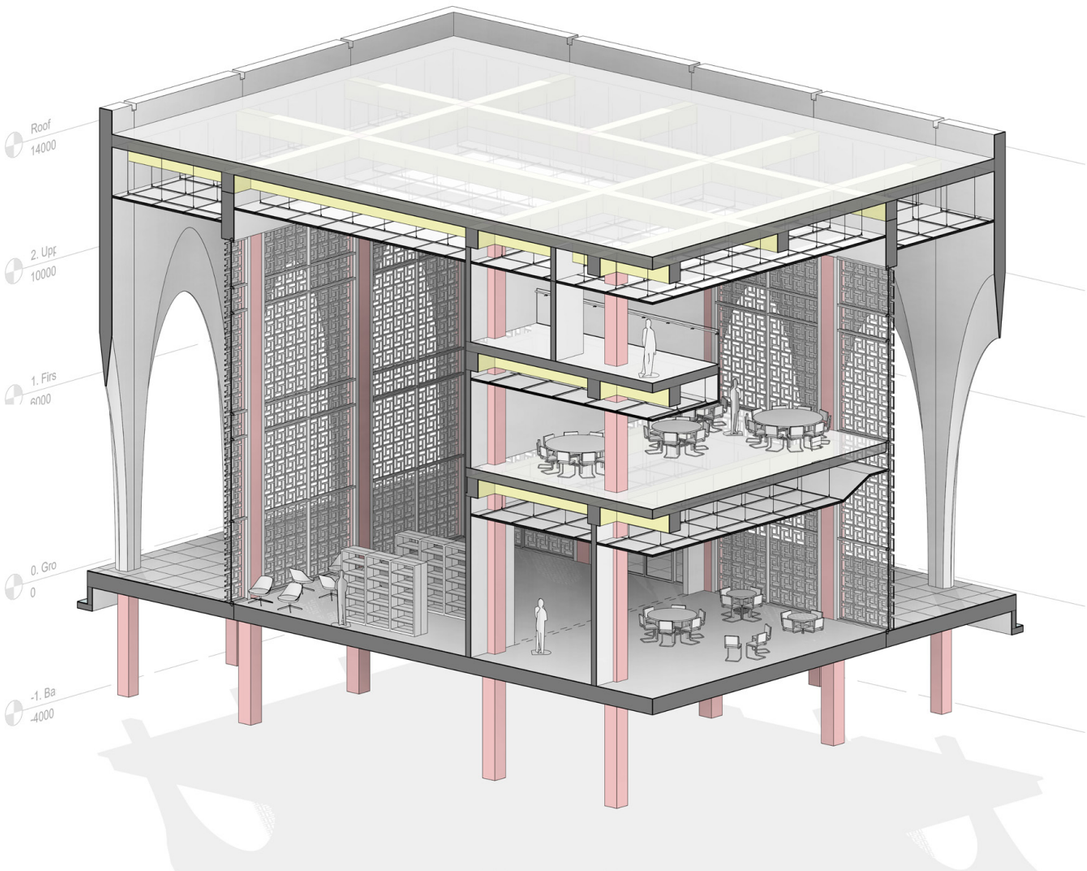


DIVIDING USES & LANDSCAPING

The building was split into two forms connected by an indoor walkway. The arcades were removed from the northern longer form. This form is now shaded by a mashrabiya screen system. The landscaping serves two functions, first, cool the area and second, better integrate the building into the site and context.

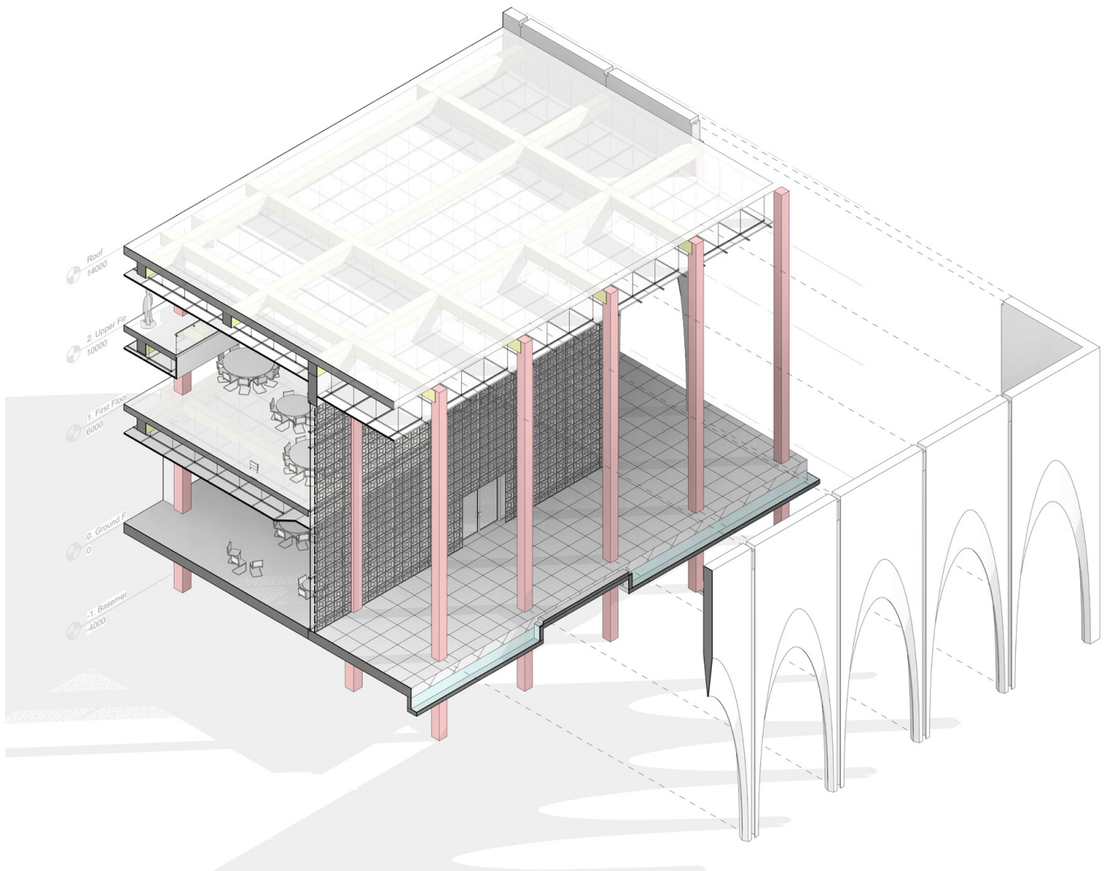


SITE PLAN



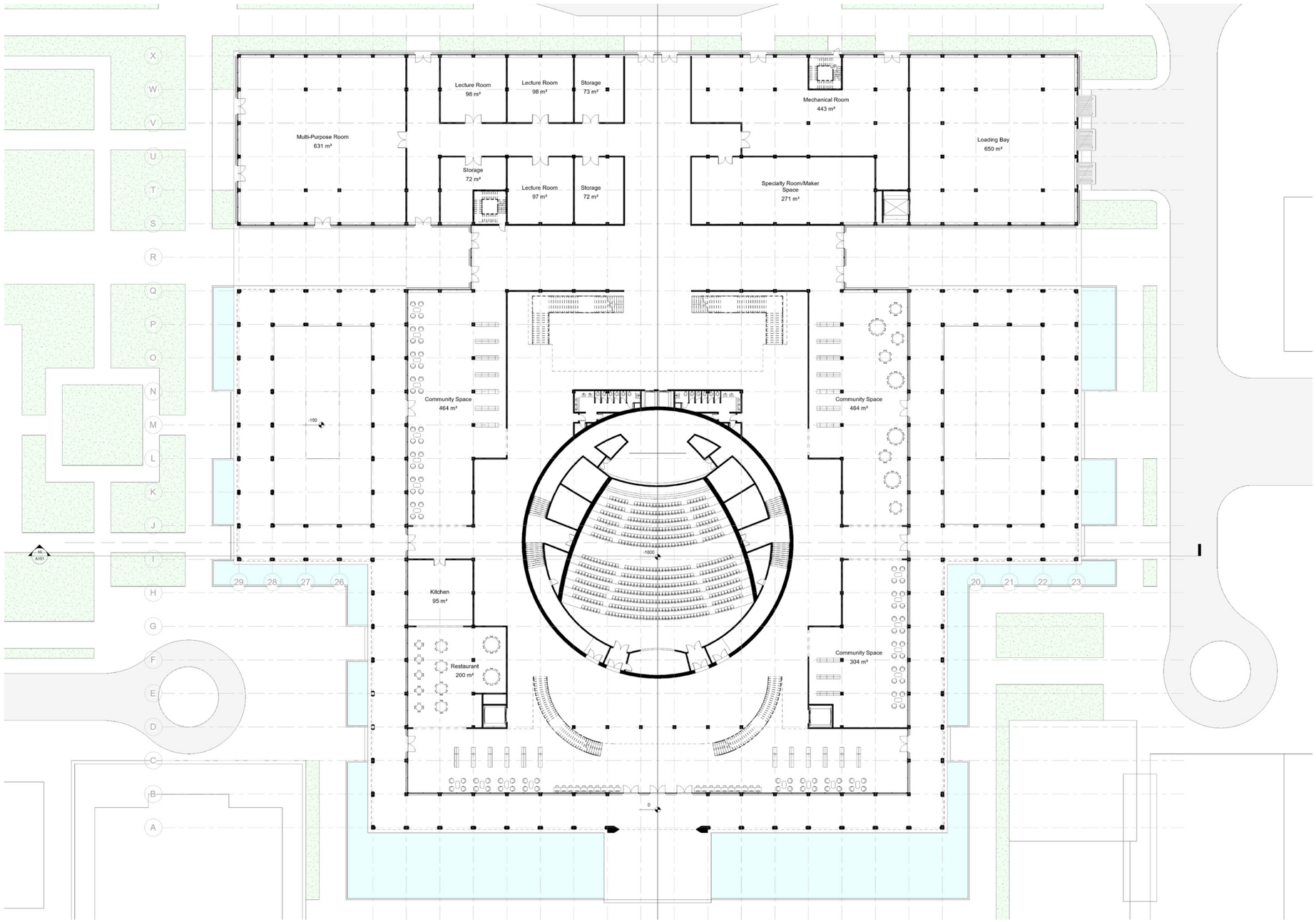
DETAIL SECTION

A 3D axonometric cutaway section showing the composition of the building.



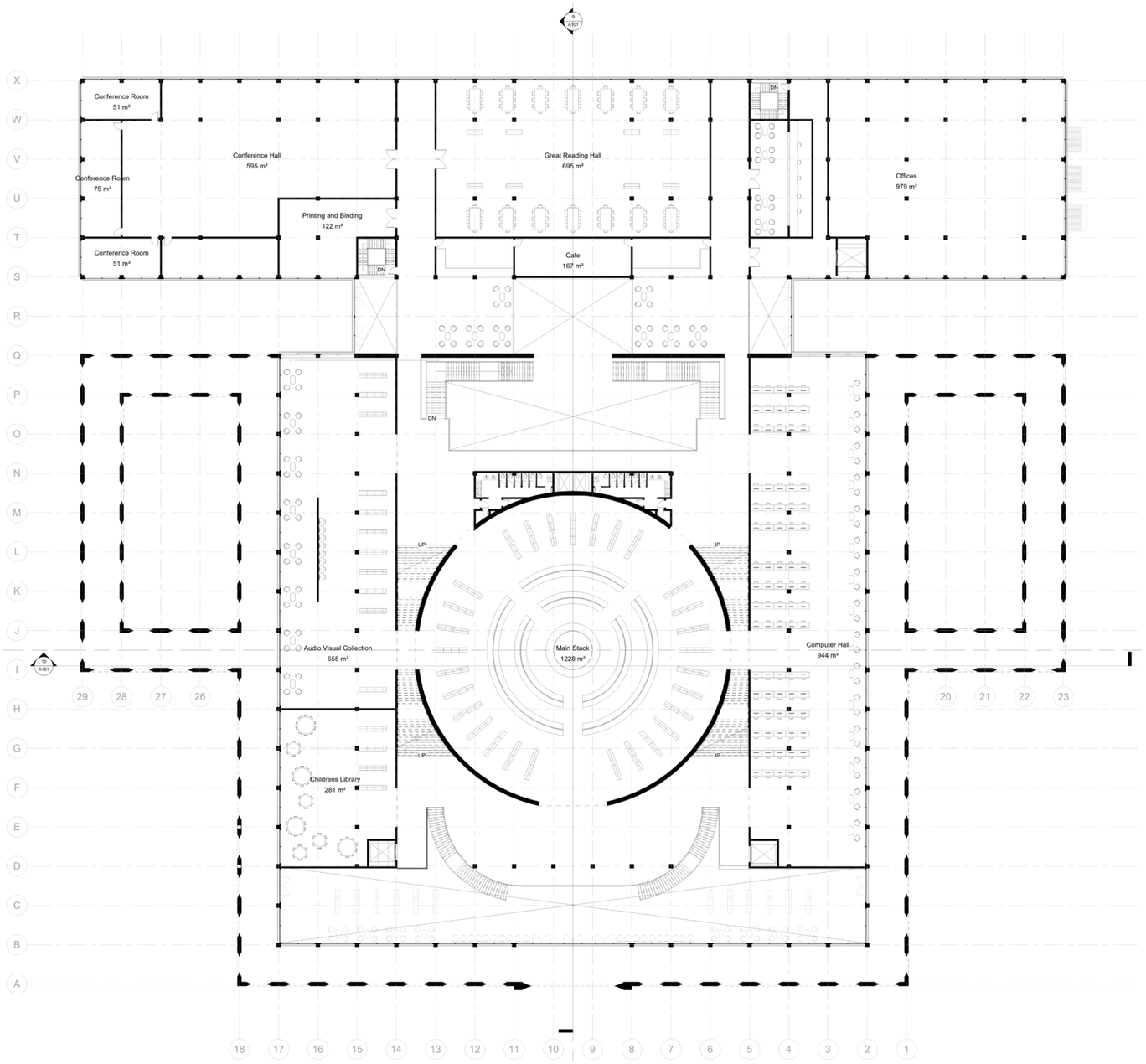
ARCADES DETAIL

A detail of the arched arcade showing the structure behind it and an idea of how it might be constructed.



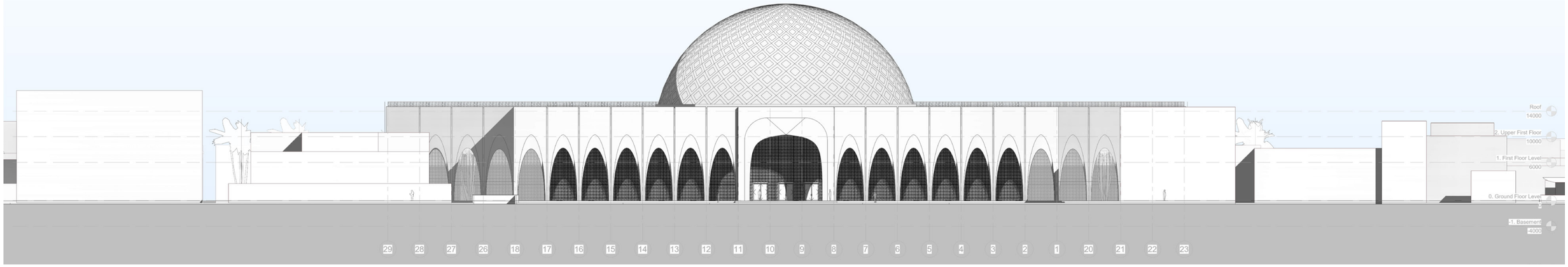
ENTRANCE AND ENTERTAINMENT LEVEL

GROUND FLOOR

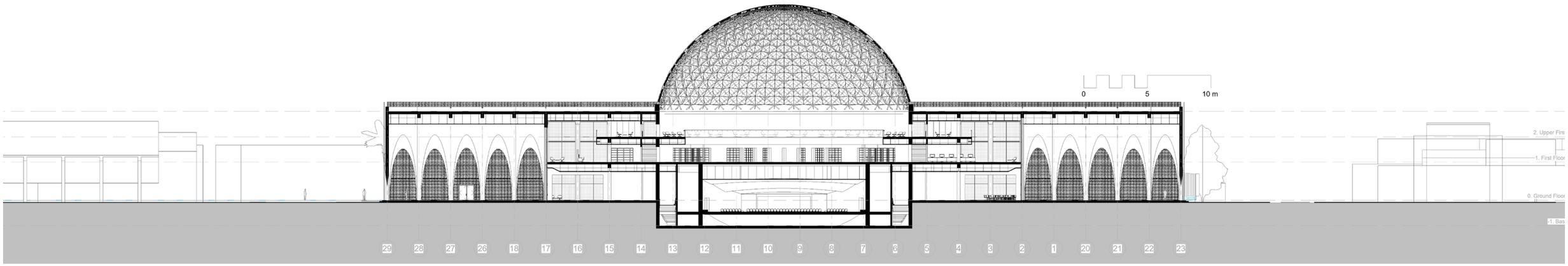


MAIN STACKS AND READING LEVEL

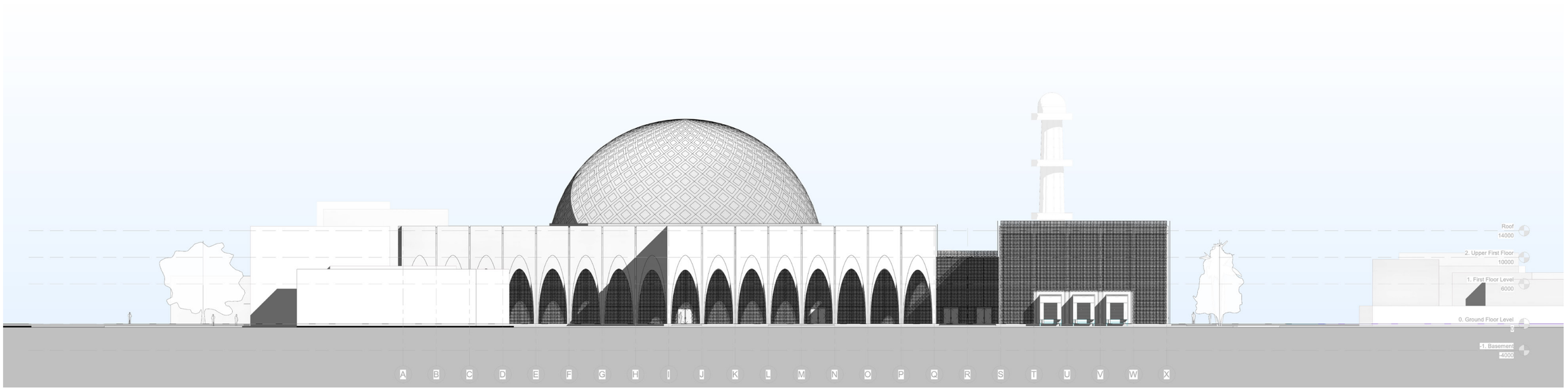
FIRST FLOOR



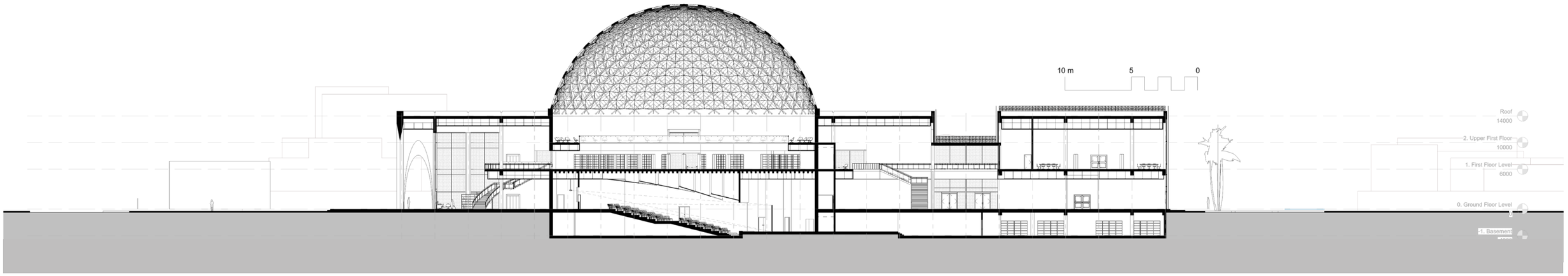
SOUTHERN ELEVATION
MAIN STREET ELEVATION



SECTION 1
THROUGH COURTYARDS



EAST ELEVATION
SECONDARY ENTRANCES



SECTION 2
THROUGH AUDITORIUM

2019 CORNICHE ROAD, ABU DHABI

THE FRAGMENTS TOWER

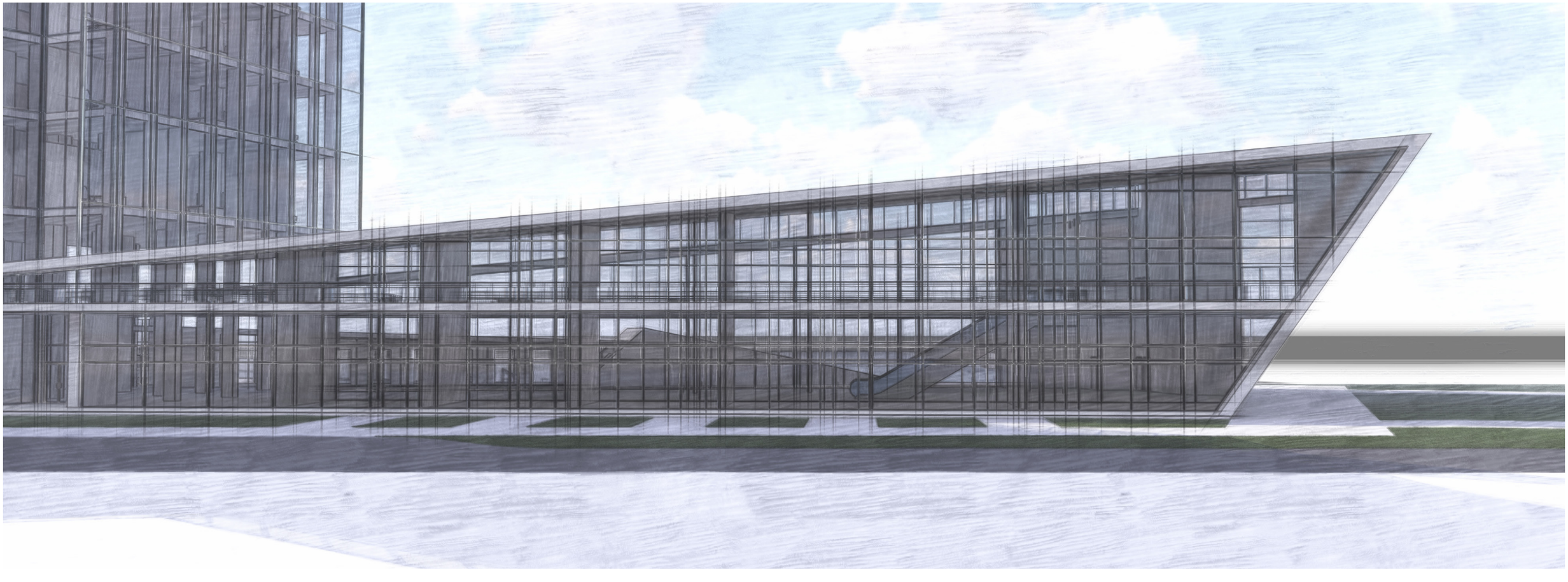
CONCEPT AND BRIEF

The Fragments Tower was a design proposal for a mixed-use high-rise tower located at the Corniche in Abu Dhabi. Over the course of 13 weeks, a 35 story, 176 meter tall tower was designed and developed.

The course for which this proposal was developed placed a heavy emphasis on vertical planning. Proposals were expected to solve planning and aesthetic issues stemming from placing different functions vertically.

The program required a tower with retail space in a podium, office space and 1, 2, 3, and 4 bedroom residential apartments, complete with all the facilities one would expect from a modern high-rise. Mechanical rooms, floors and basement parking were also required to be integrated.

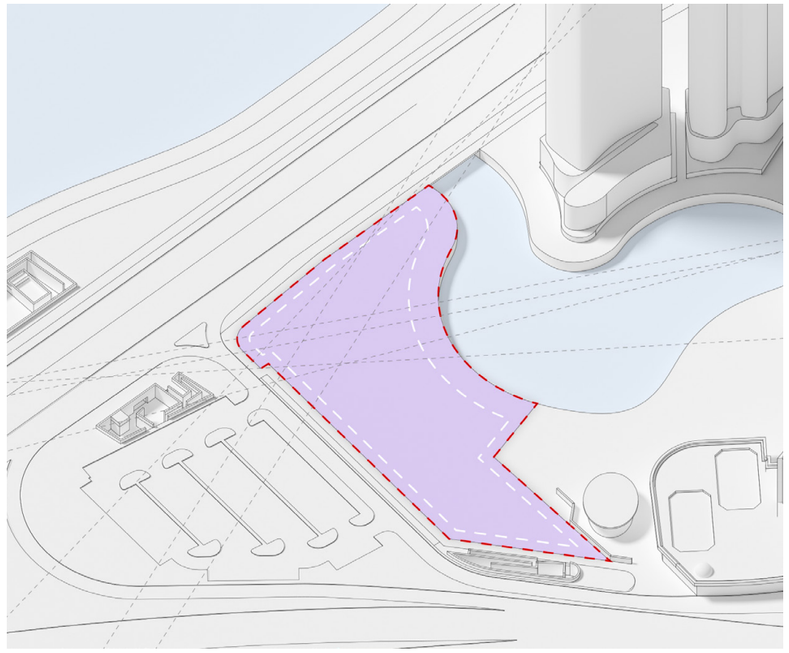
The tower was conceptualized as fragments of glass which emerge from the Abu Dhabi sand below. The idea came by arranging fragments of a broken mirror in some sand.



PROCESS AND FORM

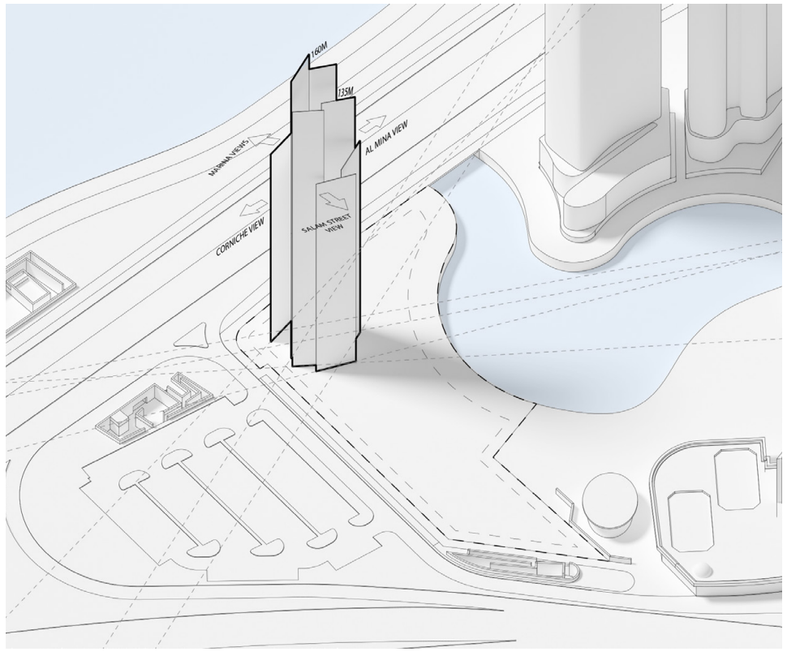
SITE AND AREA

The 11,582m² site was located at the point Corniche Road forks off to Salam Street which is a very important fork in Abu Dhabi as it connects to one of the main roads of the city to very busy highway. It looks straight down Corniche and Salam Street due to its unique location giving it amazing views of the city, the Corniche and the sea. This unique position also means our building will be visible from all ends of Abu Dhabi Island.



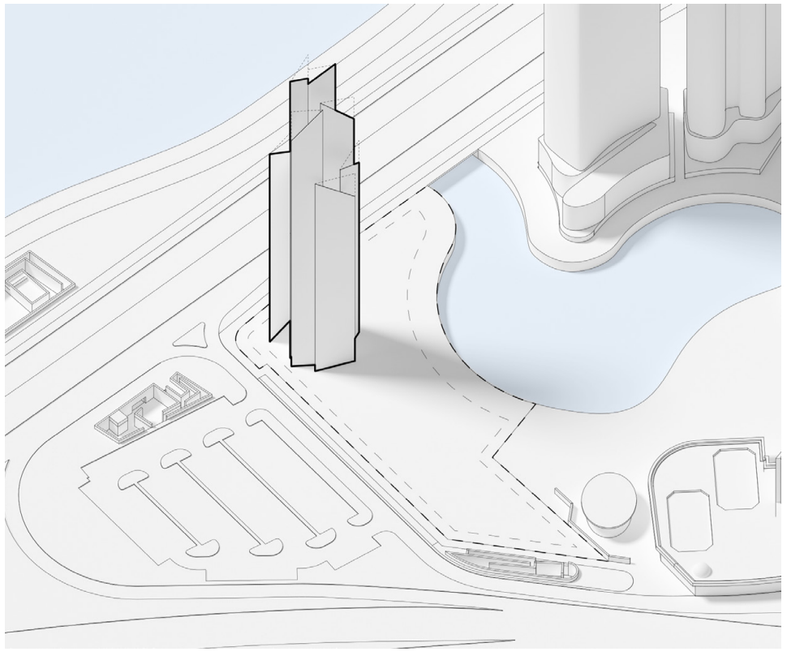
CONTEXT

In order to achieve the desired layered look to the building, lines were taken from around the site and city. Importance was given to views, landmarks, streets and buildings in the local neighborhood.



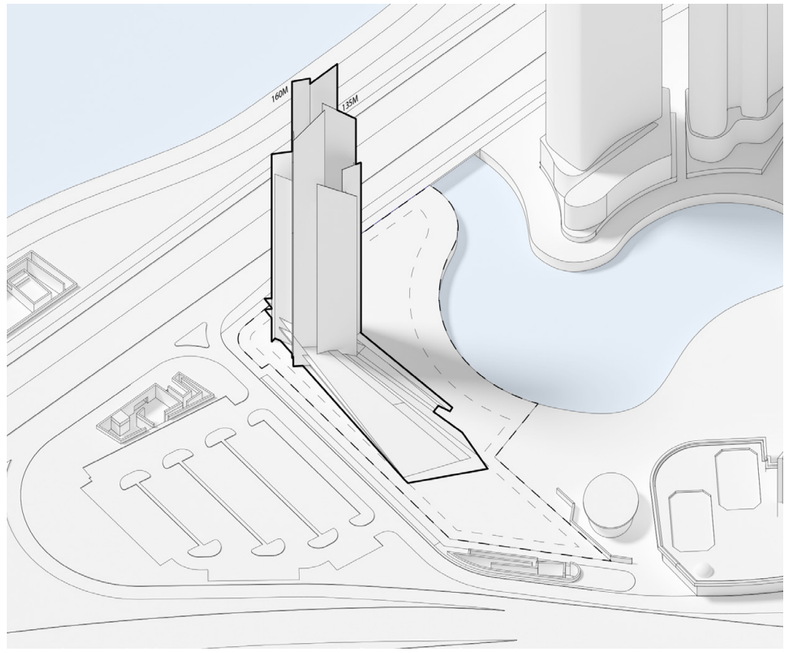
EXTRUSION

The context lines were then extruded up to varying heights to create varied and interesting "fragments". The rotations in the fragments create interesting side elevations as opposed to only interesting front and rear elevations. The fragments place emphasis on the verticality of the tower and make it seem slimmer than it is.



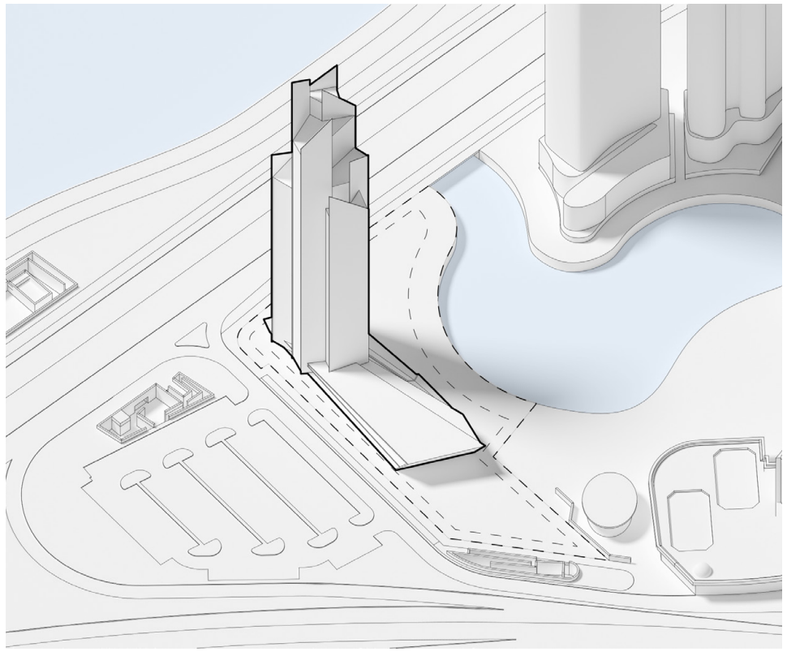
A BIT OF FLARE

Each fragment was given an angled top. This creates the effect of an unfinished tower and adds to the sense of a dynamic tower. Then some of the fragments were angled to a maximum of 5 degrees, again adding to the dynamism of the tower.



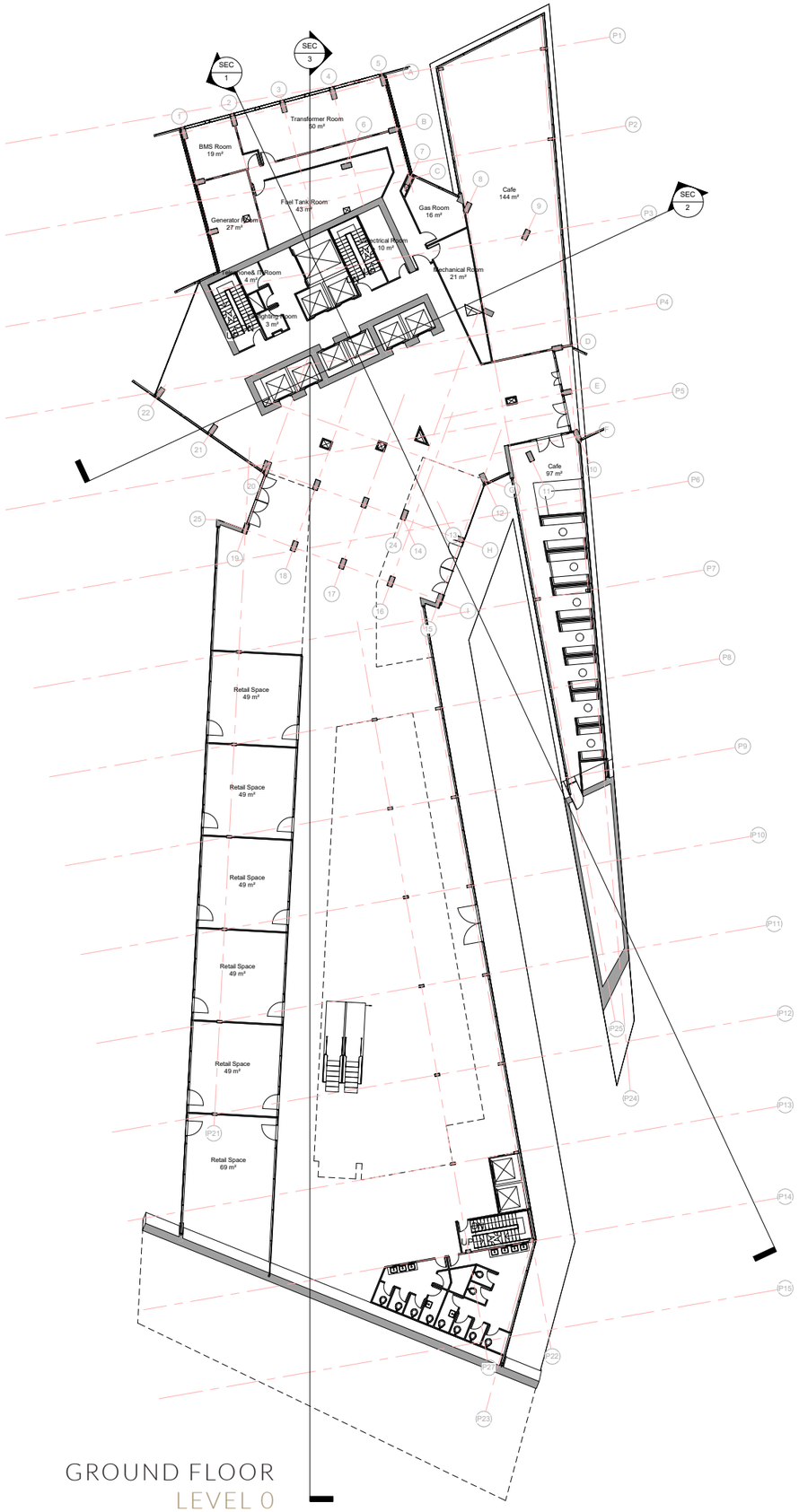
STEPPED PODIUM

The podium follows the same dynamic and angular design language as the tower. In addition, the podium is intersected by the tower giving the tower a strong connection to the ground. The podium responds to the slope of the site instead of ignoring it. It will consist of 3 levels, two above street level and one below street level but above sea level.

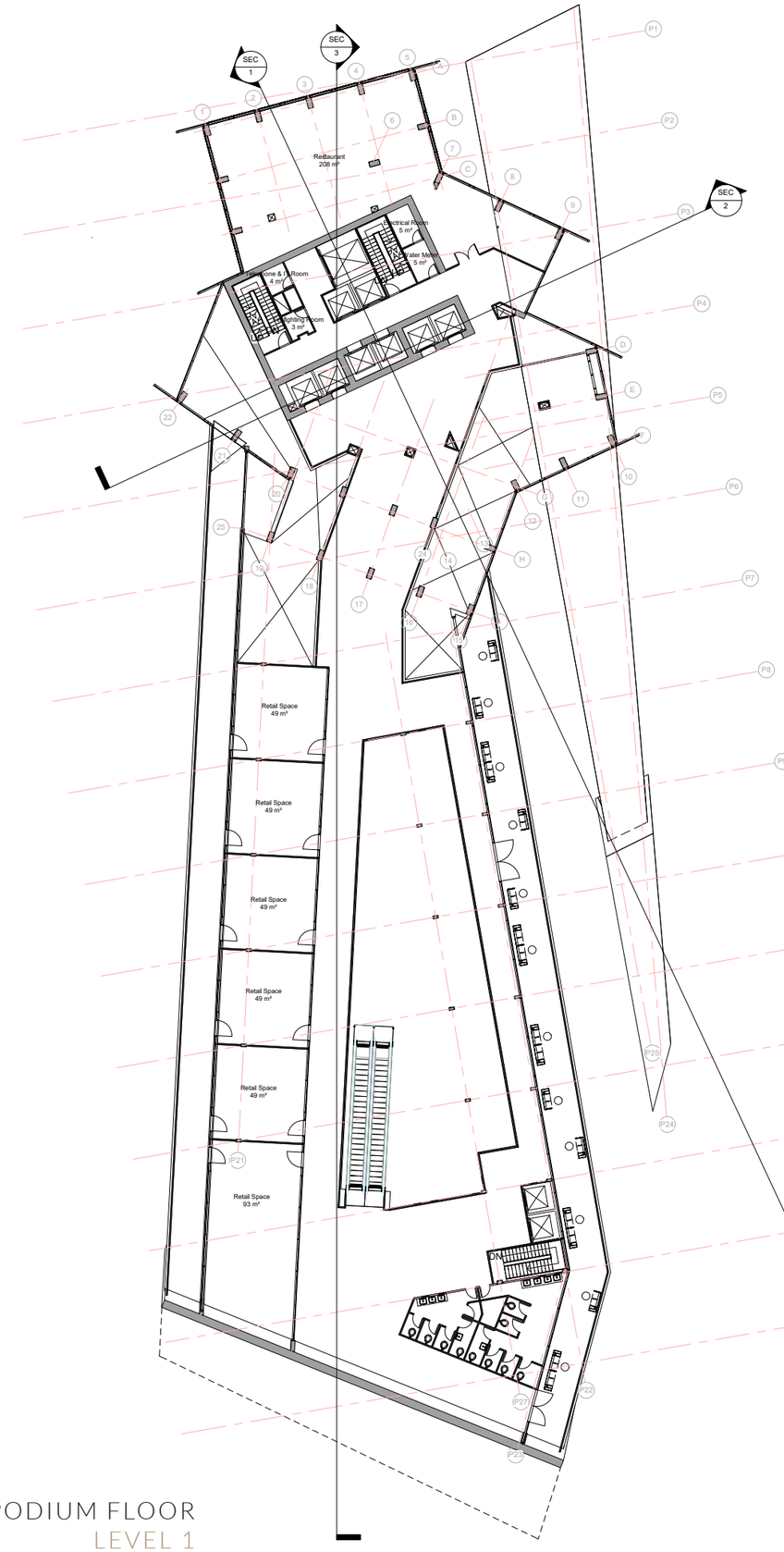


FINALIZED FORM

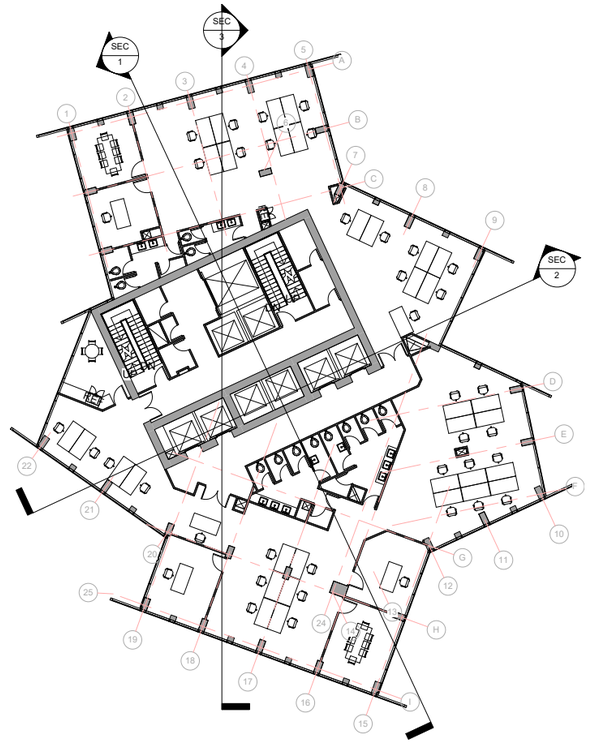
The podium was modified to rise instead of sink into the ground. This was done to create more usable space inside and, more importantly, create a more visible and striking piece of architecture in the area. In addition, the tower was finalized with some modifications to the heights of the fragments and closing the areas in between to create the indoor spaces required.



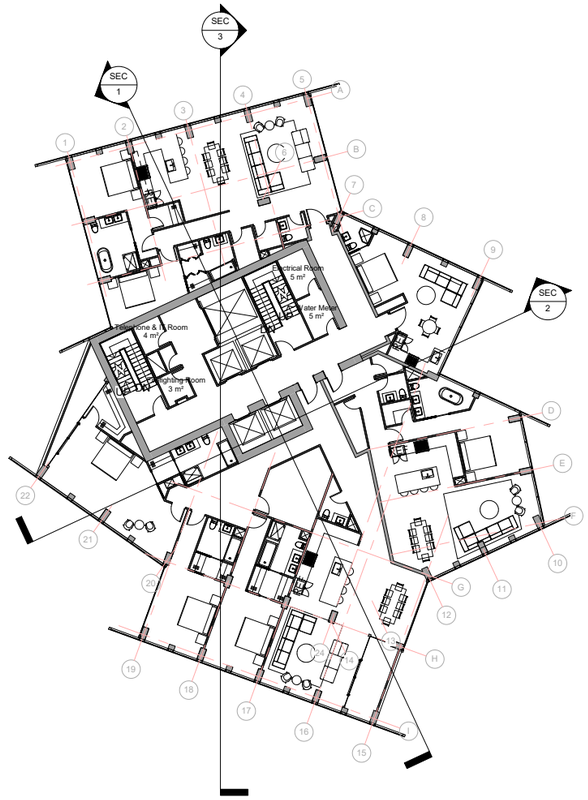
GROUND FLOOR
LEVEL 0



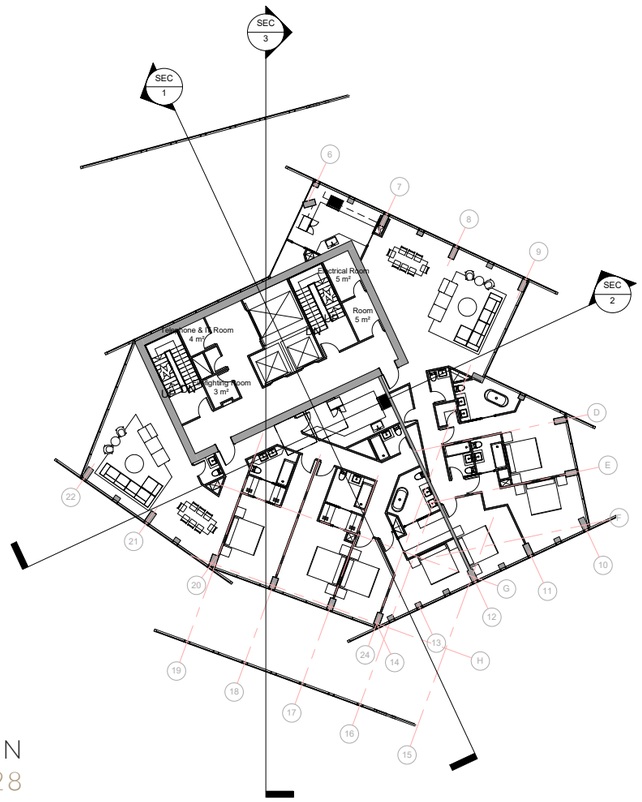
PODIUM FLOOR
LEVEL 1



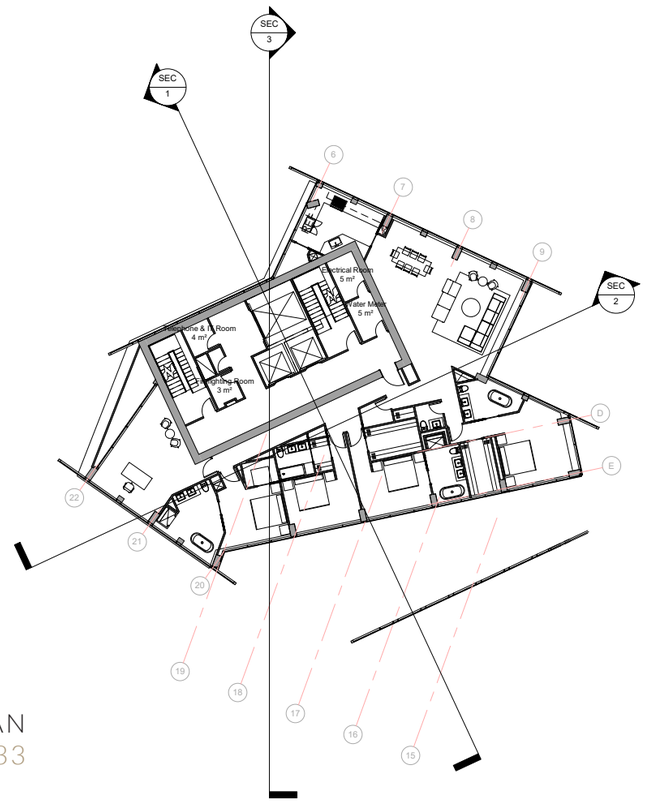
OFFICE PLAN
LEVELS 2-12



RESIDENTIAL PLAN
LEVELS 13-23

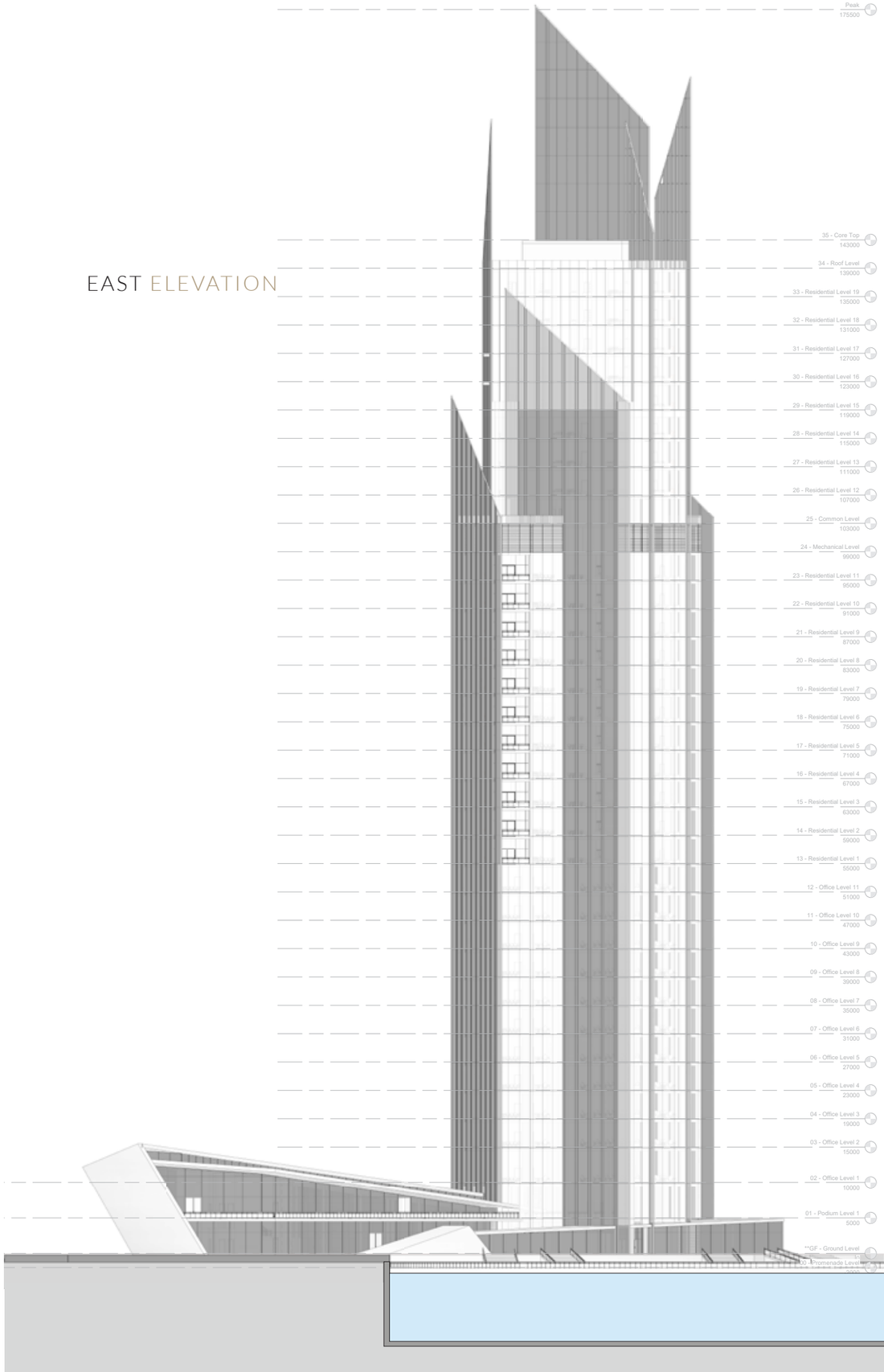


RESIDENTIAL PLAN
LEVELS 26-28

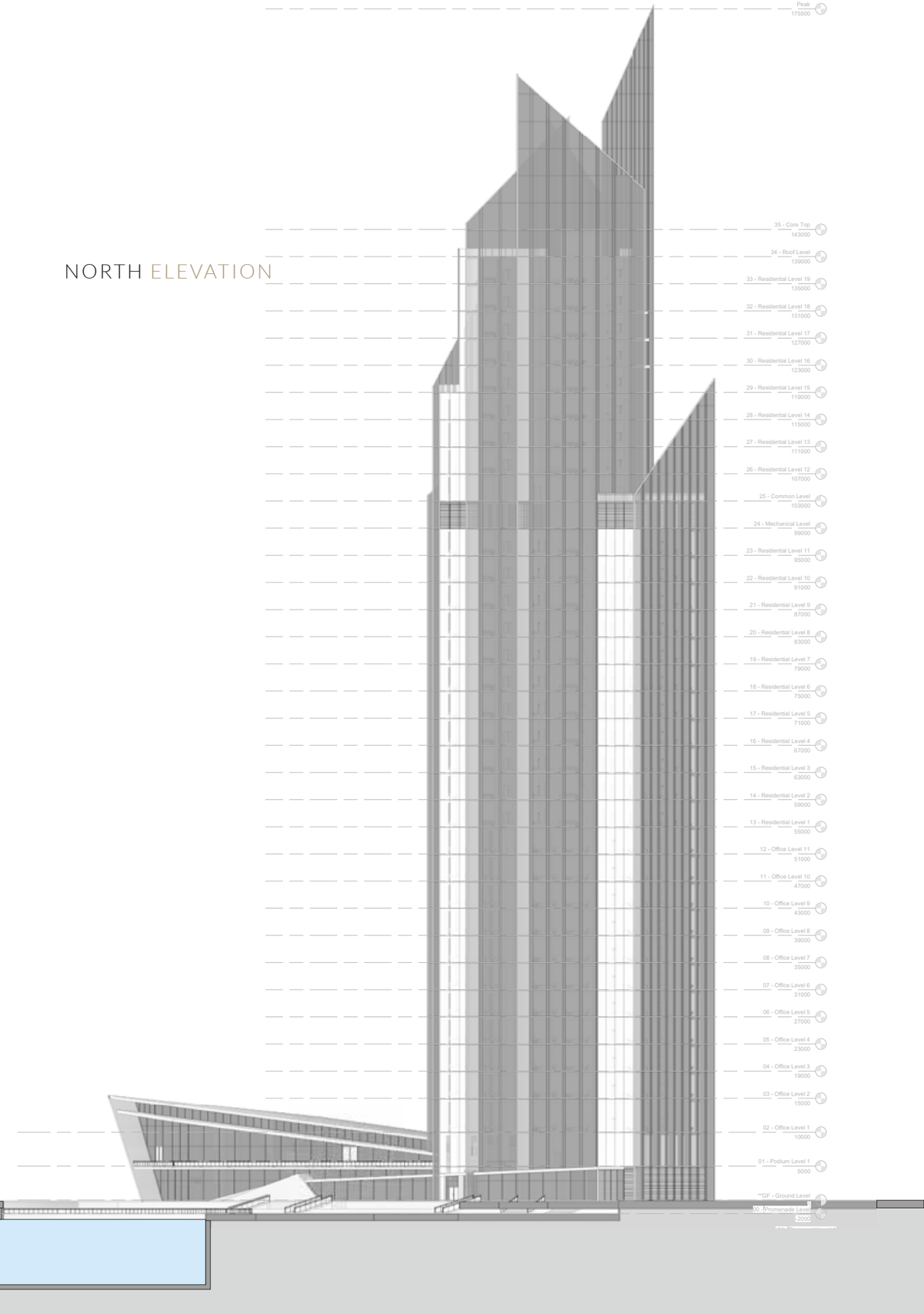


RESIDENTIAL PLAN
LEVELS 29-33

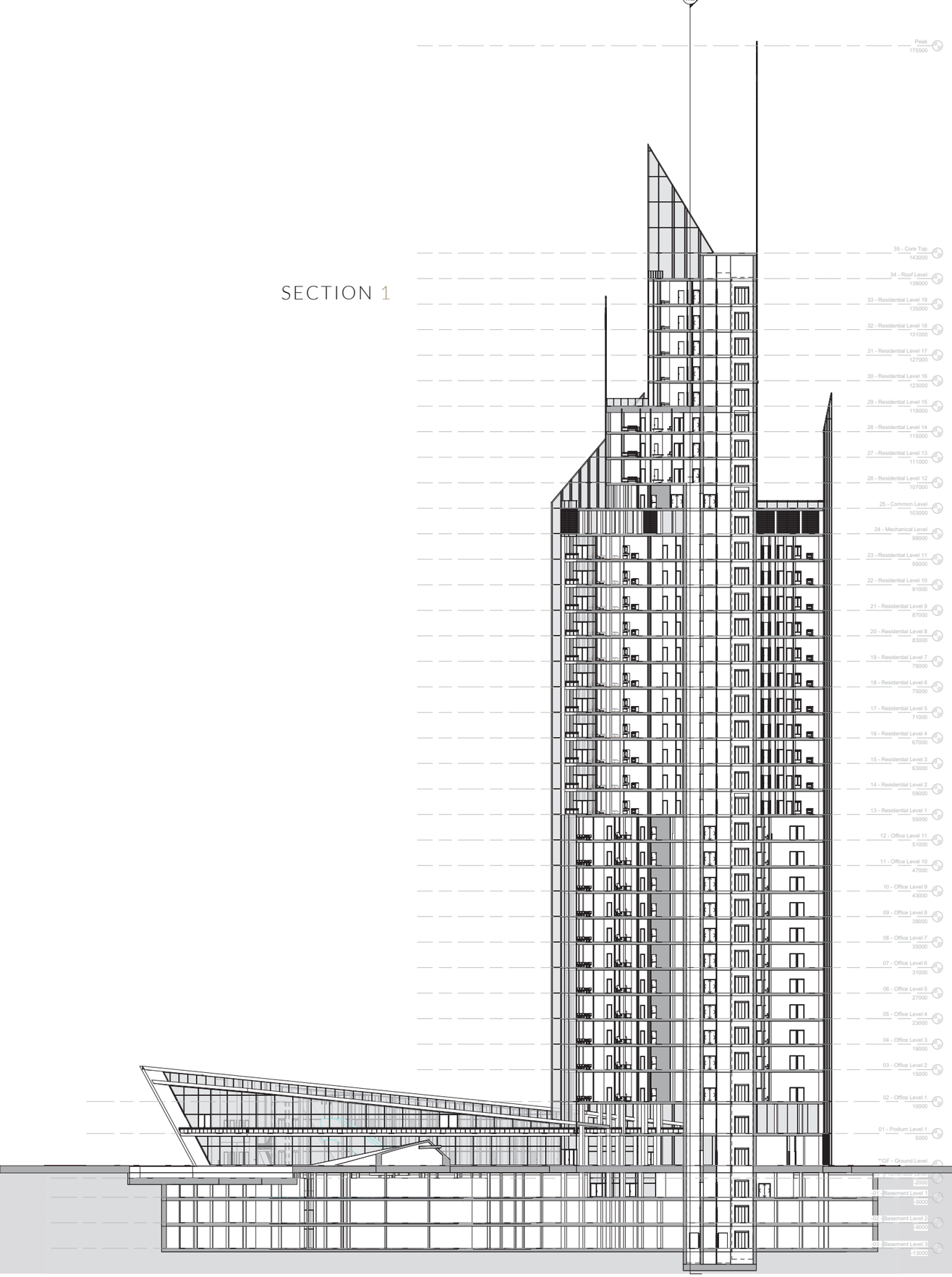
EAST ELEVATION



NORTH ELEVATION



SECTION 1



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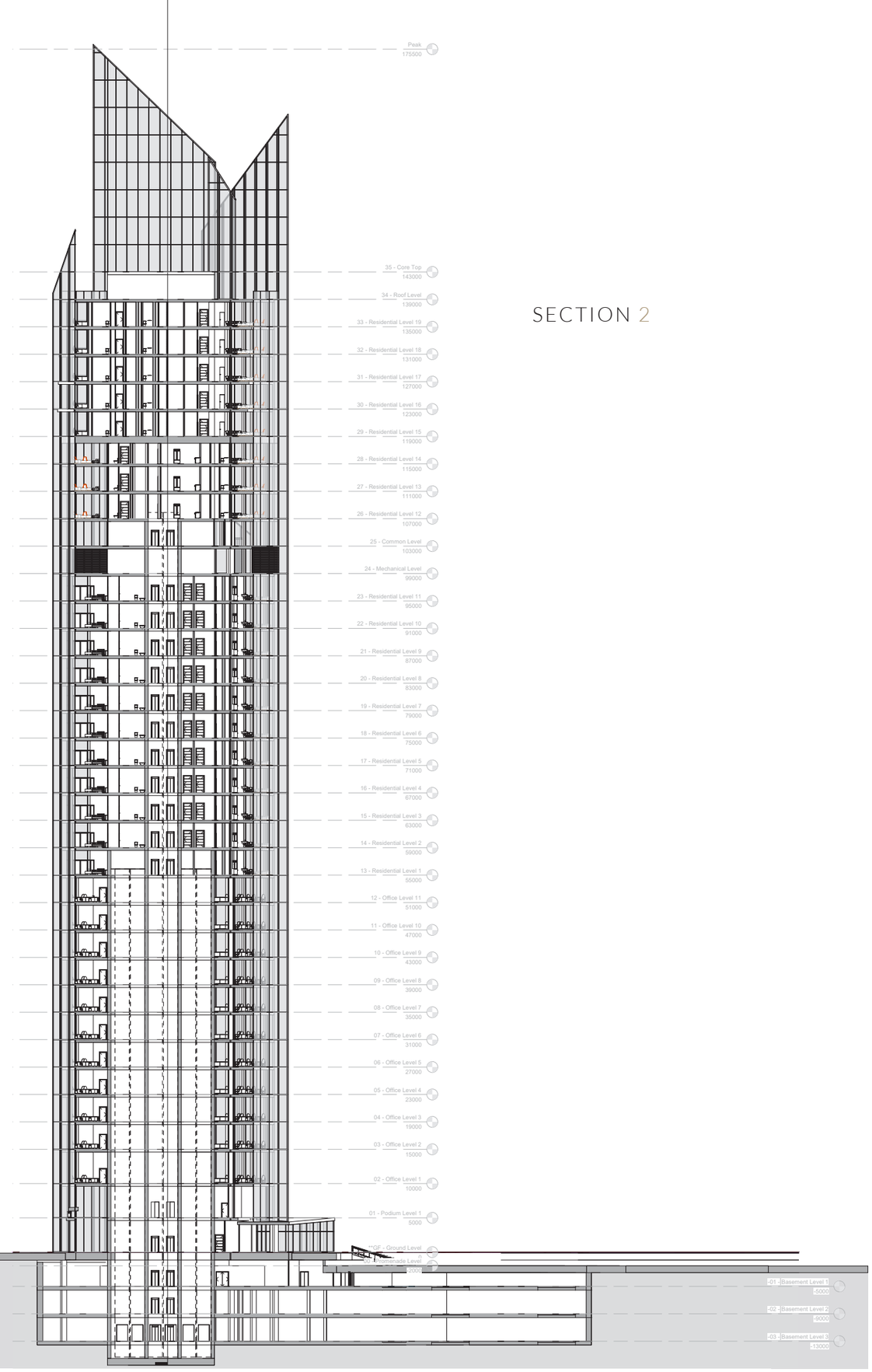
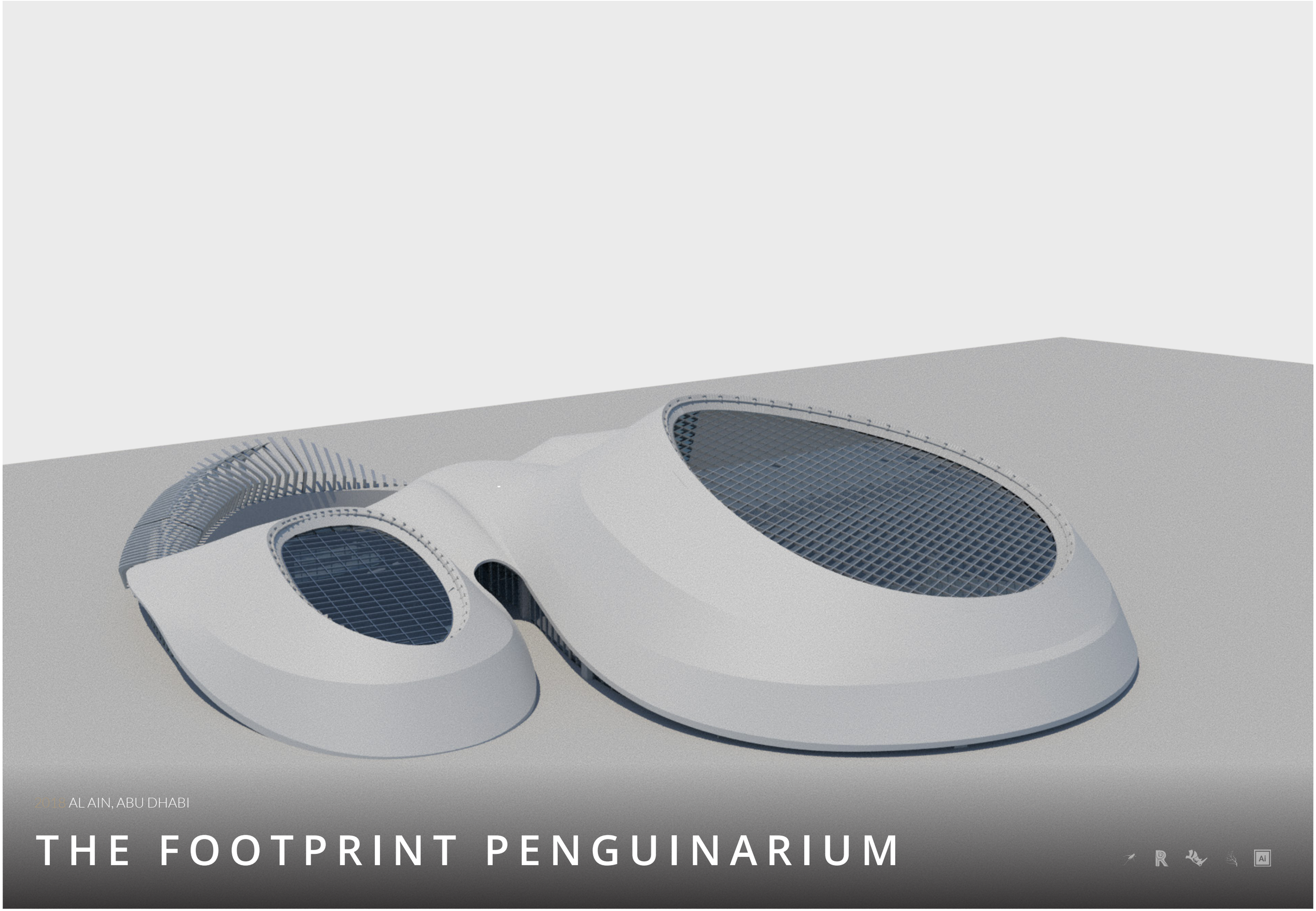




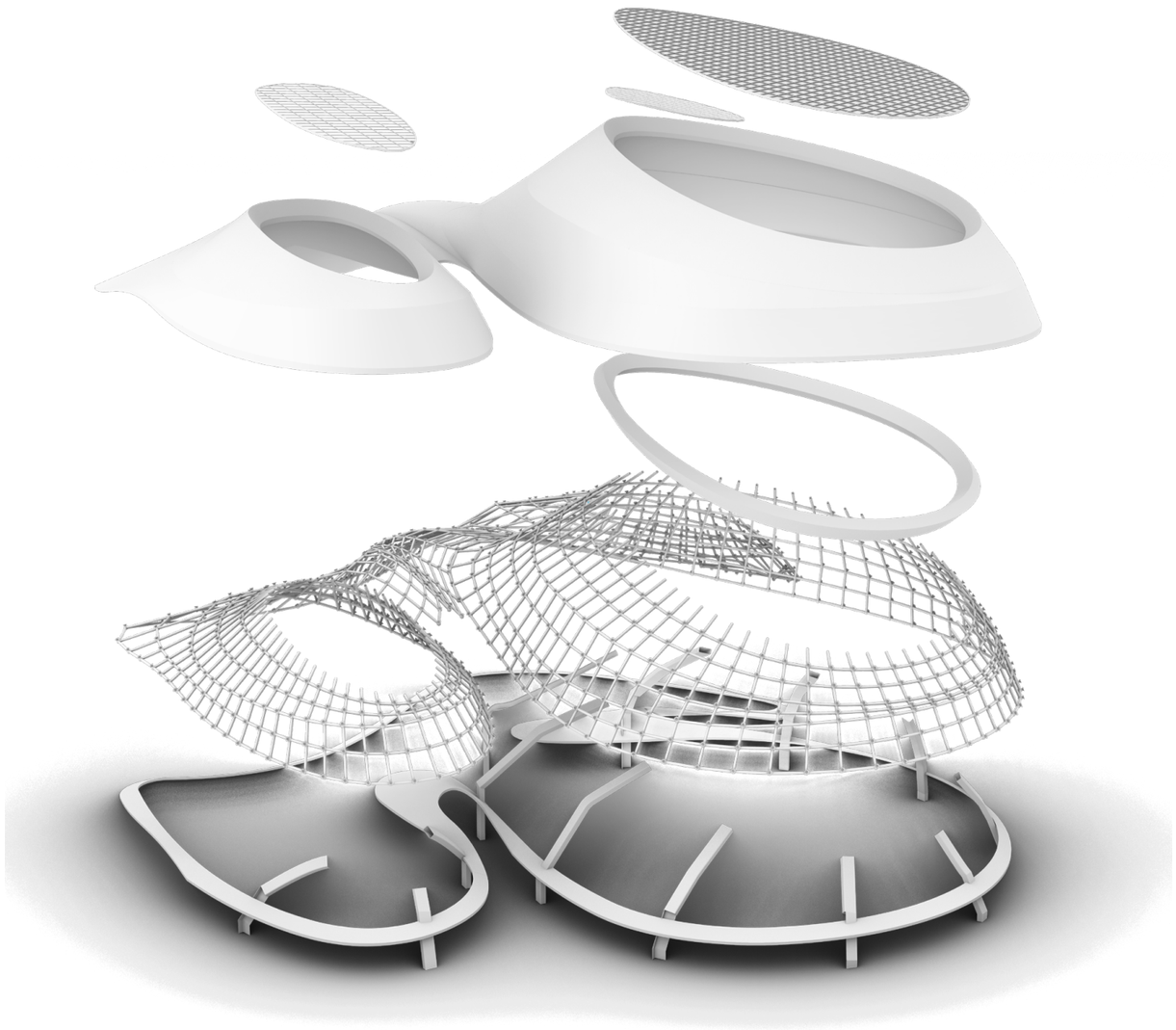
2018 AL AIN, ABU DHABI

THE FOOTPRINT PENGUINARIUM

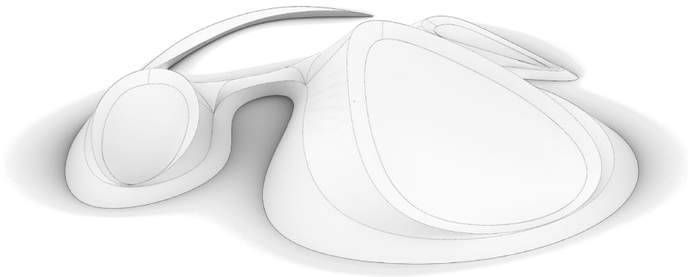
CONCEPT AND BRIEF

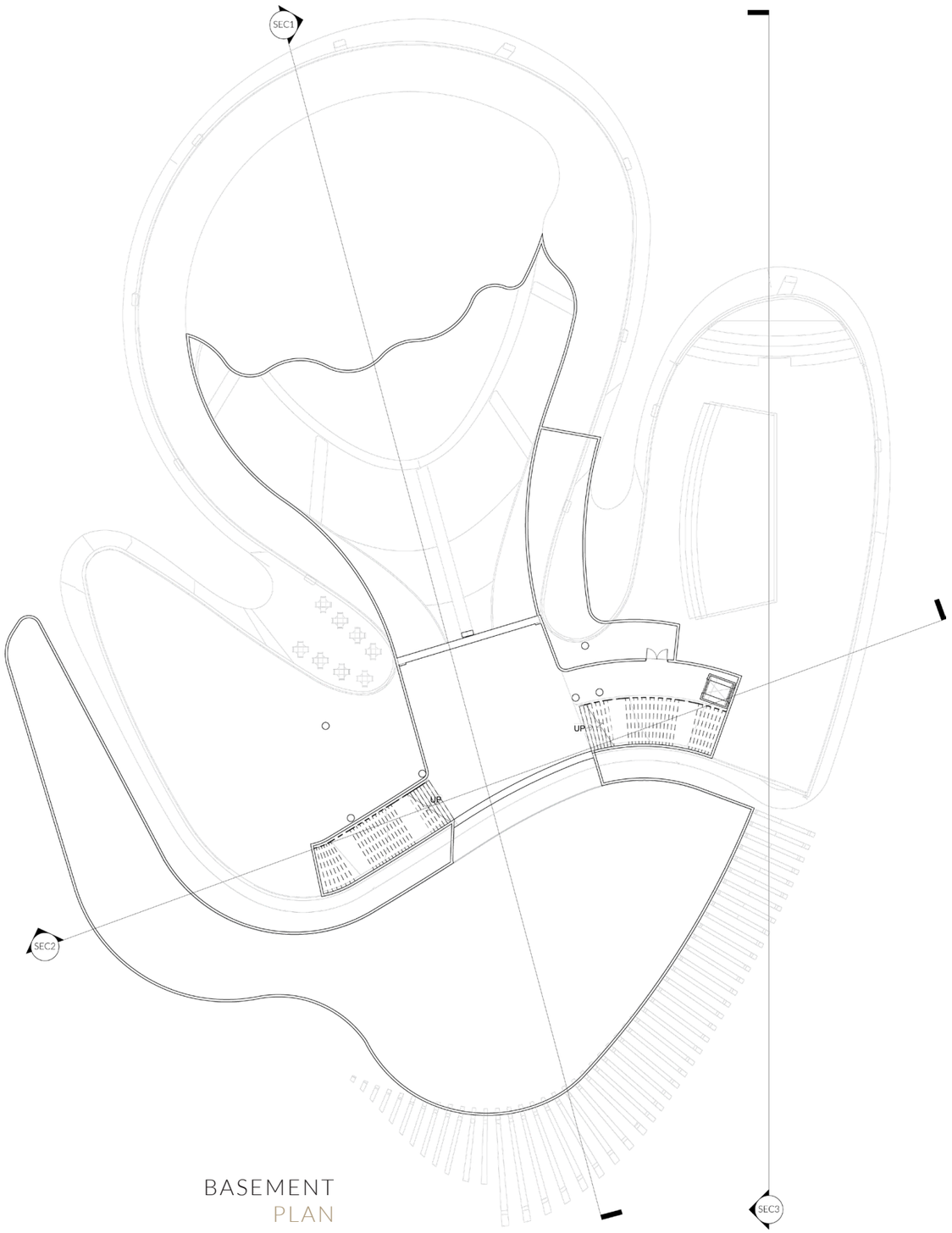
The Footprint was inspired by, you guessed it, the footprint of a penguin. From the inception of the idea the goal was to make the footprint of the building mimic the footprint of a penguin. The goal was achieved by creating three dome shaped forms or varying sizes. Each dome imitates one toe of the penguin's footprint. To complete the concept of a footprint in plan, ribbed shading elements begin before the entrance. These ribs create an obvious and interesting entrance to the building. On one side of the ribs is the external penguin exhibition area and on the other is a beautiful view of Al-Ain's mountains. Additionally, the ribs provide shading to the southern façade of the building.

Sunlight is indirectly diffused into the building with the three north facing skylights mounted on each of the domes. Load is transferred though a combination of steel mesh and concrete structures.

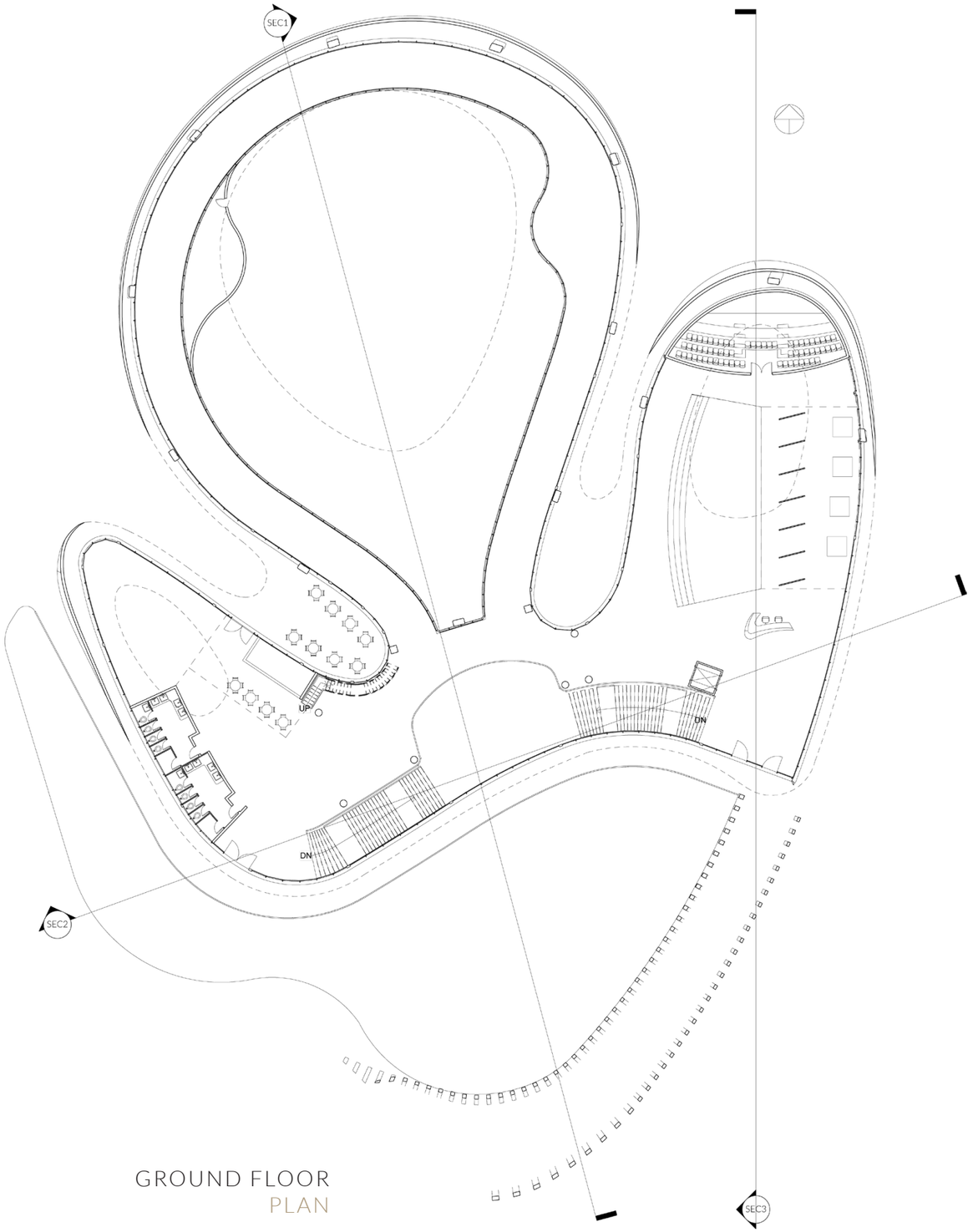


CONCEPT FORM EVOLUTION

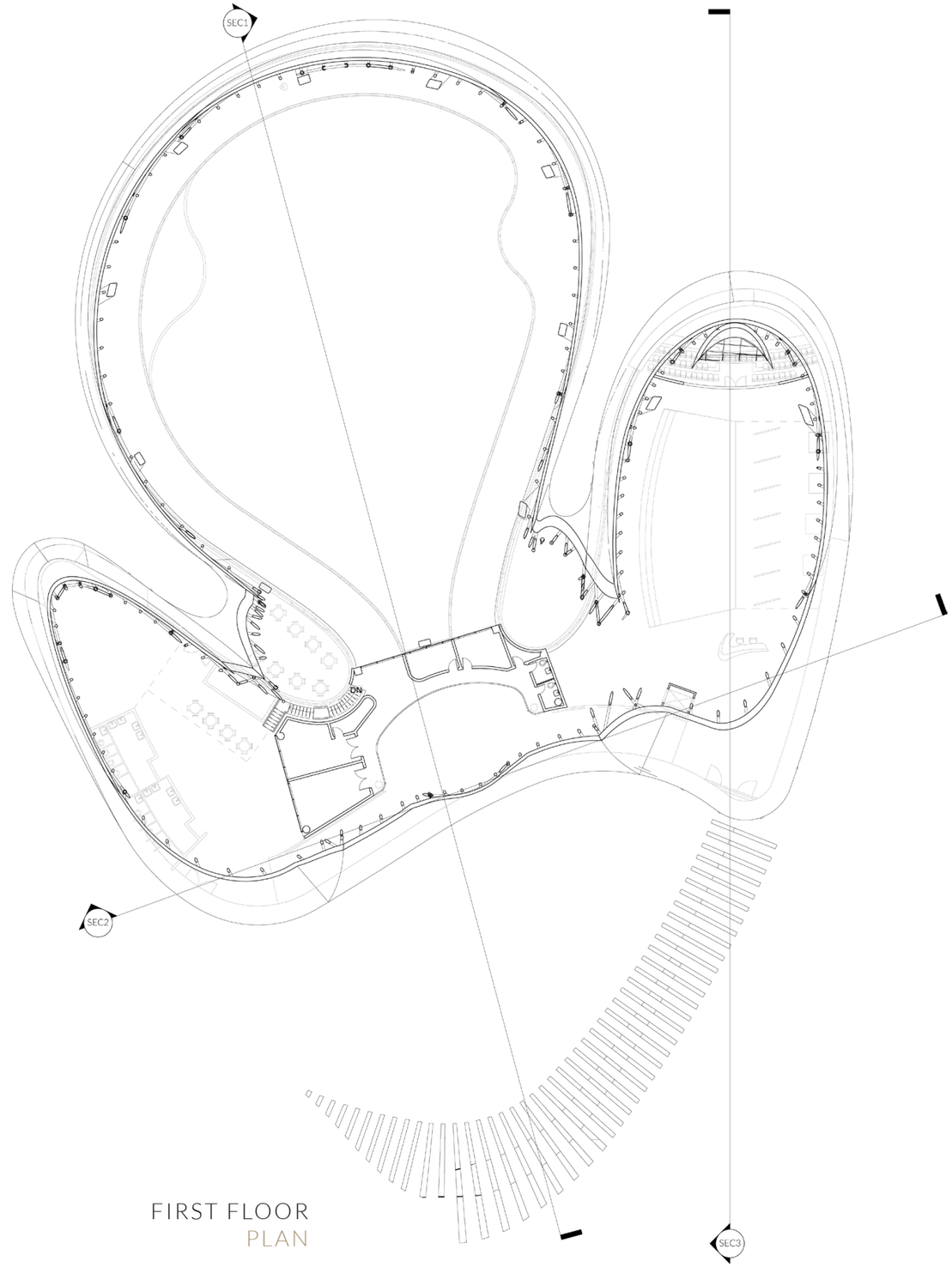




BASEMENT
PLAN

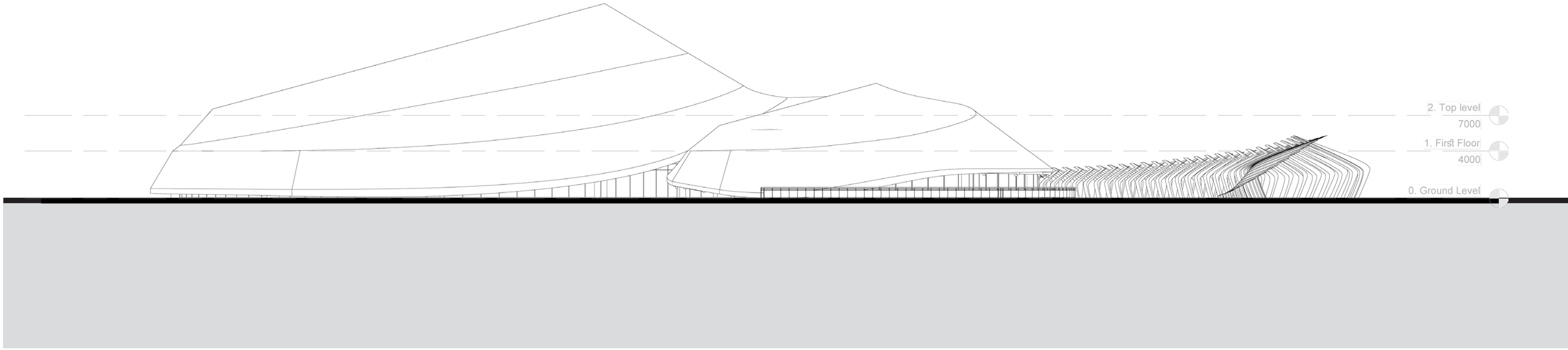


GROUND FLOOR
PLAN

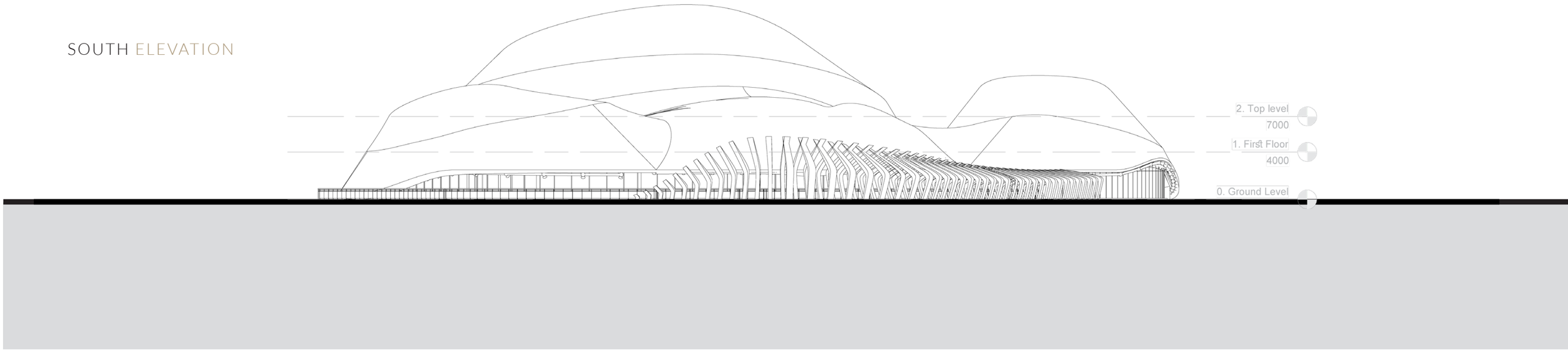


FIRST FLOOR
PLAN

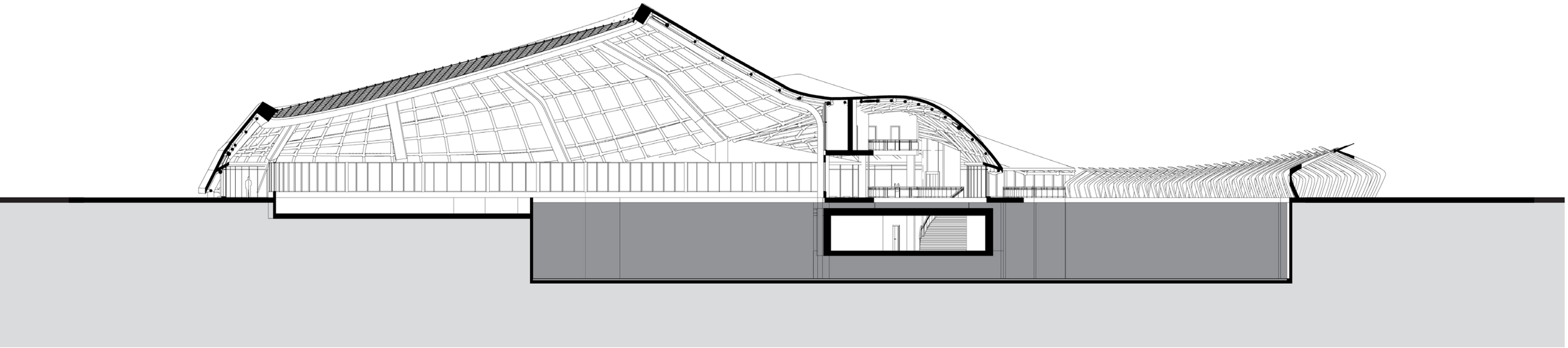
EAST ELEVATION



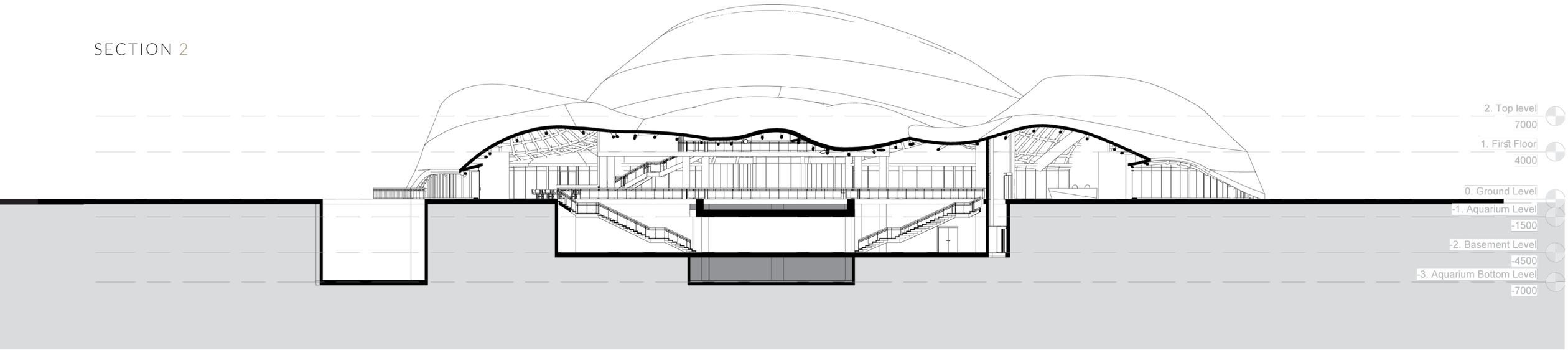
SOUTH ELEVATION



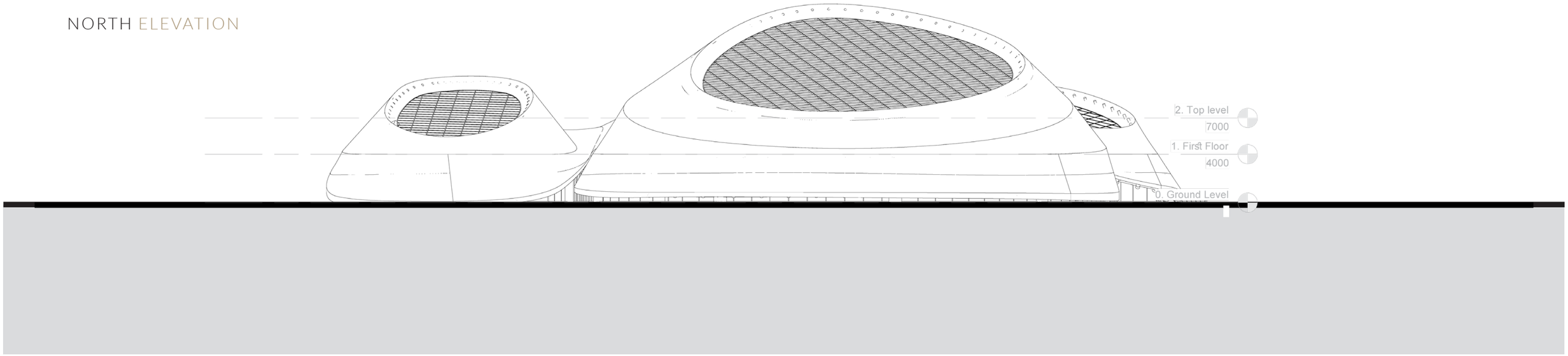
SECTION 1



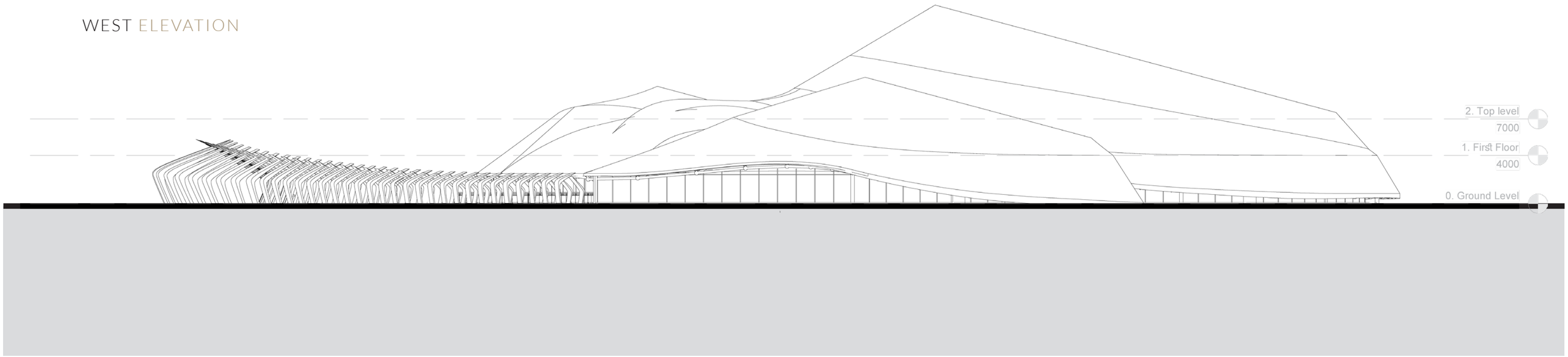
SECTION 2

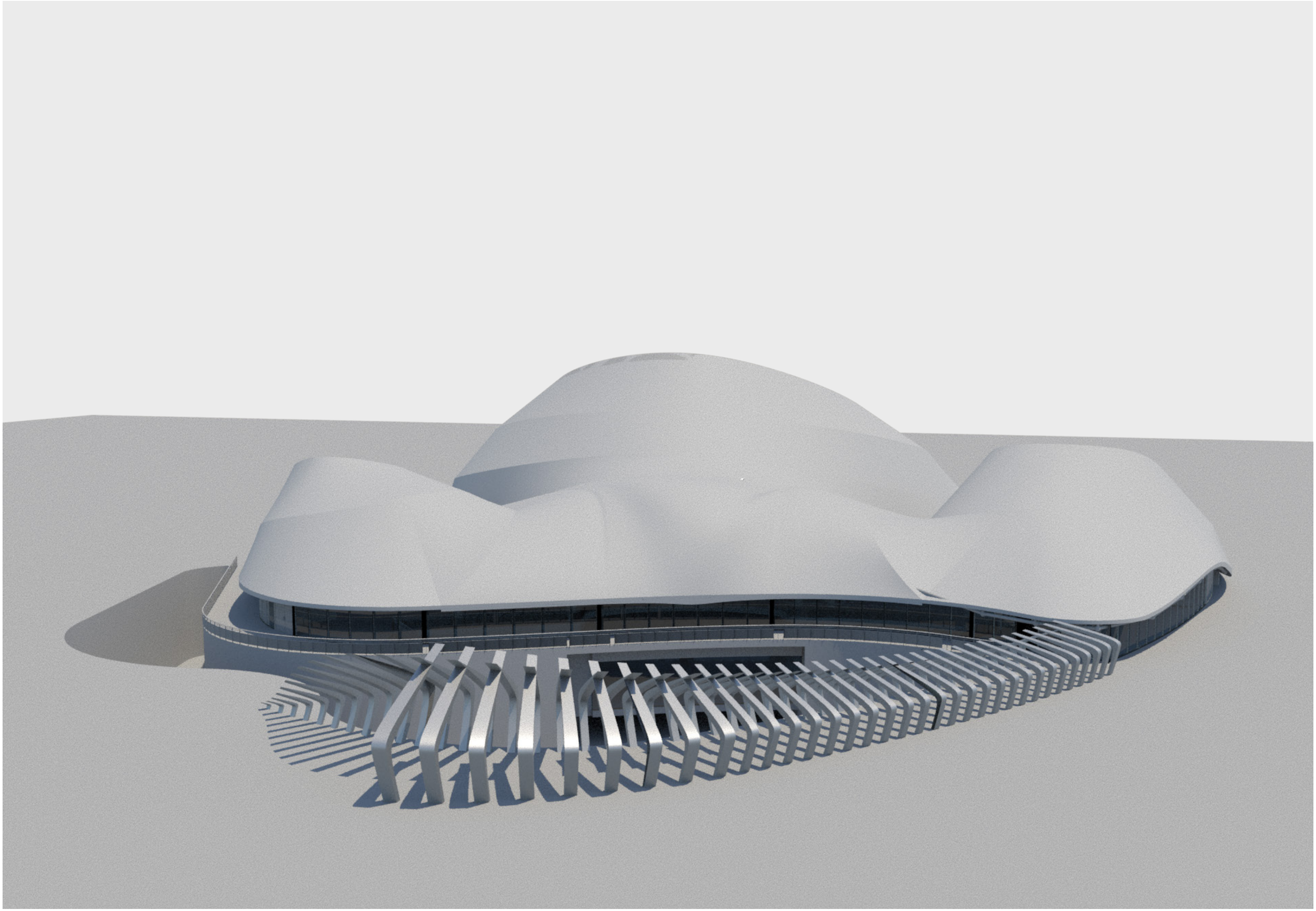


NORTH ELEVATION



WEST ELEVATION





2019 S'ADIYAAT MARINA DISTRICT, ABU DHABI

THE GARDEN OF GARDENS

CONCEPT AND BRIEF

PROGRAM

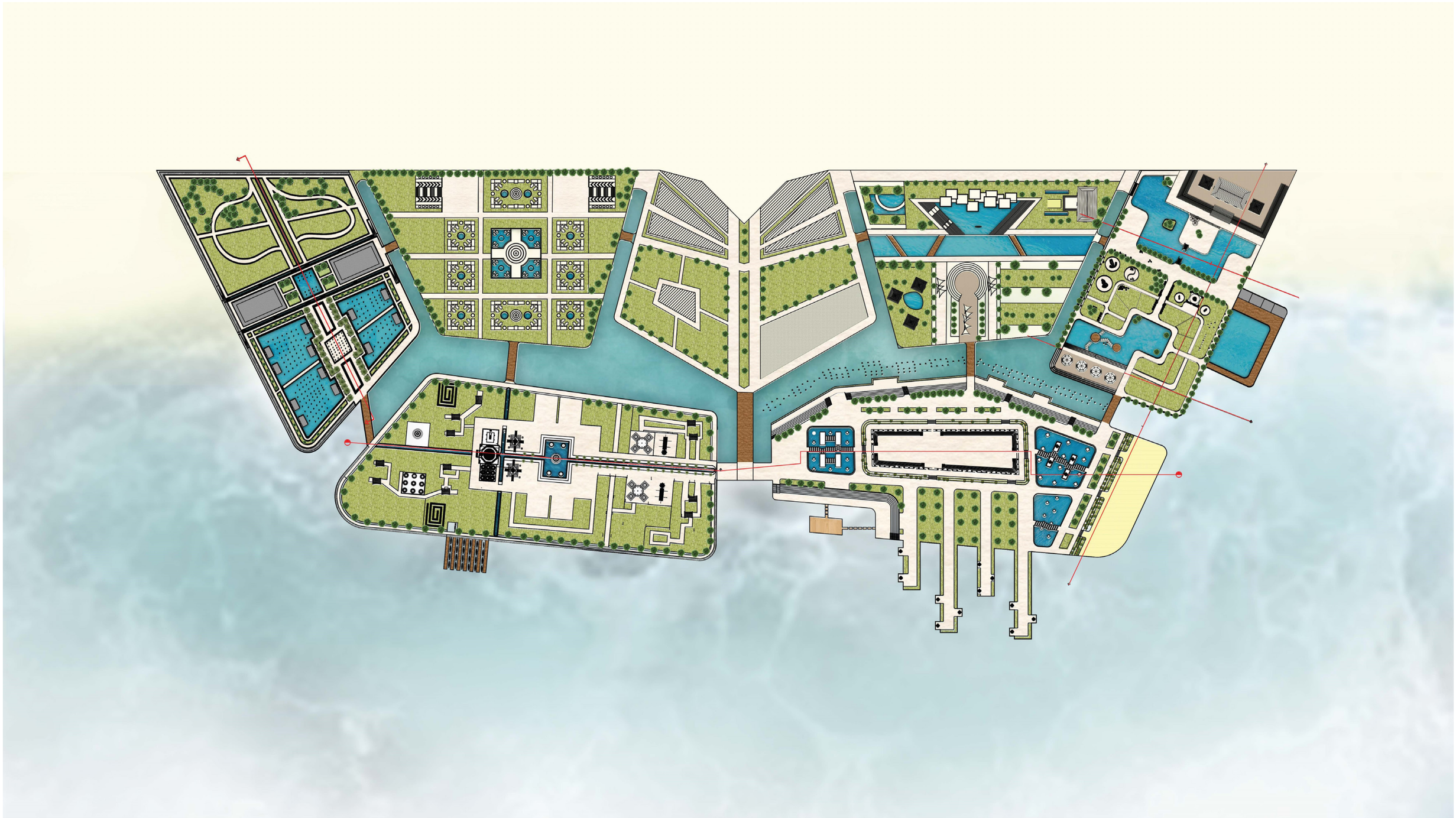
This studio was divided into two projects, a group project and an individual project. The group phase involved planning the given site whereas the individual phase focused on a specific area of the site planned in the previous phase.

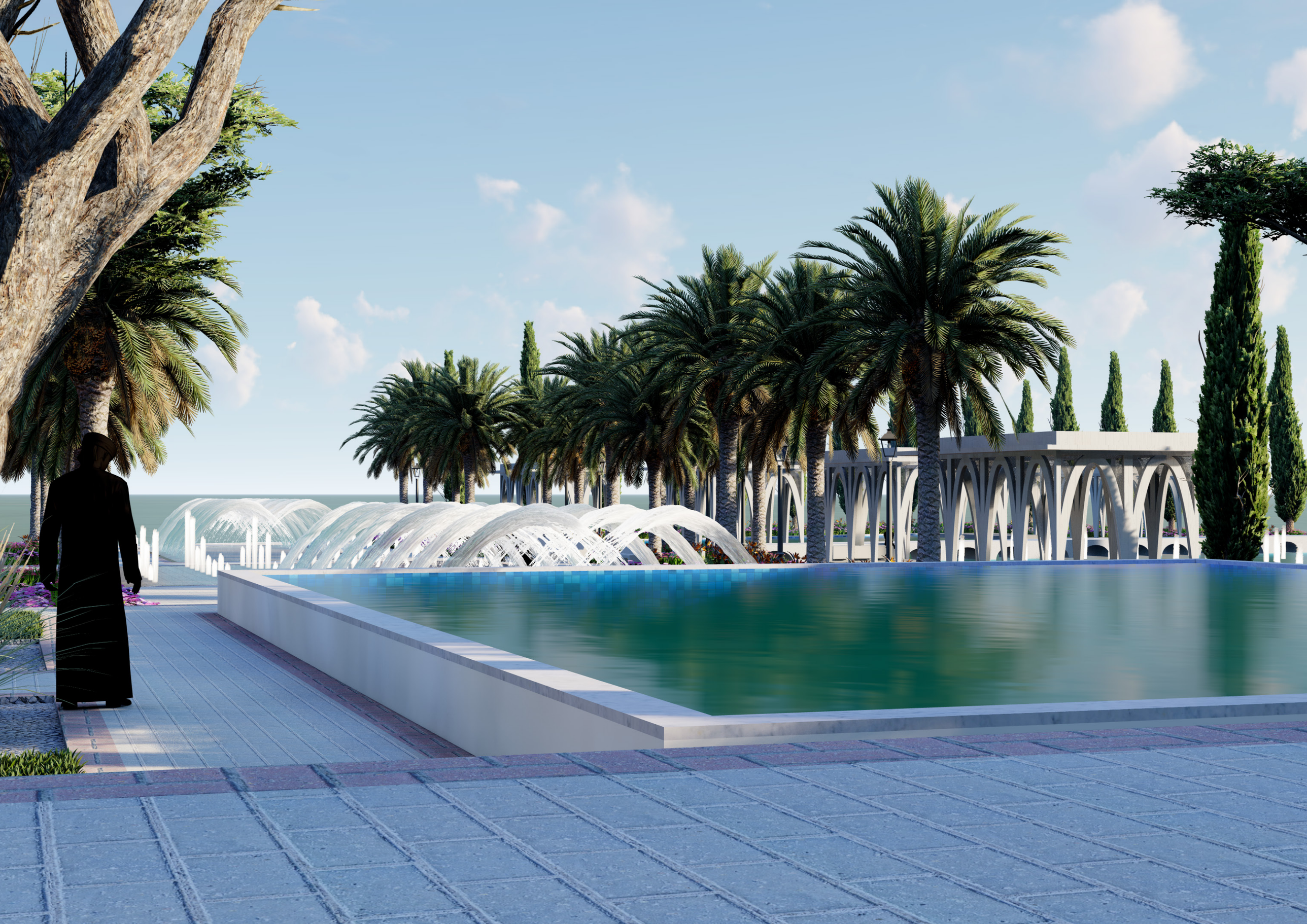
DESIGN FRAMEWORK AND PLANNING

During team brainstorming sessions, we decided we would divide our site into several smaller gardens. Each garden represents a different kind of garden from cultures all around the world. This reflects the acceptance of the United Arab Emirates of all sorts of different cultures from all over the world. The gardens planned were:

- The Mughal Garden
- The Persian Garden
- The Japanese Garden
- The Renaissance Garden
- The Greek Garden
- The Chinese Garden
- The UAE Garden

The gardens are separated by a canal that runs through the park. Visitors enter through the UAE garden and can make their way around by crossing bridges that connect the gardens. Visitors can rent canoes from a station in the Persian garden and travel through the canals to the various gardens. Between the Greek, Chinese and Japanese gardens are a series of dancing fountains.





2019 AL JAZEERA, ABU DHABI

ABU DHABI YOUTH FORUM

PROJECT OVERVIEW

THE DEVELOPMENT

Al Jazeera Youth Hub was a development designed to fill a major need of Abu Dhabi. It is comprised of two structures, a Youth Forum and a Youth Hostel.

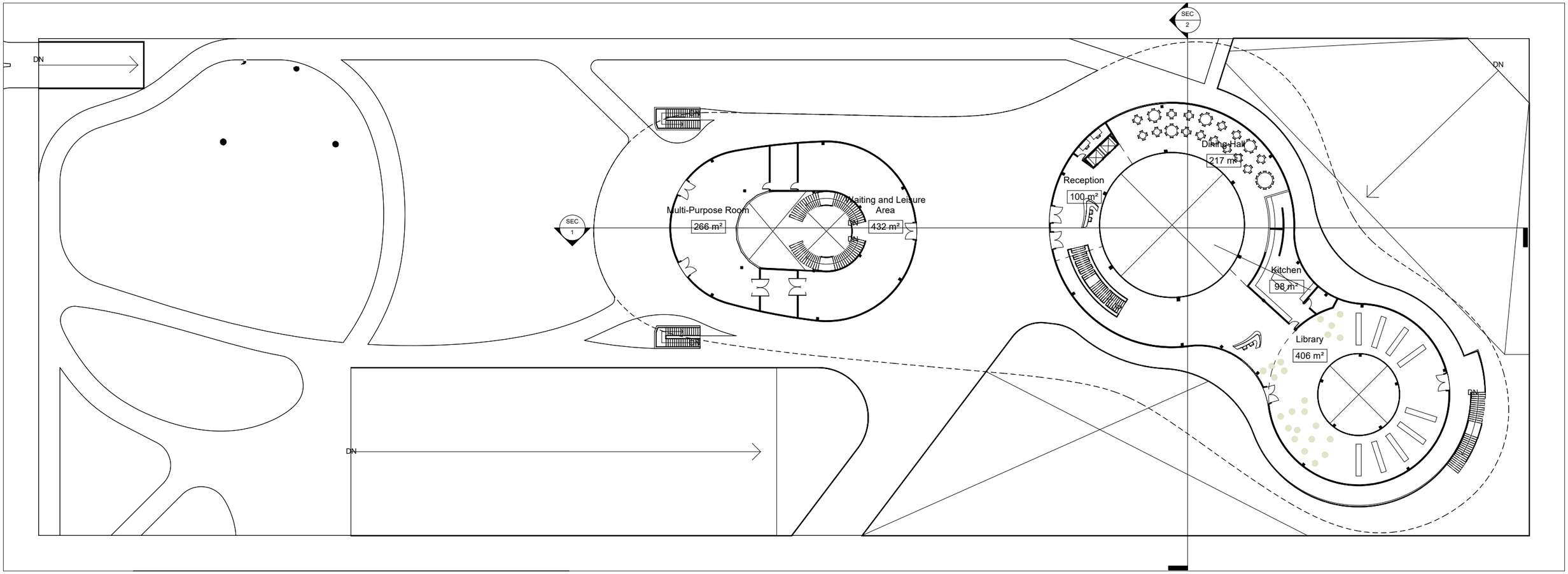
THE FORUM

The Youth Forum was designed to give Abu Dhabi's Youth a place to come relax, work, play and collaborate. With a total area of 6849m2 the youth forum houses many facilities that are required by the youth of today. Such facilities include areas for learning such as classroom and workshops. Areas for play, such as a gaming center and plenty of open space for sports activities are available. In addition, the forum has an auditorium, multi-purpose hall and exhibition space to show off the skills and talents of the youth. Finally, the youth hub is a center for collaboration, whether it be a young entrepreneur looking to start the next big thing or students looking to work on a group project, the library, meeting rooms and lounges make this is the place to collaborate.

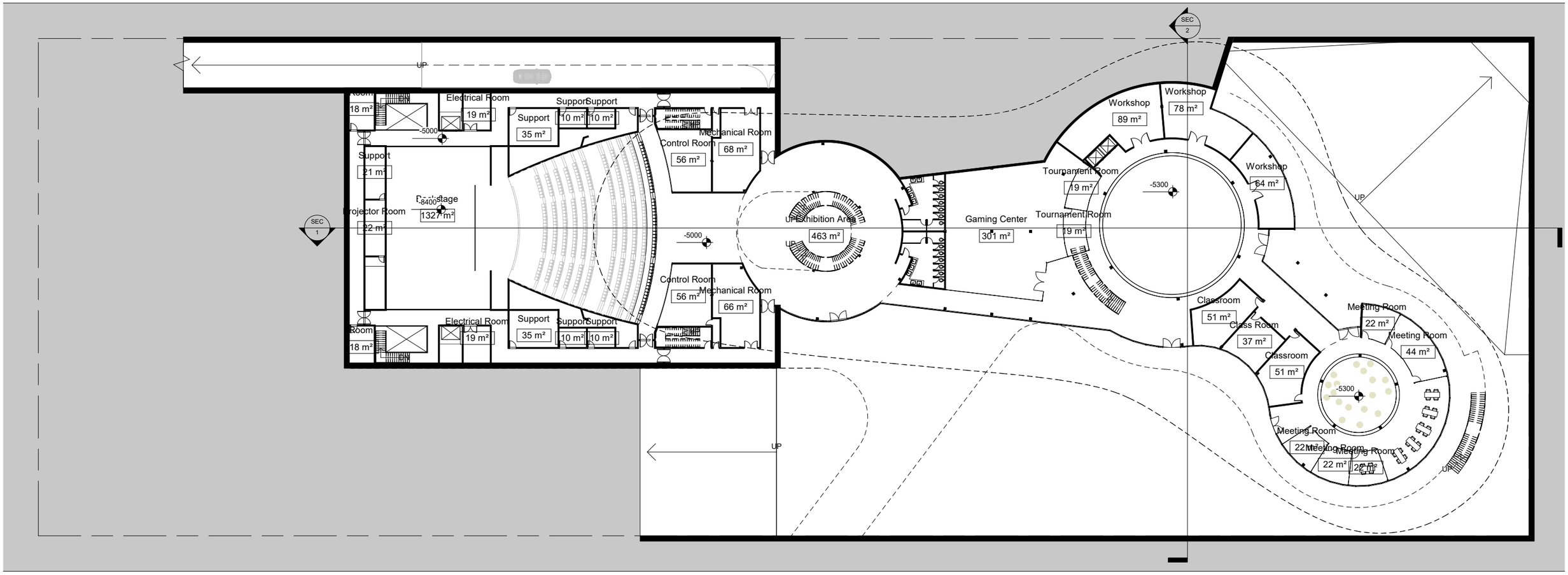
THE HOSTEL

The Youth Hostel was designed to allow groups of traveling students and their teachers to come to Abu Dhabi and stay affordably and comfortably. The hostel has a capacity of 56 people. Its facilities include a cafeteria, laundry room and lounges.

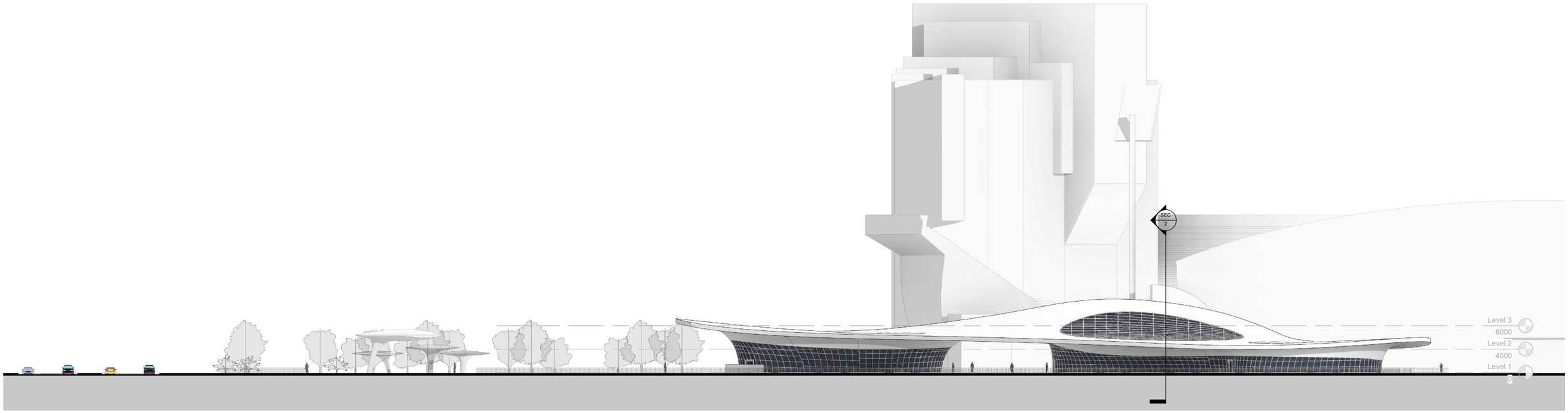
The Hostel was designed as an exercise in design that needs a quick turn around. The 'mini' project was designed in one week.



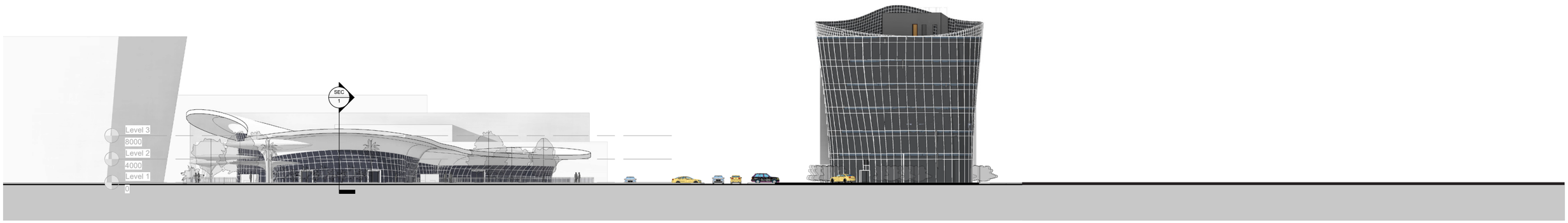
GROUND FLOOR PLAN



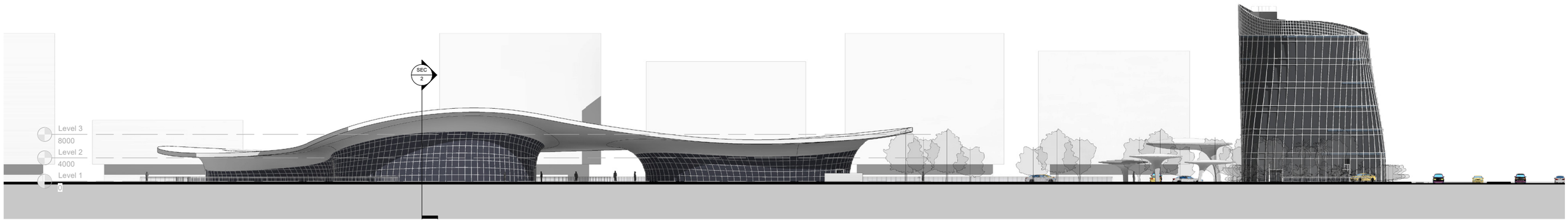
SUNKEN FLOOR PLAN



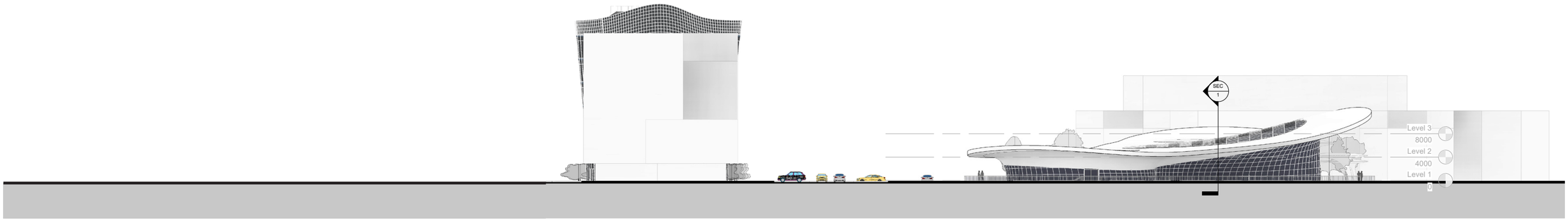
SOUTHWEST ELEVATION



NORTHWEST ELEVATION



NORTHEAST ELEVATION



SOUTHEAST ELEVATION

2019 S'ADIYAAT MARINA DISTRICT, ABU DHABI

URBAN DESIGN + LUXURY COMPOUND

CONCEPT AND BRIEF

PROGRAM

This studio was divided into two projects, a group project and an individual project. The group phase involved planning the given site whereas the individual phase focused on a specific area of the site planned in the previous phase.

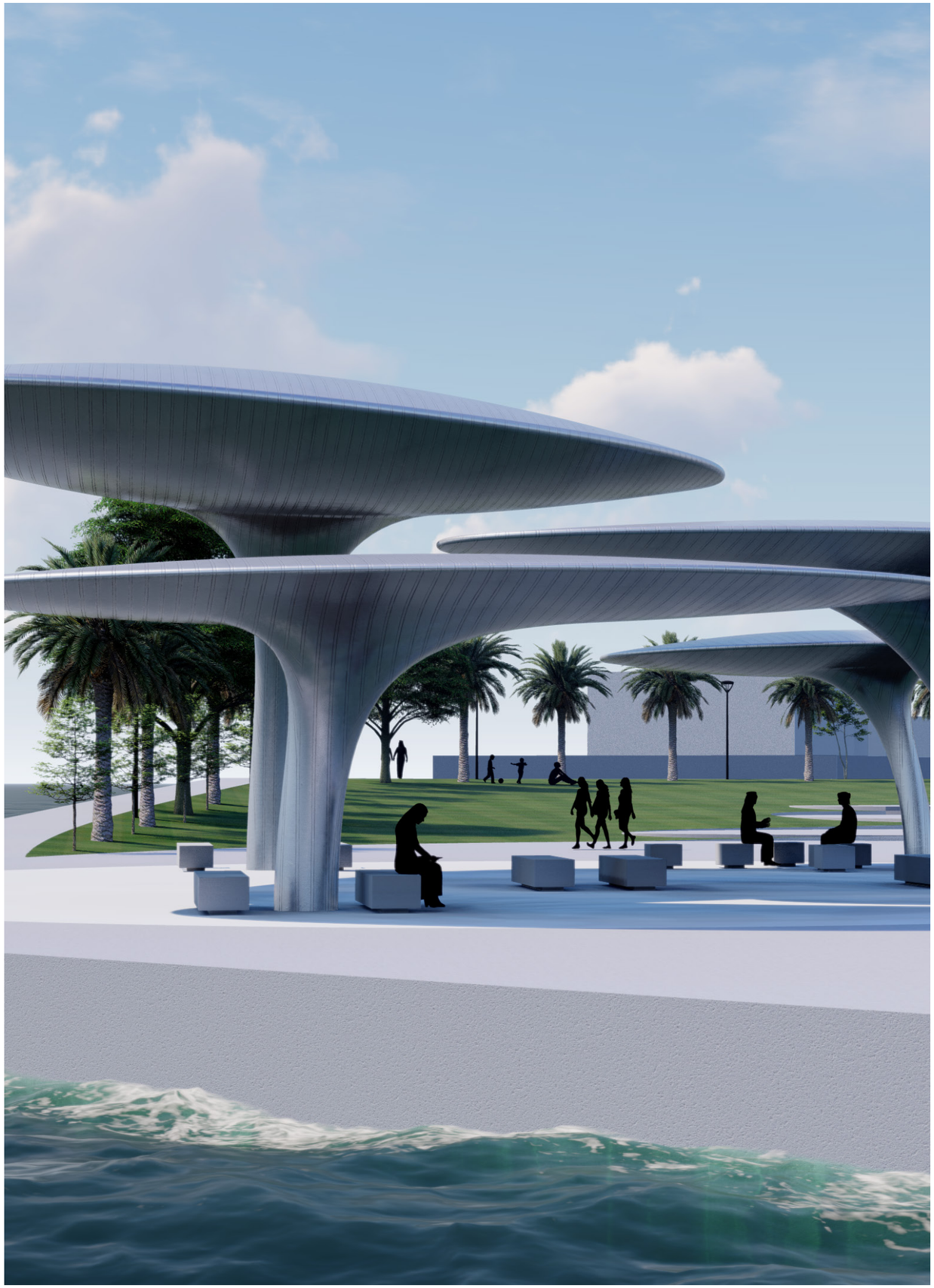
DESIGN FRAMEWORK

The master site is located on the coast of S'adiyaat Island in the Marina District facing downtown Abu Dhabi. The studio decided as a whole the function of each part of the master site. Then each group took one third of the site to plan. Our group chose the area of the site with the best access. It was decided that the site would include the following:

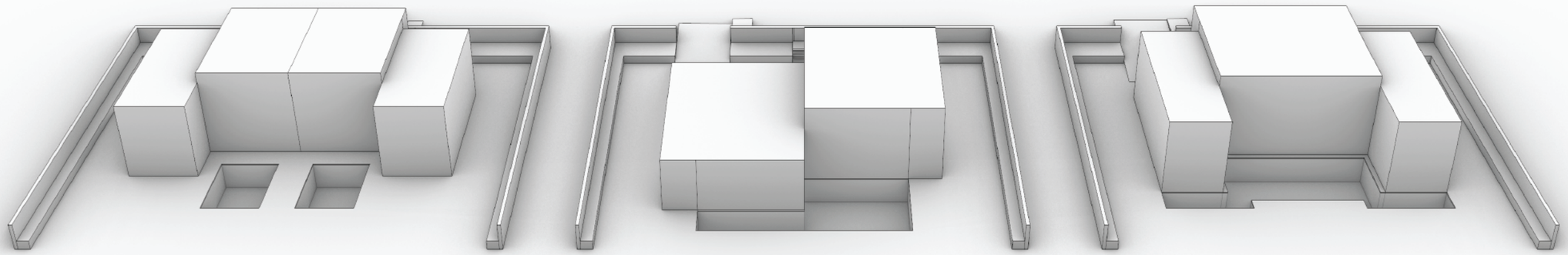
- City Walk
- Dancing Fountains
- Grand Mosque
- Central Park
- Luxurious Compound
- Private Plaza
- Business Marina
- Business Marina Plaza

THE COMPOUND

The compound was separated from the main land as privacy was given a high priority. Two bridges connect the island to the mainland. The compound features 3, 4 and 5 bedroom villas. Each villa gets amazing views to the marina and Abu Dhabi.



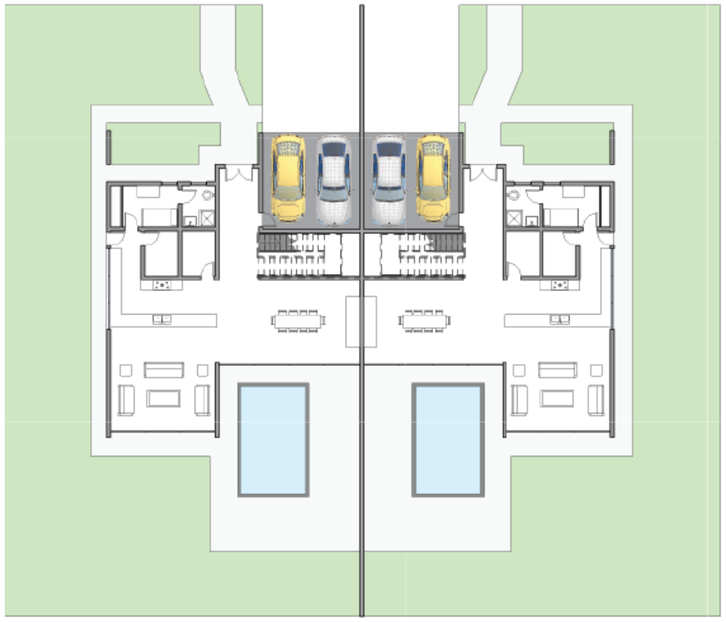
VILLA TYPOLOGY & PROGRAM



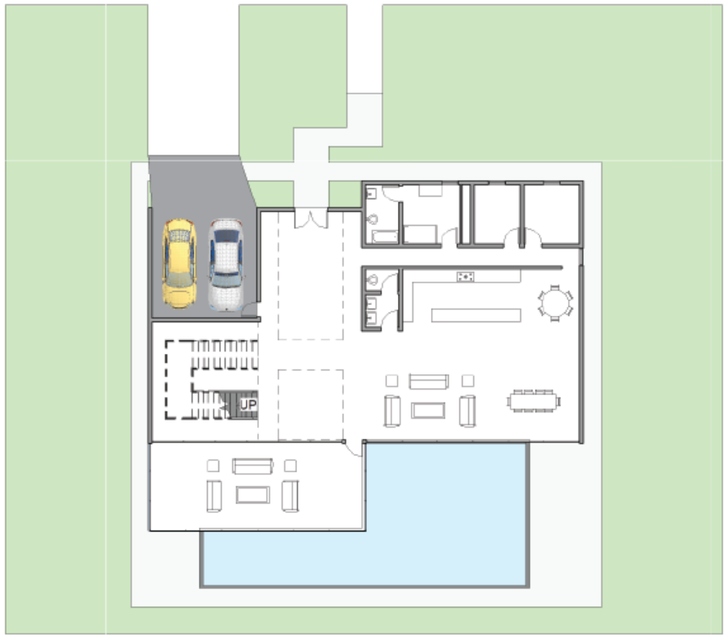
Villa Type 1	
14	Number of Villa's
3	Number of Bedroom's
320m²	Approximate Floor Space
Attached	Villa Type
4.6	Population Per Villa
65	Total Population

Villa Type 2	
9	Number of Villa's
4	Number of Bedroom's
546m²	Approximate Floor Space
Detached	Villa Type
5.9	Population Per Villa
54	Total Population

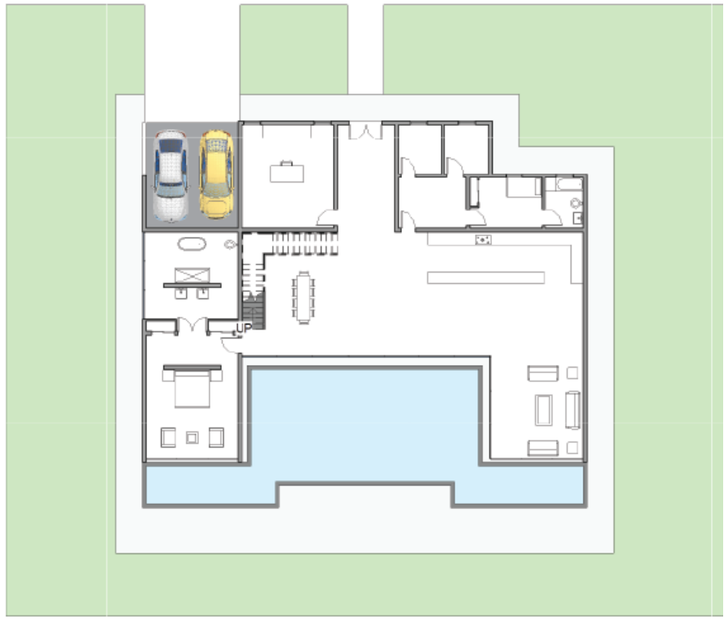
Villa Type 3	
6	Number of Villa's
5	Number of Bedroom's
700m²	Approximate Floor Space
Detached	Villa Type
7.1	Population Per Villa
43	Total Population



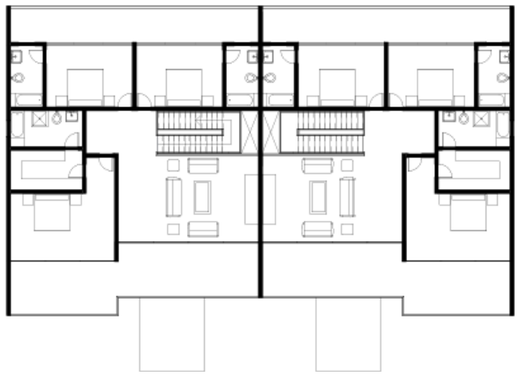
GROUND FLOOR PLAN



GROUND FLOOR PLAN

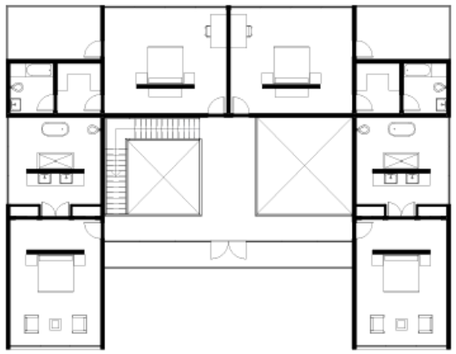


GROUND FLOOR PLAN

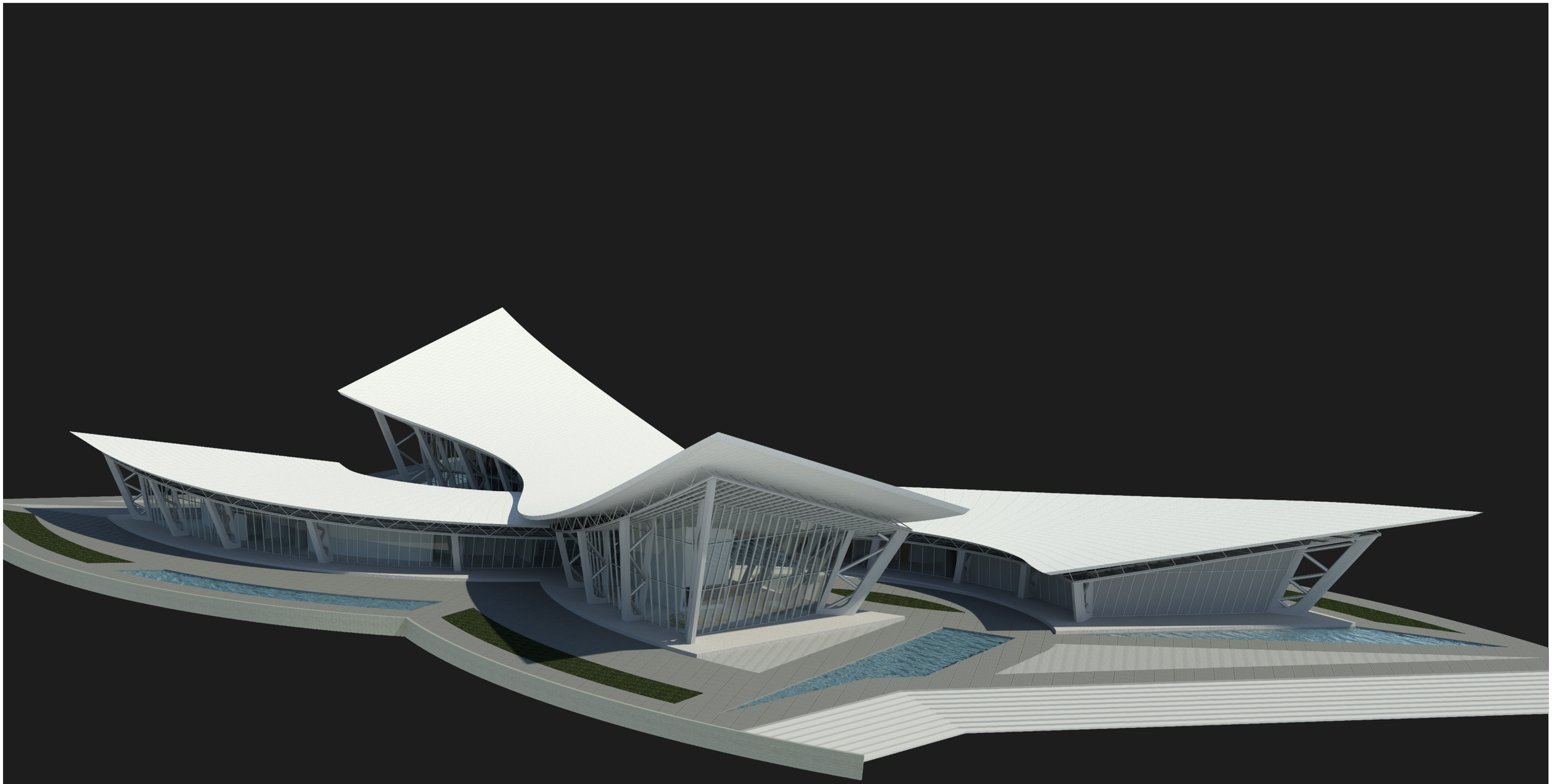


FIRST FLOOR PLAN

FIRST FLOOR PLAN



FIRST FLOOR PLAN



2018 THE DHOW HARBOR, AL MINA, ABU DHABI

AL MINA ART HUB

CONCEPT AND BRIEF

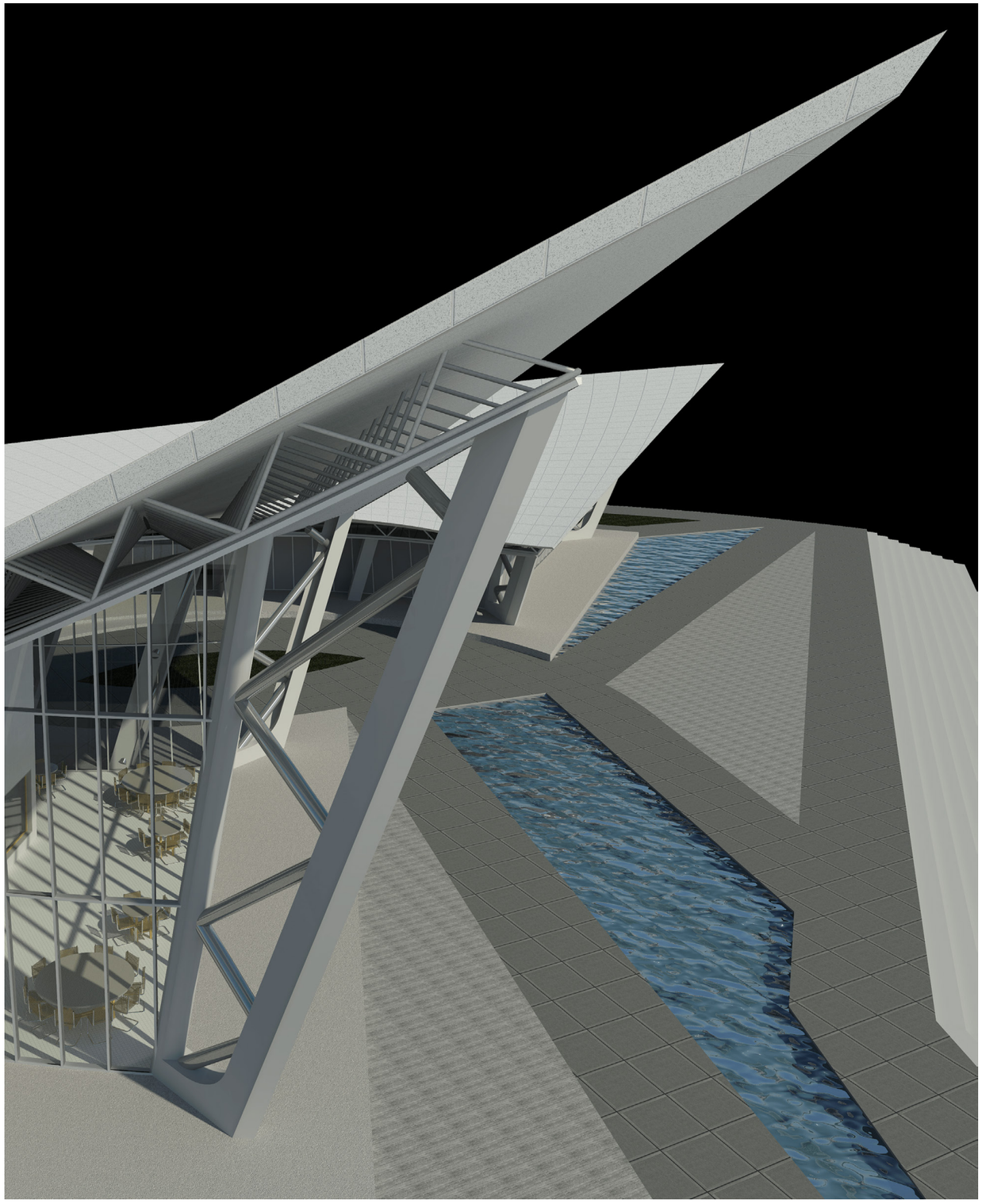
PROJECT SUMMARY

Al Mina Art Hub was a studio project which placed a special focus on the concept and form of the building.

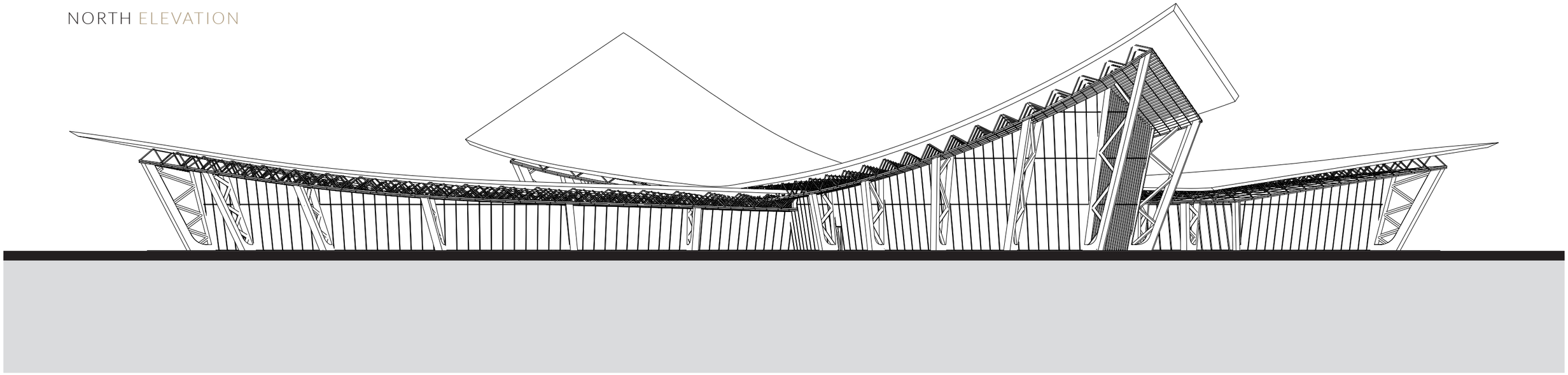
The Hub was a cultural exhibition space designed to be a center for art in Abu Dhabi. The project was located right of the Dhow Harbor, in Al Mina, across the sea from what is now the Abu Dhabi Youth Hub.

CONCEPT

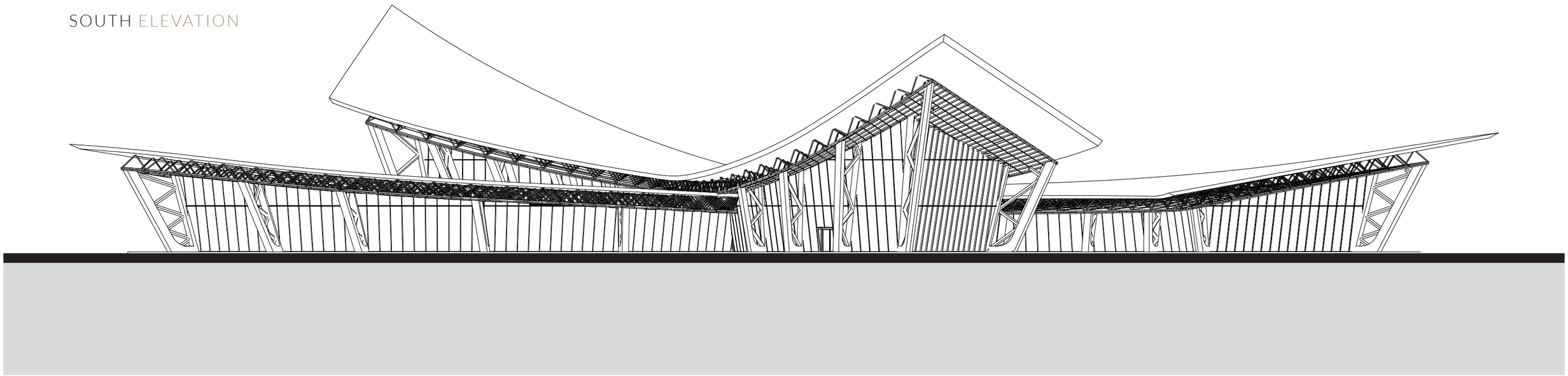
The original design was inspired by the National Day Air Show that takes place on the Corniche in Abu Dhabi every year. The fluidity of the planes flying over each other was incorporated into the design. The design had only two wings at first. After a few iterations, later the design had four wings in order to accommodate all program requirements.



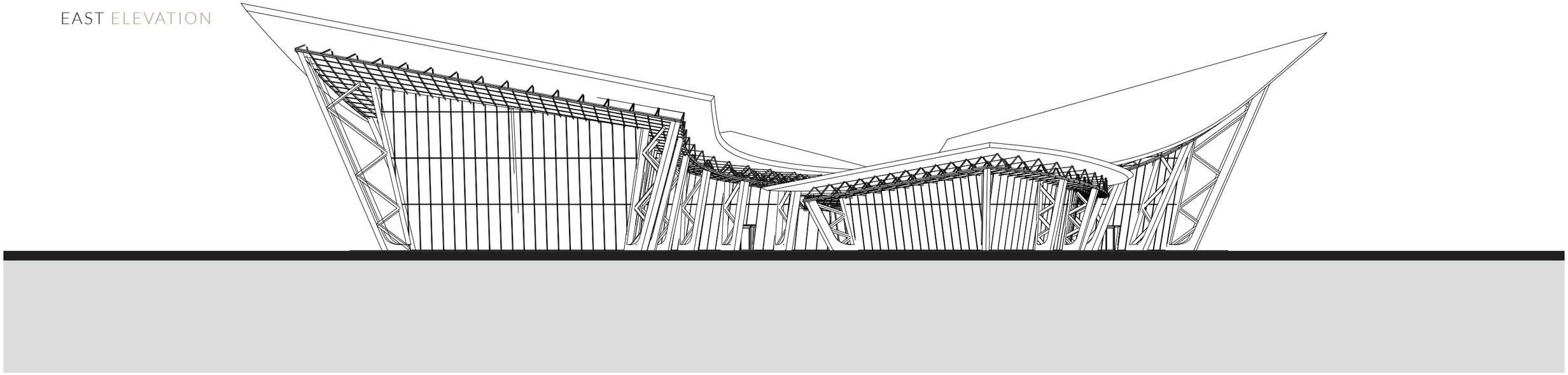
NORTH ELEVATION



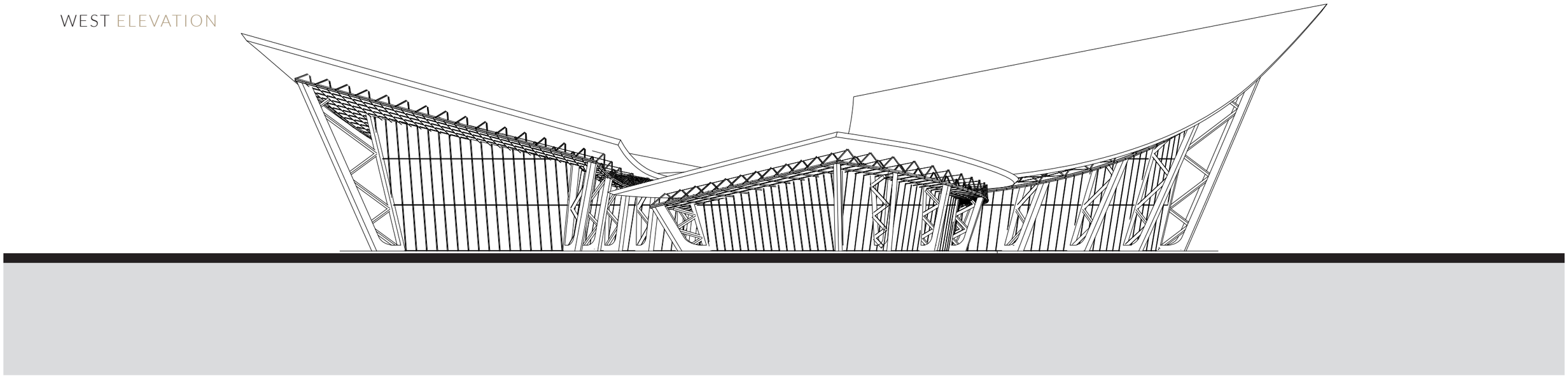
SOUTH ELEVATION

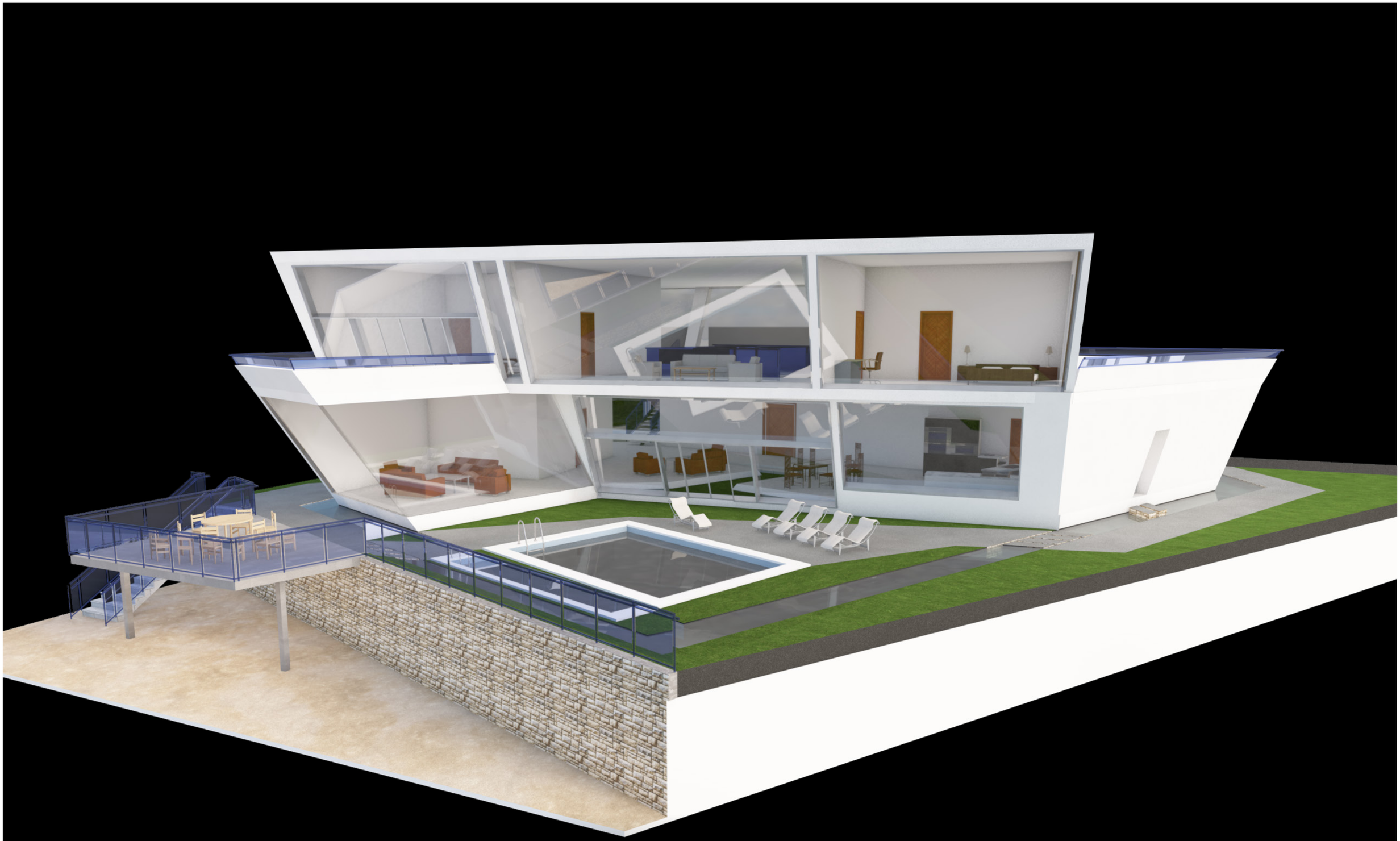


EAST ELEVATION



WEST ELEVATION





2017 AL ZEINA, ABU DHABI

THE DHOW VILLA

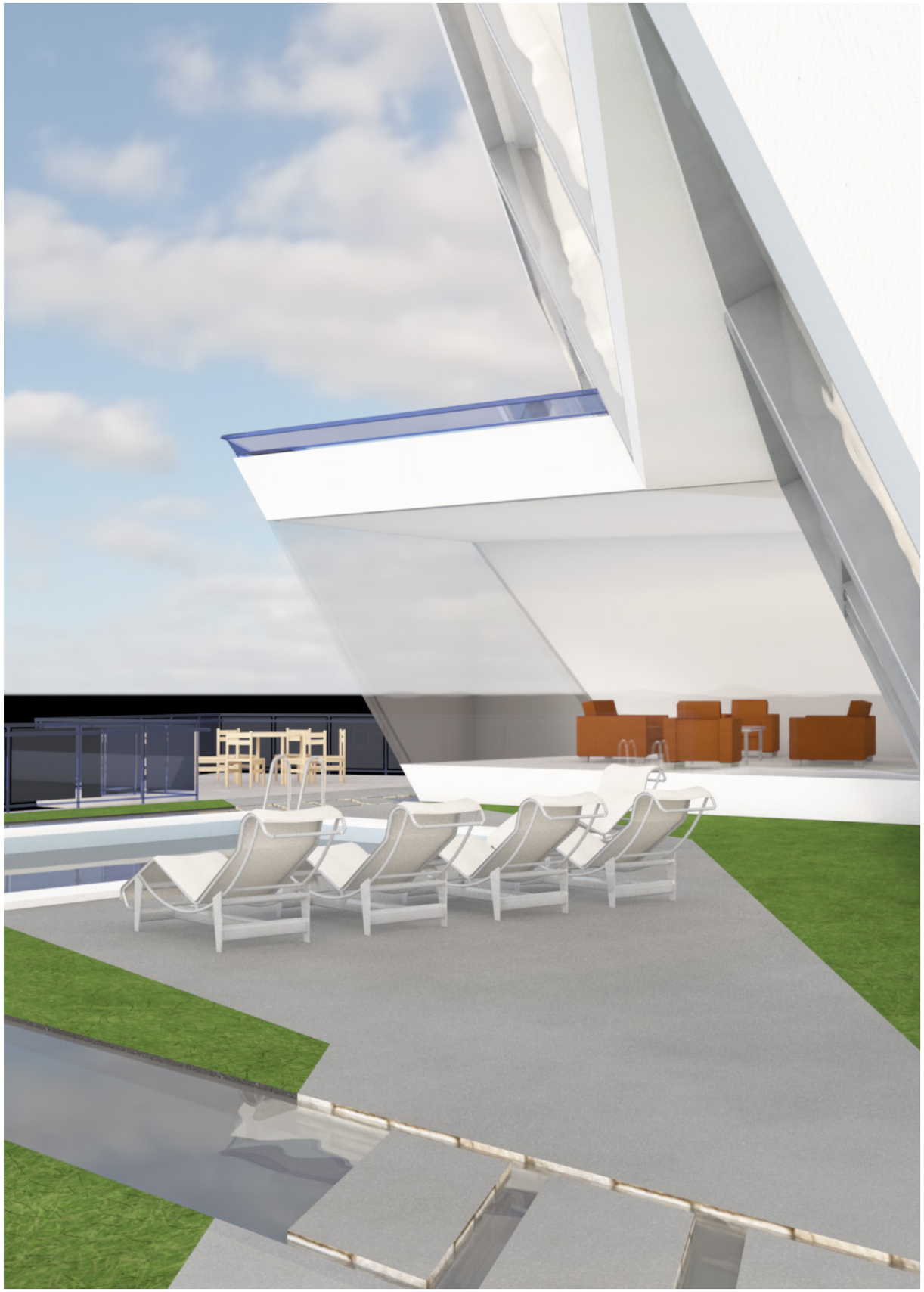
CONCEPT AND BRIEF

CONCEPT AND INSPIRATION

The villa was inspired by the dhow boat commonly used in the middle eastern region for fishing, pearl diving and much more. It is a part of the history of the region. The resemblance to the dhow is most clearly seen in elevations and sections.

CLIENT STORY

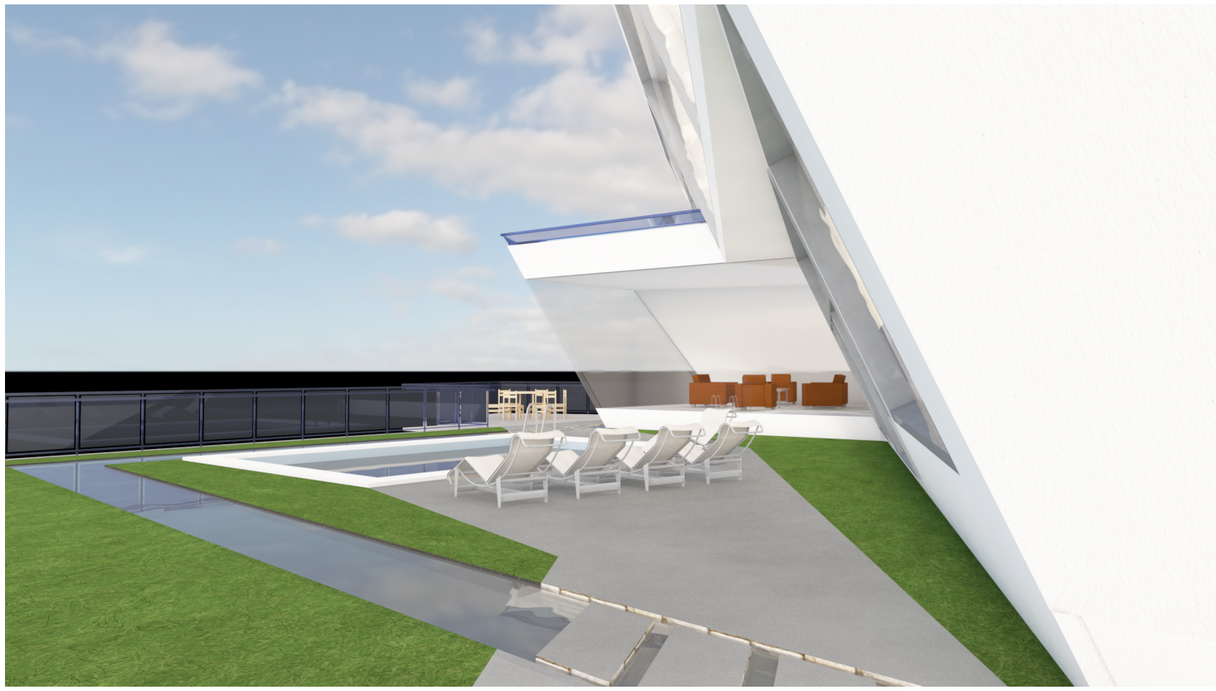
A small family of four. A husband, wife, son, and daughter. A very outdoor family. Love to go out to the park for a picnic or to the beach to have a swim. Both parents work. Father is a lawyer with his own a small practice. Mother is a surgeon who works late hours. Both children are young and in school.



BUILDING FEATURES

EAST FACADE

The entrance of the building and the front/east façade of the building is made up of interesting angles and lines. This has been done to make the entrance a distinguished part of the building.

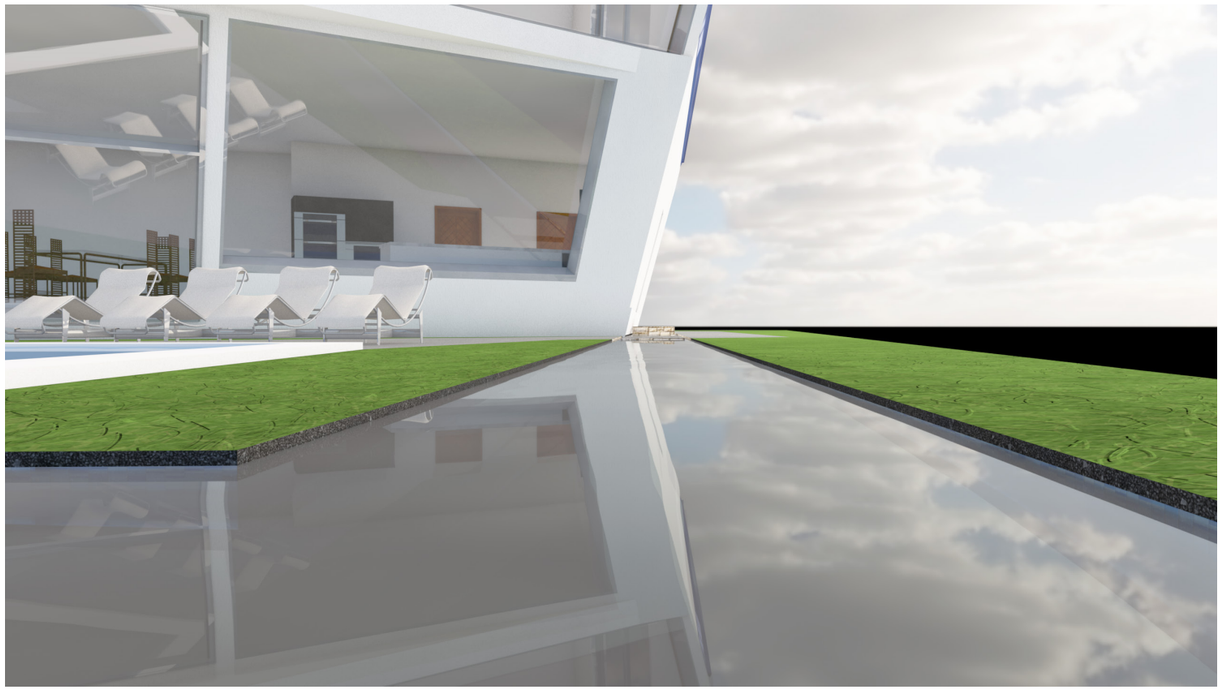


LANDSCAPING

Walking to the front of the building reveals a beautifully crafted landscape. Complete with a pool, deck, and of course the buildings' signature water canal.

INTERIOR LANDSCAPING

Inside the landscaping continues and seamlessly integrates with the exterior landscaping. The interior landscaping serves to add variation to the inside of the building as well as divide the usable area of the first floor into different zones/areas.



THE WATER CANAL

The water canal is a specially designed element of the project that seemingly brings the water of the sea around and into the building. The water not only surrounds but also enters the building.

2019 AL AIN, ABU DHABI, UAE

ESTIDAMA MASTER PLAN

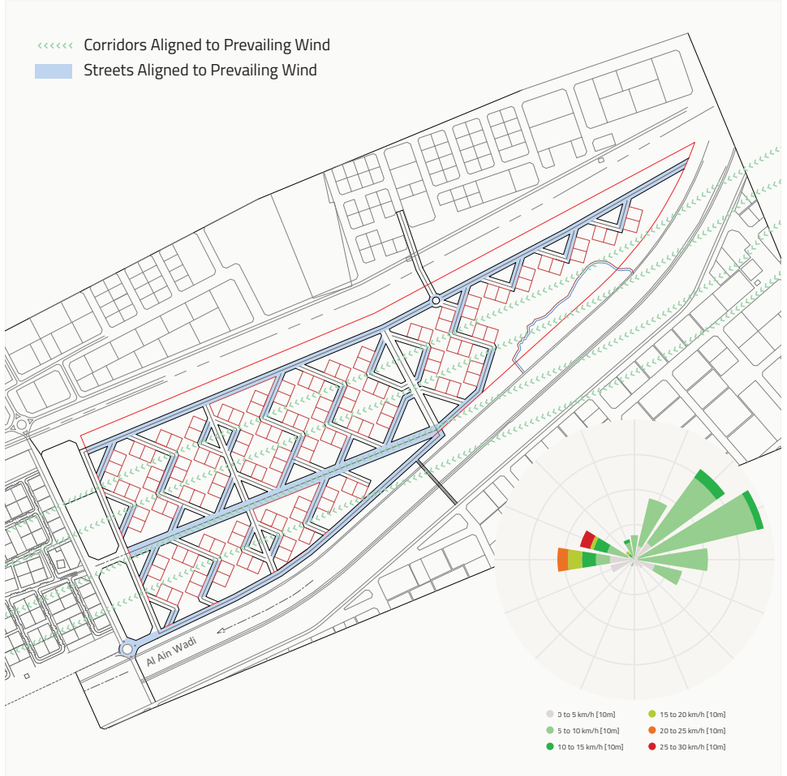
PROJECT SUMMARY

This master plan was created as a response to a prompt to create a neighborhood that achieves as many Estidama Pearl Points as possible. The site is in western Al Ain and is bordered by a small pond, Al Ain Wadi, and an existing residential compound.

ACHIEVING POINTS

To achieve the points, the Estidama Manual by the Urban Planning Council was studied and, where possible, the requirements were applied to the master plan of the site. A total of 14 points were achieved.

ESTIDAMA PEARLS ACHIEVED



RE-1
COMMUNITY STRATEGIES FOR PASSIVE COOLING

ALIGNMENT OF STREETS(1PT)

Streets are aligned within 15 degrees of the prevailing wind direction

ALIGNMENT OF PARKS(1PT)

Open spaces and corridors run parallel to the prevailing wind direction

RE-1
COMMUNITY STRATEGIES FOR PASSIVE COOLING

STAGGERED BUILDING MASSING(1PT)

Staggered building prevent wind flow from becoming stagnant

LANDSCAPED SITE PERIMETER(1PT)

90% of the perimeter of the development is bordered by greenery with the prevailing wind side receiving almost 100% greenery

LC-2
NEIGHBORHOOD CONNECTIVITY

INCREASED VEHICLE CONNECTIVITY

Vehicle Connectivity to surroundings is increased with the addition of new collector roads

INCREASED BICYCLE CONNECTIVITY

Bike Lanes connect to existing network and expand it

LC-3
OPEN SPACE NETWORK

EASE OF ACCESS (1PT)

At least 70% of residents are within 350m of a 1Ha public space

PURPOSES (1PT)

Each Space will serve a unique function

LC-6
COMMUNITY WALKABILITY

DIRECT ROUTE INDEX (1PT)

All facilities of the development will be connected by pedestrian routes with a direct route index of less than 1.5

SHADING (1PT)

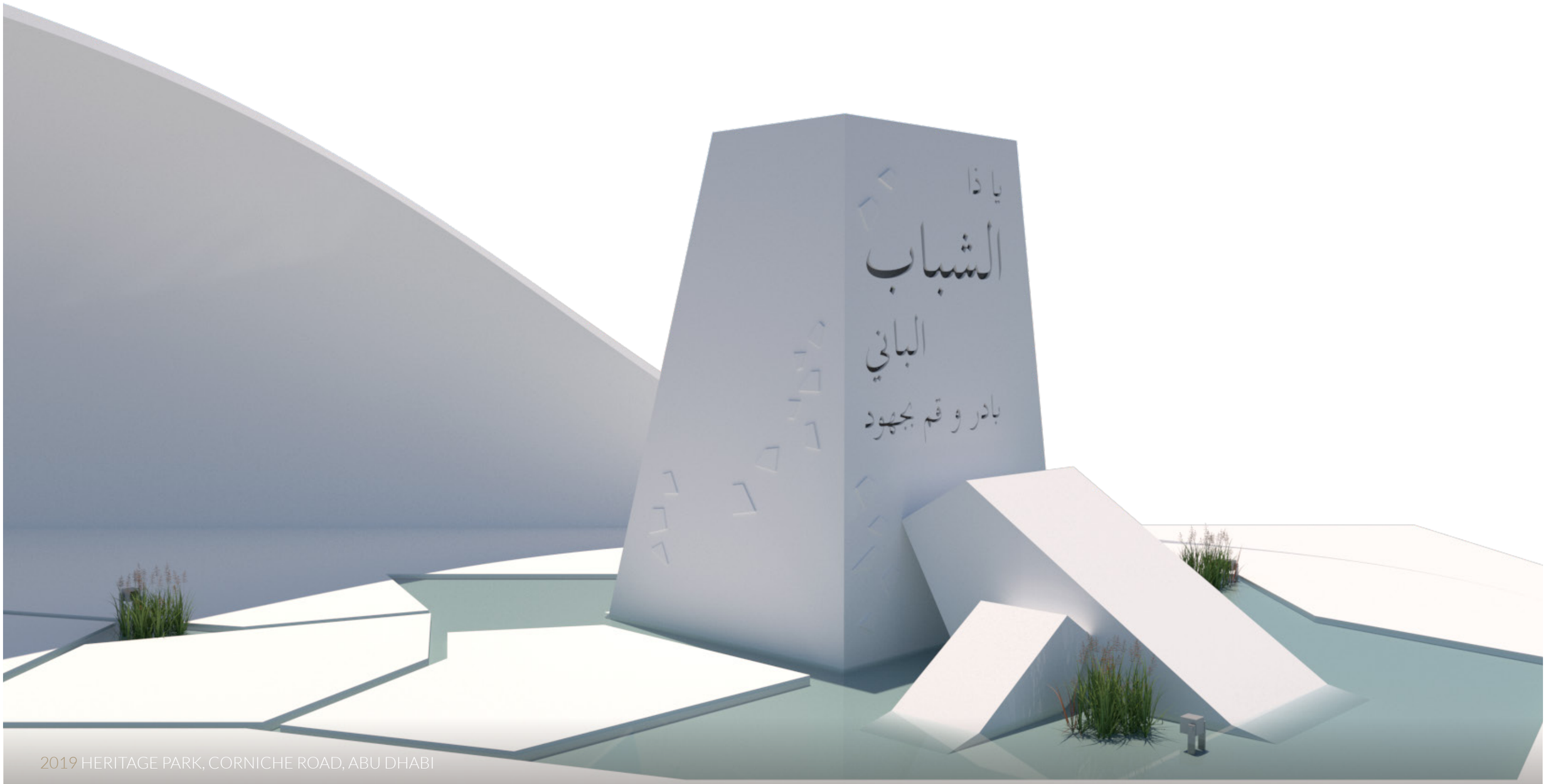
There will be 100% shaded areas at least every 350m

LC-8
TRAVEL PLAN

REDUCTION OF CAR JOURNEYS(1PT)

A combination of the reduction of roads and the alignment of the streets and public spaces with the prevailing wind direction will promote walking and bicycling over the use of cars

COMPETITION



2019 HERITAGE PARK, CORNICHE ROAD, ABU DHABI

ABU DHABI YOUTH HUB EXTERNAL PAVILION

CONCEPT AND BRIEF

THE COMPETITION

The brief provided by the Abu Dhabi Youth Hub called for:

- A structure inspired by the phrase " الشباب الباني ", from the poem of the Late Sheikh Zayed Bin Sultan Al Nahyan. The material of the structure to be durable to withstand the harsh weather conditions.
- Lighting to be considered; as the structure must be visible and lit at night time.
- Participants to produce plans, sections, elevations, and 3D renders.

The winning design was intended to be constructed and installed at the Abu Dhabi Youth Hub front/main entrance area. However, limiting factors halted the project as shown here. A different design was conceived by Farasat Mirza and Rashed Al Mazrouei which was built and sits at the entrance of the Abu Dhabi Youth Hub.

OUR INSPIRATION

The verse: 'معكم ثقافه و علم و إتقان' from Sheikh Zayed's poem, 'الشباب الباني' was the main inspiration behind the design of our pavilion. The design consists of three main concrete blocks. The large, 3 meter tall block imitates a book, representing knowledge and signifies Abu Dhabi Youth Hub as a center for the exchange of ideas.

The two smaller blocks represent youth. These smaller blocks look to be leaning on the largest block, creating imagery of youth gaining knowledge from a book.

EARLY SKETCH

The first idea in the thought process was to create a pavilion that is in high contrast in shape to the main building.

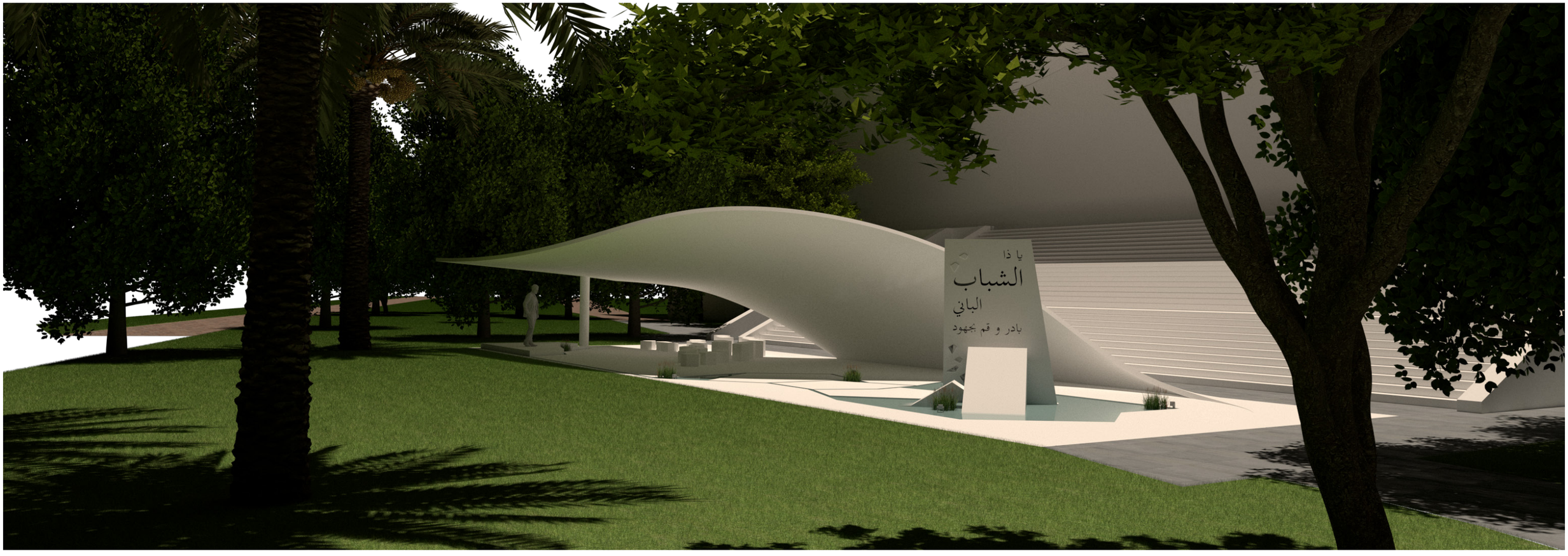
Our design mirrors the aesthetics of Abu Dhabi, taking inspiration from modern cultural sights in Abu Dhabi such as The Founder's Memorial , Wahat Al Karama, and Qaser al Hosn.

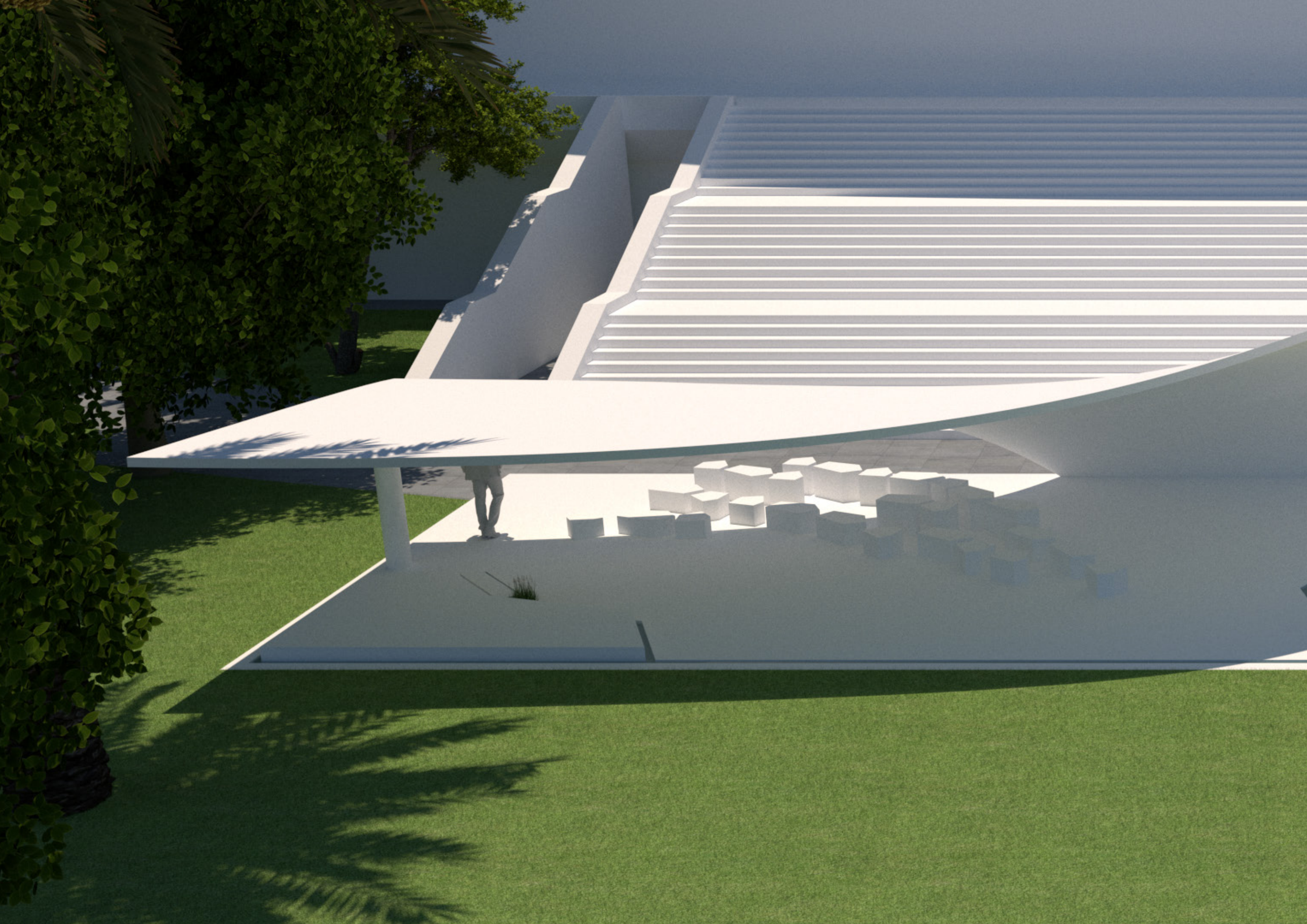
INTEGRATING WITH THE SURROUNDINGS

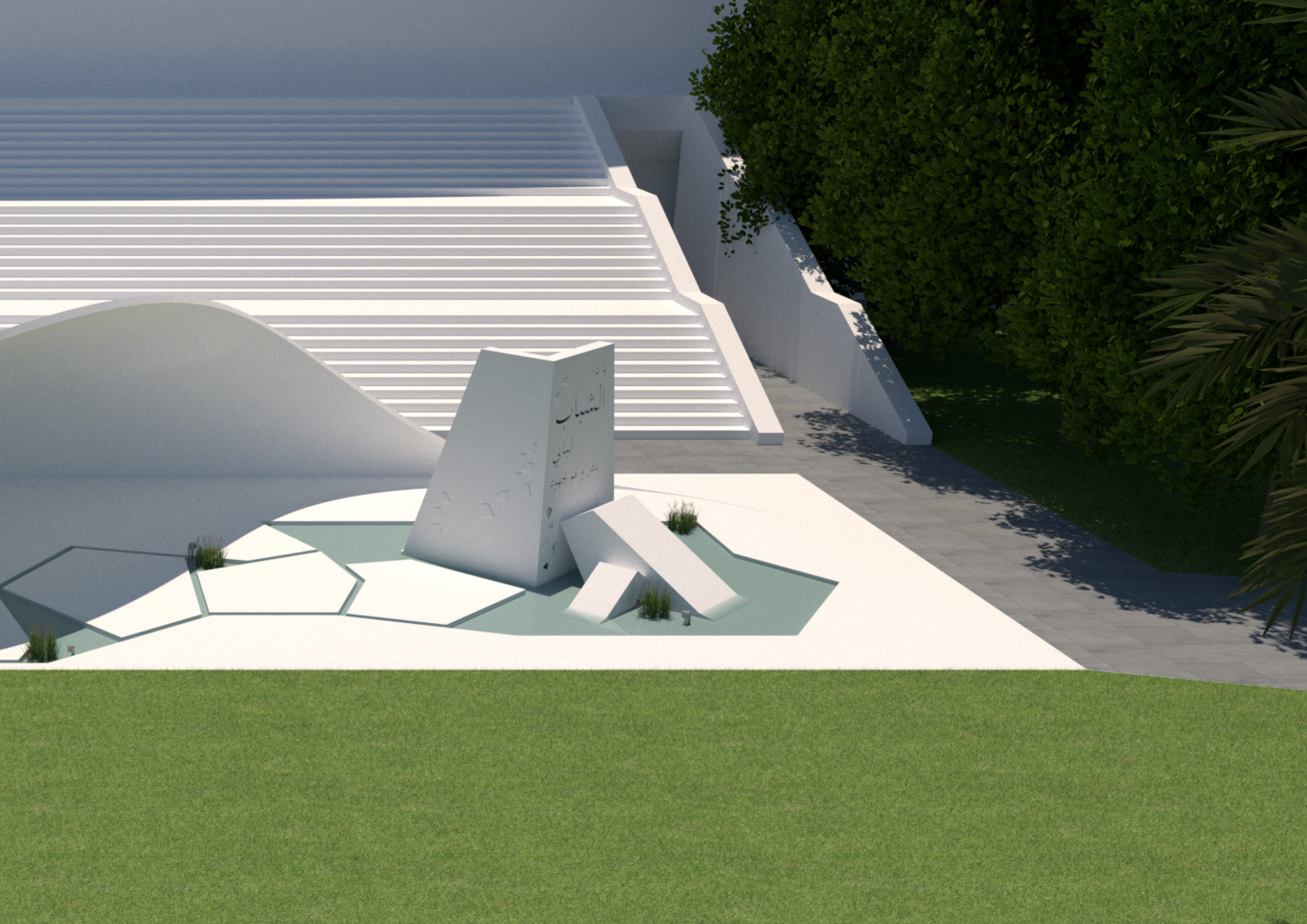
We wanted our pavilion to integrate with its surroundings, namely with the main Youth Hub building. The Youth Hub building has an organic shape inspired by the rear wing of an F1 race car. In order to make sure the pavilion isn't mistaken for a building of some other purpose, we decided to add a cantilevered concrete canopy that mirrors the design of the main building. The combination of angular and organic design blended seamlessly together create for an overall striking, visually appealing and clean modern design.

PROVIDING ACCESS TO THE MAIN BUILDING

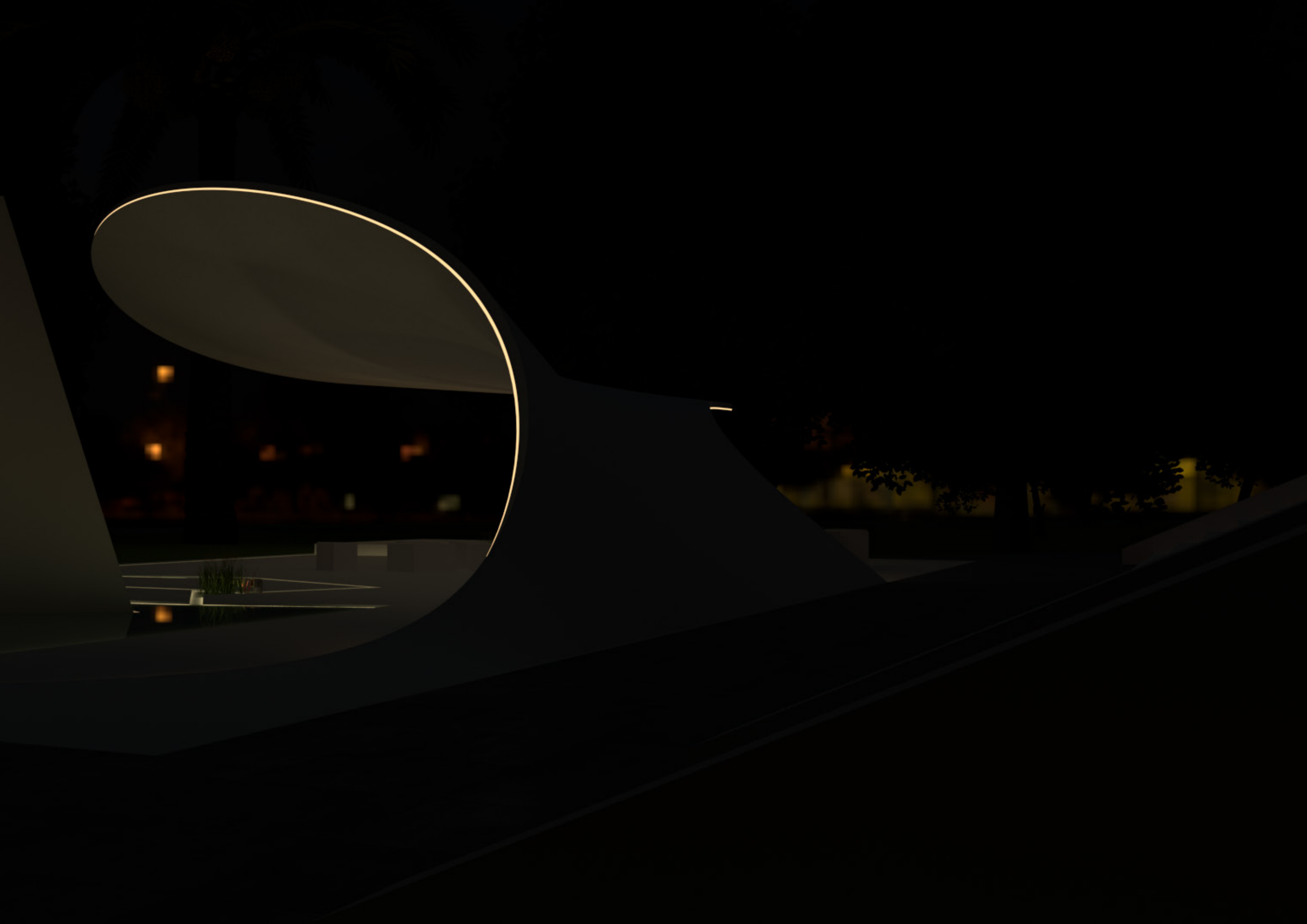
As our design progressed, an issue arose. Access to the main building was obscured by the pavilions canopy/shading element. This meant that people would be inconvenienced, as they would have to walk to one side of the pavilion to enter and exit. The solution to this problem came in the form of another swooping line that cuts out part of the rear of the canopy. This line is an elegant solution to the problem and adds character to the overall structure.






الشباب

الشباب



2018 MANARAT S'ADIYAAT, S'ADIYAAT ISLAND, ABU DHABI

ABU DHABI ART PALM PAVILION

CONCEPT AND BRIEF

The goal for the entry was to design and build the best and most meaningful pavilion for the Abu Dhabi Art Fair during the Year of Zayed.

INSPIRATION

The Palm Pavilion takes inspiration from the palm tree. The palm tree in general has been very important throughout history, specifically, in the UAE.

"For us, the date palm is, and always has been, truly the tree of life. We have grown up with this remarkable species and its many products and find it impossible to imagine life without it. When we admire a date palm, we are looking at the foundations of our civilization and the sustaining force for countless generations." ~ Sheikh Zayed bin Sultan Al Nahyan

The Palm Pavilion was designed to directly reflect the huge importance the Palm tree has played in the history of the UAE.

THE DESIGN

The Pavilion consists of four elements. The three palm inspired pillars, the ribbed side walls and roof, the glass curtain walls on the front and back and the round benches around the pavilion.

THE PILLARS

The pillars take their shape from the trunk of a palm tree. The organic swooping design starts at the bottom on the floor and blends seamlessly with the roof lines. In addition, the pillars are divided into ribs to imitate the look of wooden veneer.

THE WALLS AND ROOF

The design incorporates two types of wall. The first type is located on either side of the pavilion. These walls are a series of ribs and extend from the front to the back of the pavilion. The ribs are slanted and curve into the roof. Glass panels will be integrated into the ribs to isolate the interior from the exterior.

The second type of wall is used on the front and back of the pavilion. These curtain walls allow for wonderful views of the unique palm inspired pillars. They also allow visitors to look out into the beautiful landscaping of Manarat Al S'adiyaat.

The roof continues the theme of using ribbed elements. The ribs of the pillars and side walls blend in with the rook to create a flowing building profile. The ribs on the roof represent the leaves of the palm tree. The leaves (the roof) sprout from the tree trunk (the pillars) and curve down towards the ground.

The ribbed walls and roof allow light to filter into the pavilion creating a pattern of light throughout the building. They may also allow for natural ventilation if they aren't closed off by glass panels.

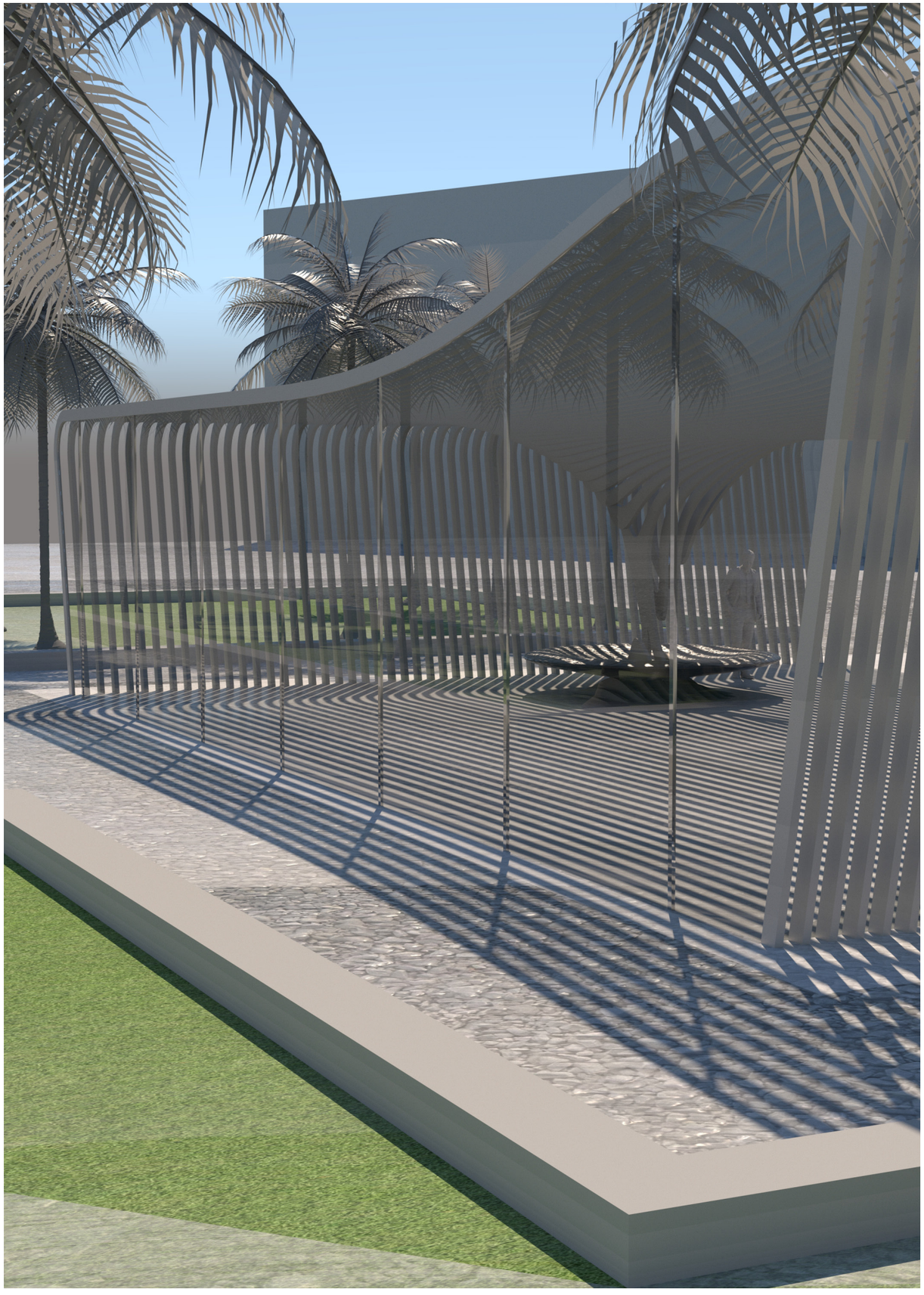
Each rib can be divided into multiple pieces and fabricated off site. The suggested material is steel or reinforced concrete. The fabricated pieces can then be transported and assembled on-site.

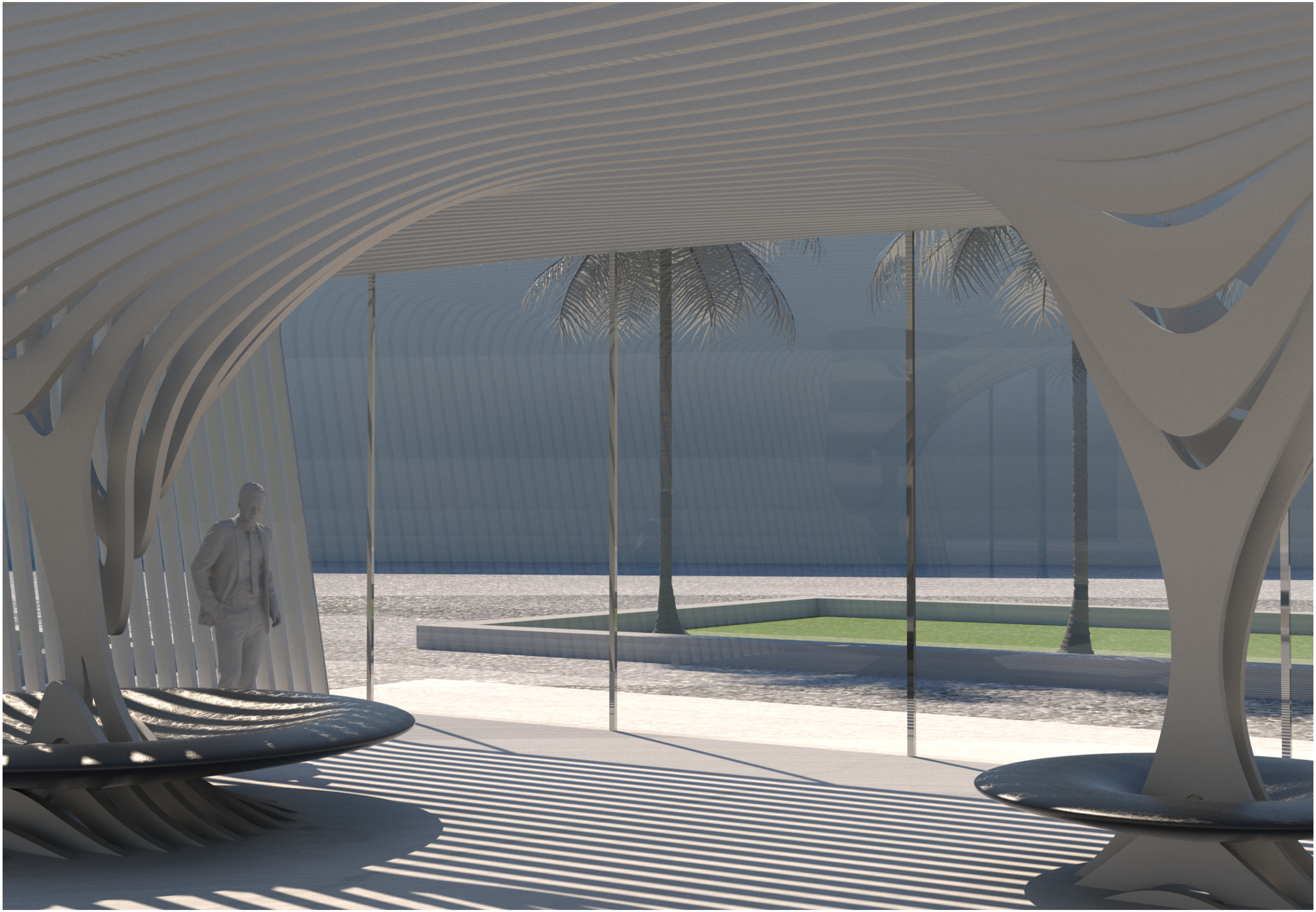
FURNITURE

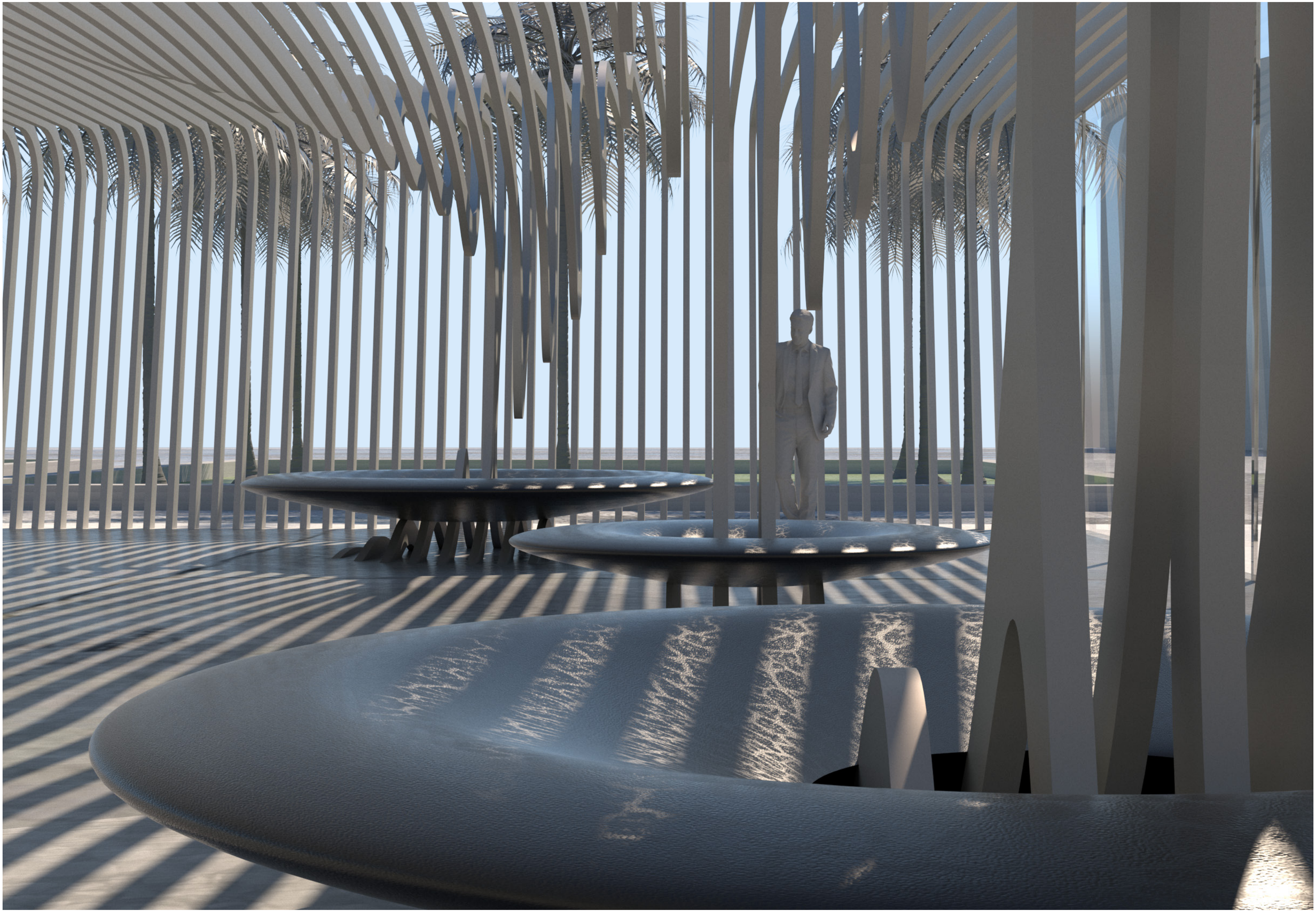
The round seating incorporated into this design are fitted around the pillars. They imitate vegetation that commonly grows around trees. The seating allows for intimate conversations between 2 people. They can also be used to seat larger groups of people when required from things like talks and presentations. The design of the seating can be replicated minus the pillar to seat more people when required.

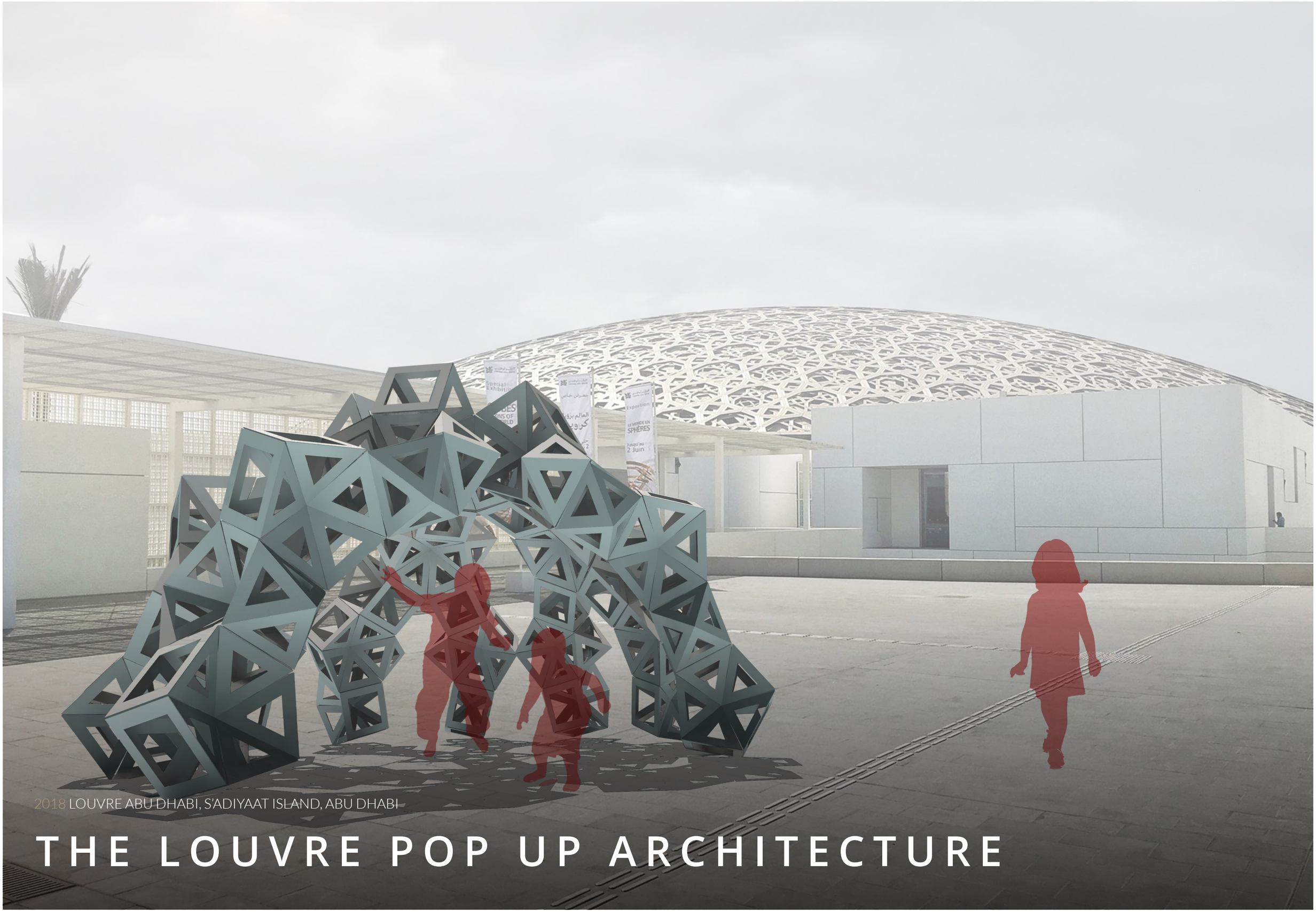
OTHER DESIGN CONSIDERATIONS

- At night the pavilion will be lit up with a series of LED strips mounted to the bottom of the roof ribs.
- AC units can be placed in the empty space inside the pillars.









2018 LOUVRE ABU DHABI, S'ADIYAAT ISLAND, ABU DHABI

THE LOUVRE POP UP ARCHITECTURE

PROJECT OVERVIEW

PROJECT SUMMARY

Students from all over the United Arab Emirates were invite by the Louvre Abu Dhabi in the winter of 2018 to participate in a Pop Up Architecture event.

Teams from Abu Dhabi University, The Canadian University of Dubai, UAE University and The American University of Sharjah participated.

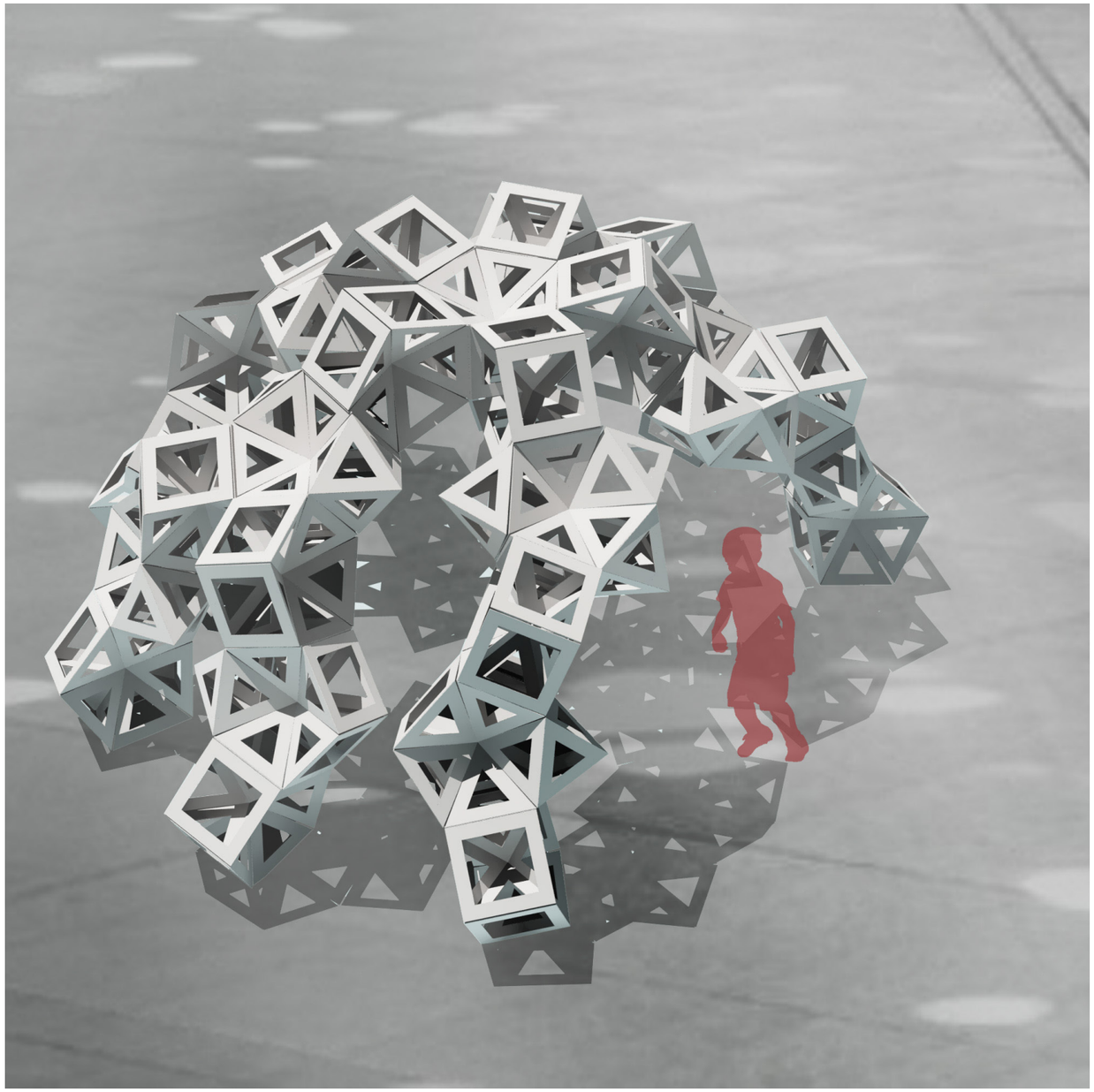
THE RAIN OF LIGHT

In buildings, the phenomena of 'The Rain of Light' is when architectural elements are used to soften or diffuse direct sunlight. The elements used not only help insulate a space from the sun, but also create rays of light. The movement of the sun allows the light to dance with the shadows as they smoothly spread across the space.

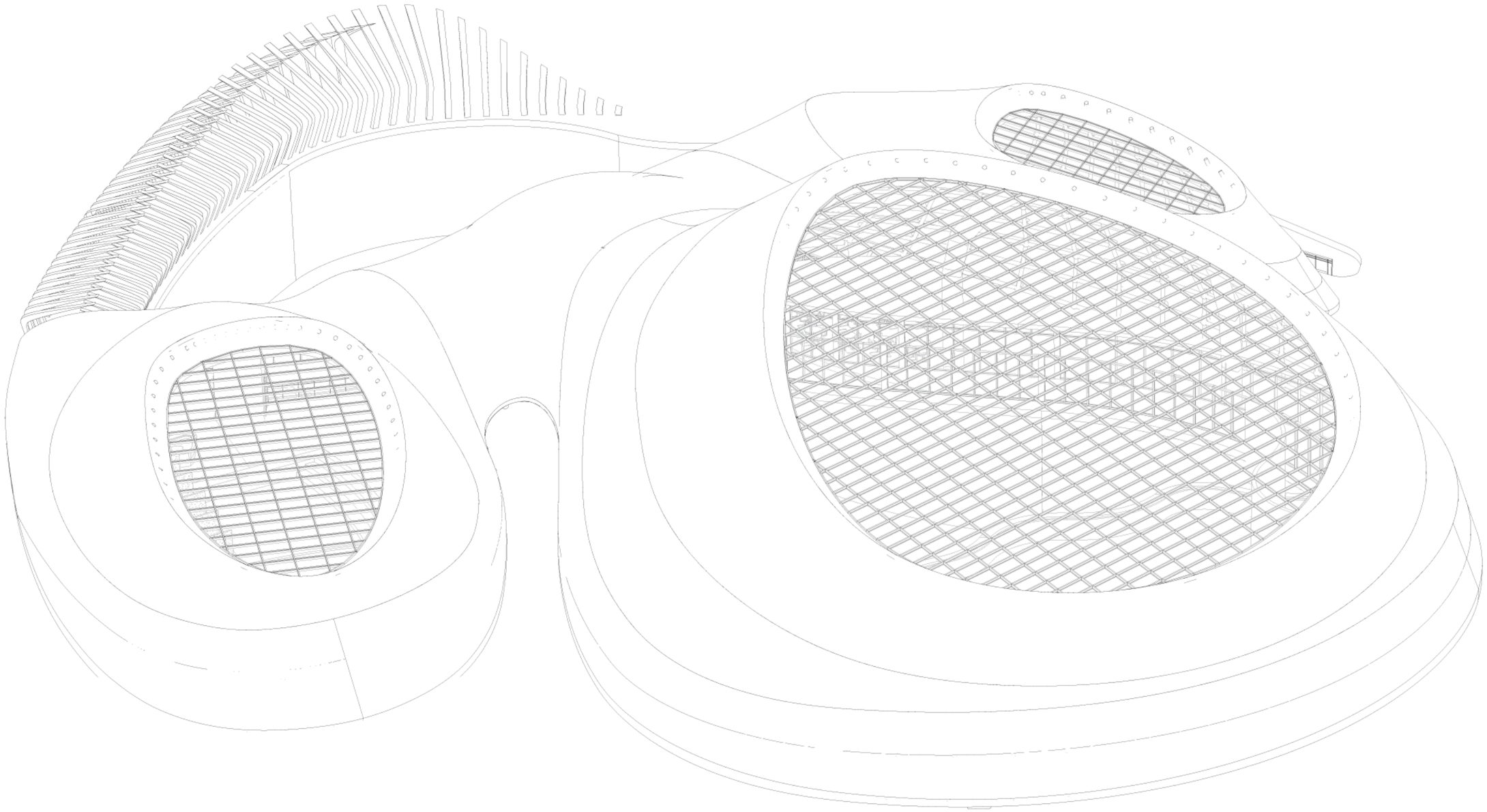
CONCEPT AND PURPOSE - A PLACE FOR CHILDREN

The structure attempts to break free from the massive and serious scale of the Louvre Abu Dhabi to create a less intimidating and more playful environment for children to come and express their creativity. The welcoming environment for children was achieved by lowering the maximum height of the structure to 1.5 meters, the ideal height for children.

Farasat's contribution to the project included the compilation of assets and design of the presentation for the project proposal. He was also one of three speakers to present the project at the Louvre Abu Dhabi theatre to the museum staff and the other teams participating in the event.

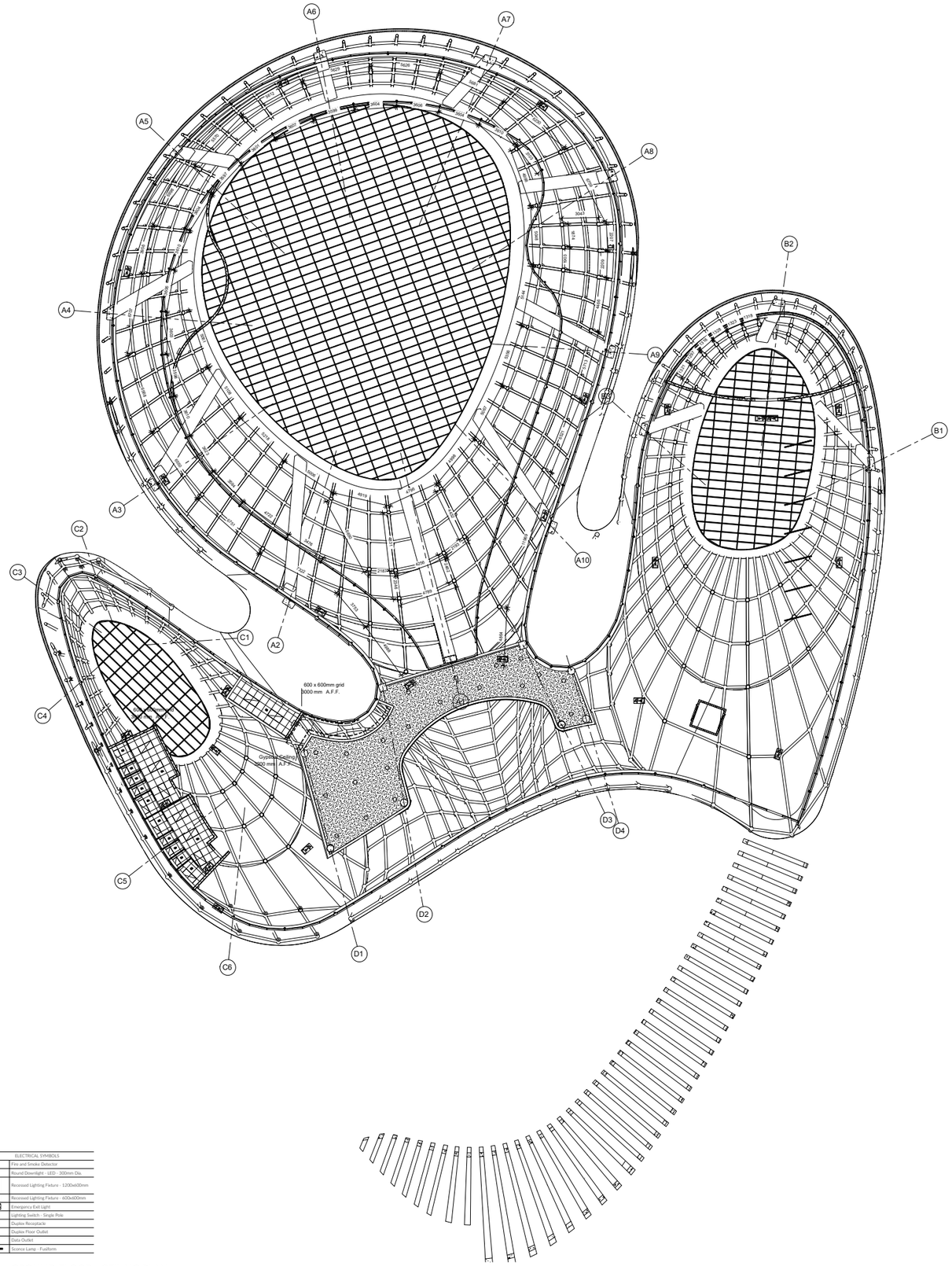


TECHNICAL



2019 AL AIN, ABU DHABI

WORKING DRAWINGS - THE FOOTPRINT



ELECTRICAL SYMBOLS
Fire and Smoke Detector
Round Downlight - LED - 300mm Dia.
Recessed Lighting Fixture - 1200x600mm
Recessed Lighting Fixture - 600x600mm
Emergency Exit Light
Lighting Switch - Single Pole
Duplex Receptacle
Duplex Floor Outlet
Data Outlet
Sconce Lamp - Fusiform

1 GROUND FLOOR - CEILING PLAN
1 : 100

FARASAT MIRZA
22A CORNICHE TOWER, KHALIFA STREET, AL MARKAZYIA, ABU DHABI, UNITED ARAB EMIRATES

THE FOOTPRINT
A PENGUINARIUM

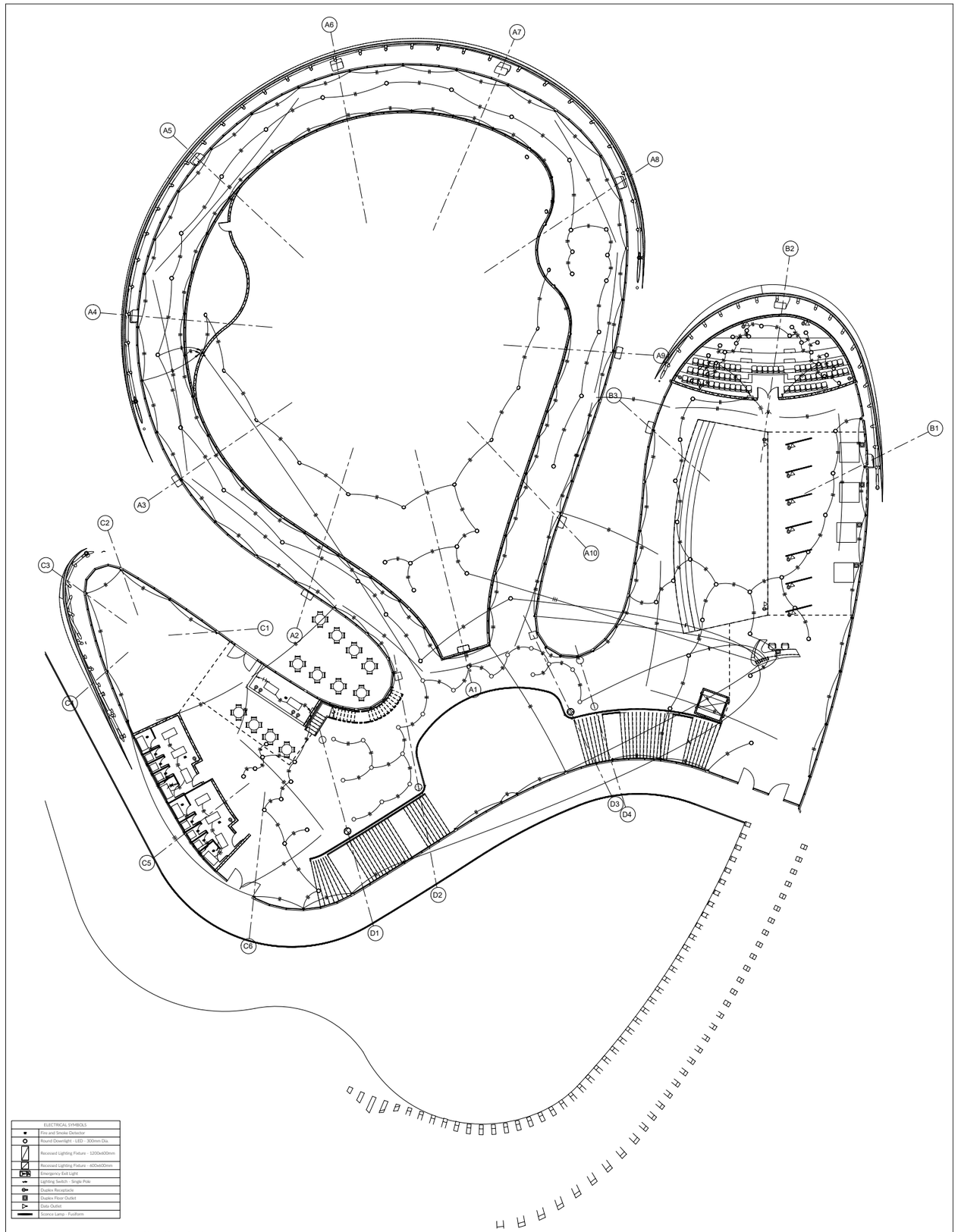
SHEET NAME
GROUND FLOOR - CEILING PLAN

REVISIONS

NO.	DATE	COMMENTS	REQUESTED BY
1	01.JAN.2017	First issue	Farasat
2	17.FEB.2017	Sheet title changed	Farasat

PROJECT NUMBER
0001
SHEET ISSUE DATE
01/20/19
PROJECT ADDRESS
AL AIN ZOO, AL AIN, UNITED ARAB EMIRATES

SHEET NUMBER
A102
DRAWING SCALES
1 : 100



ELECTRICAL SYMBOLS
Fire and Smoke Detector
Round Downlight - LED - 300mm Dia.
Recessed Lighting Fixture - 1200x600mm
Recessed Lighting Fixture - 600x600mm
Emergency Exit Light
Lighting Switch - Single Pole
Duplex Receptacle
Duplex Floor Outlet
Data Outlet
Sconce Lamp - Fusiform

1 GROUND FLOOR - ELECTRICAL PLAN
1 : 100

FARASAT MIRZA
22A CORNICHE TOWER, KHALIFA STREET, AL MARKAZYIA, ABU DHABI, UNITED ARAB EMIRATES

THE FOOTPRINT
A PENGUINARIUM

SHEET NAME
GROUND FLOOR - ELECTRICAL PLAN

REVISIONS

NO.	DATE	COMMENTS	REQUESTED BY
1	01.JAN.2017	First issue	Farasat
2	17.FEB.2017	Sheet title changed	Farasat

PROJECT NUMBER
0001
SHEET ISSUE DATE
20 JANUARY 2019
PROJECT ADDRESS
AL AIN ZOO, AL AIN, UNITED ARAB EMIRATES

SHEET NUMBER
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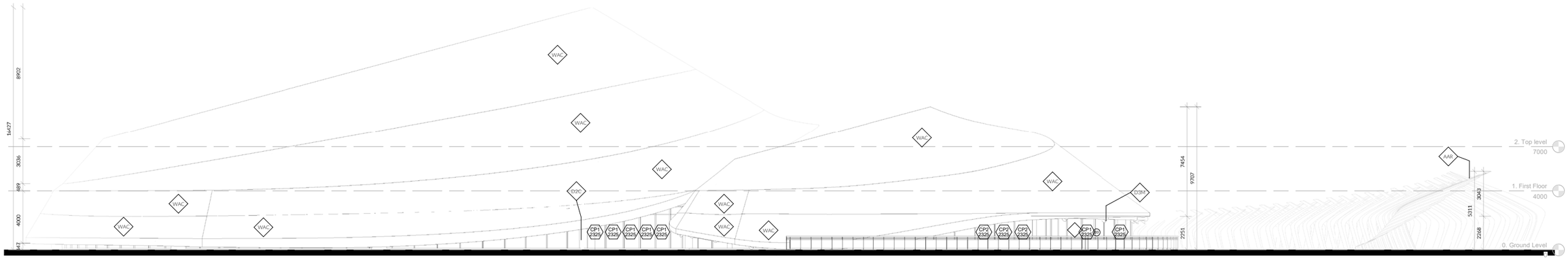

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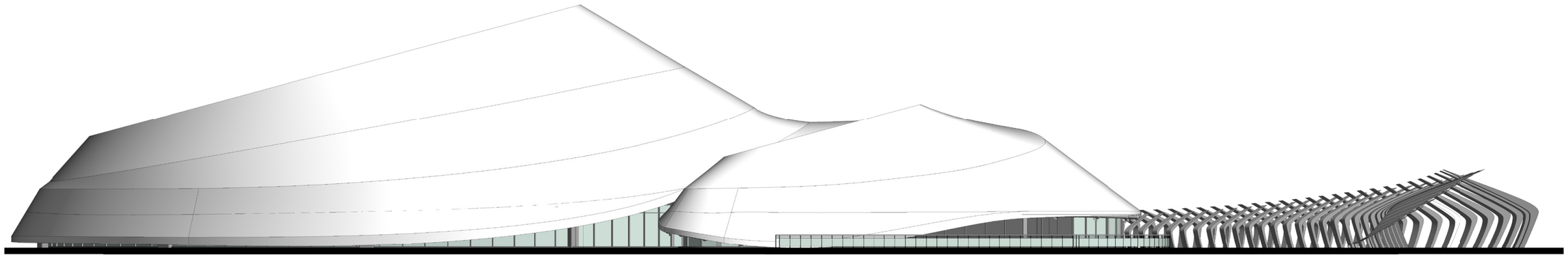
1 : 100



2 West - Material Finishing
1 : 100

ELEVATION SYMBOLS

WAC	Variable Dimension - White Aluminum Roof Cladding
CP1	Dome 1 Reinforced Concrete Columns - Painted
CP2	Dome 2 Reinforced Concrete Columns - Painted
D1M	Dome 1 Steel Mesh
D3M	Dome 3 Steel Mesh
AAR	Anodized Aluminum Entrance Ribs
RSE	500x700mm Roof Skylight System

SHEET NUMBER
A104-B
DRAWING SCALES
1 : 100

PROJECT NUMBER
0001
SHEET ISSUE DATE
27 JANUARY 2019
PROJECT ADDRESS
AL AIN ZOO, AL AIN, UNITED ARAB EMIRATES

REVISIONS

NO.	DATE	COMMENTS	ISSUED BY
1	27 JAN 2019	FOR ISSUE	F. MIRZA

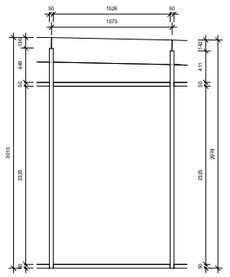
FARASAT MIRZA

22A CORNICHE TOWER, KHALIFA
STREET, AL MARKAZIYA, ABU DHABI,
UNITED ARAB EMIRATES

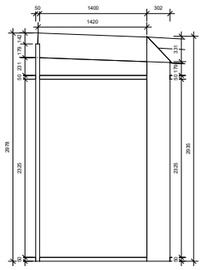
THE FOOTPRINT

A PENGUINARIUM

SHEET TITLE
West Elevation



1 Curtain Panel 30
1 : 20



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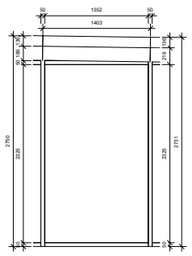

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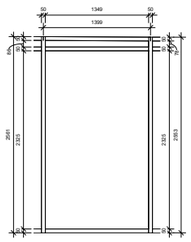

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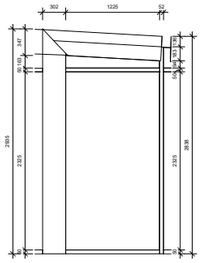

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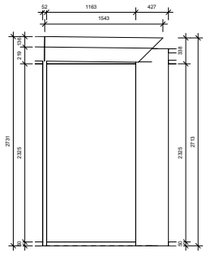

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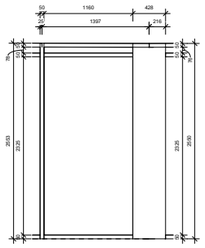

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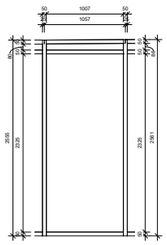

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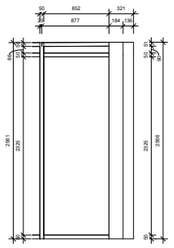

9 Curtain Panel 89
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8	7	System Panel: Glazed	2400	1083	Clear	Black Anodized Aluminum	
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10	4	System Panel: Glazed	2400	1075	Clear	Black Anodized Aluminum	
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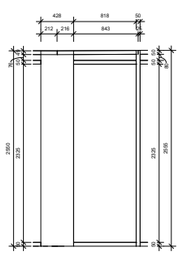
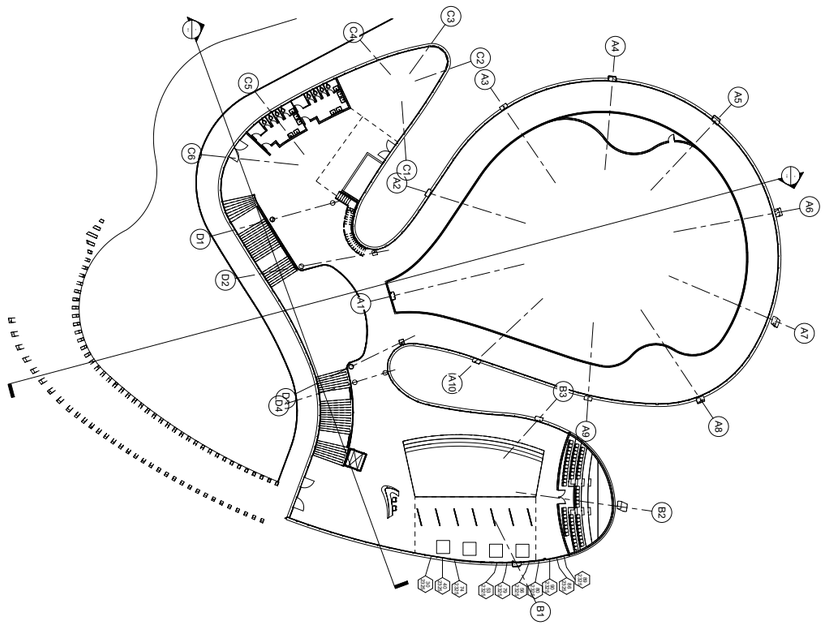
68	1	System Panel: Glazed	2325	1257	Clear	Black Anodized Aluminum	
69	1	System Panel: Glazed	2325	1255	Clear	Black Anodized Aluminum	
70	1	System Panel: Glazed	2325	1253	Clear	Black Anodized Aluminum	
71	2	System Panel: Glazed	2325	1239	Clear	Black Anodized Aluminum	
72	2	System Panel: Glazed	2325	1227	Clear	Black Anodized Aluminum	
73	2	System Panel: Glazed	2325	1226	Clear	Black Anodized Aluminum	
74	3	System Panel: Glazed	2325	1225	Clear	Black Anodized Aluminum	
75	1	System Panel: Glazed	2325	1223	Clear	Black Anodized Aluminum	
76	3	System Panel: Glazed	2325	1219	Clear	Black Anodized Aluminum	
77	2	System Panel: Glazed	2325	1210	Clear	Black Anodized Aluminum	
78	2	System Panel: Glazed	2325	1178	Clear	Black Anodized Aluminum	
79	1	System Panel: Glazed	2325	1163	Clear	Black Anodized Aluminum	
80	2	System Panel: Glazed	2325	1159	Clear	Black Anodized Aluminum	
81	2	System Panel: Glazed	2325	1132	Clear	Black Anodized Aluminum	
82	2	System Panel: Glazed	2325	1127	Clear	Black Anodized Aluminum	
83	1	System Panel: Glazed	2325	1126	Clear	Black Anodized Aluminum	
84	2	System Panel: Glazed	2325	1092	Clear	Black Anodized Aluminum	
85	2	System Panel: Glazed	2325	1005	Clear	Black Anodized Aluminum	
86	1	System Panel: Glazed	2325	1003	Clear	Black Anodized Aluminum	
87	1	System Panel: Glazed	2325	1002	Clear	Black Anodized Aluminum	
88	3	System Panel: Glazed	2325	1001	Clear	Black Anodized Aluminum	
89	1	System Panel: Glazed	2325	850	Clear	Black Anodized Aluminum	
90	1	System Panel: Glazed	2325	816	Clear	Black Anodized Aluminum	
91	2	System Panel: Glazed	2325	281	Clear	Black Anodized Aluminum	
92	4	System Panel: Glazed	1625	1395	Clear	Black Anodized Aluminum	
93	537	System Panel: Glazed	685	1371	Clear	Black Anodized Aluminum	
94	97	System Panel: Glazed	679	1367	Clear	Black Anodized Aluminum	
95	47	System Panel: Glazed	660	1309	Clear	Black Anodized Aluminum	
96	1	System Panel: Glazed	525	1336	Clear	Black Anodized Aluminum	
97	2	System Panel: Glazed	500	1005	Clear	Black Anodized Aluminum	
98	2	System Panel: Glazed	500	818	Clear	Black Anodized Aluminum	
99	432	System Panel: Glazed	Variable Width & Height		Clear	Black Anodized Aluminum	
100	6	System Panel: Solid	2325	1502	Solid	Black Anodized Aluminum	
101	1	System Panel: Solid	2325	1377	Solid	Black Anodized Aluminum	
102	2	System Panel: Solid	2325	1323	Solid	Black Anodized Aluminum	
103	1	System Panel: Solid	2325	1198	Solid	Black Anodized Aluminum	
Grand Total: 1462							



10 Curtain Panel 90
1 : 20

11 Curtain Panels - Ground Floor Key Plan
1 : 200



FARASAT MIRZA
22A CORNICHE TOWER, KHALIFA STREET, AL MARKAZIYA, ABU DHABI, UNITED ARAB EMIRATES

THE FOOTPRINT
A PENGUINARIUM

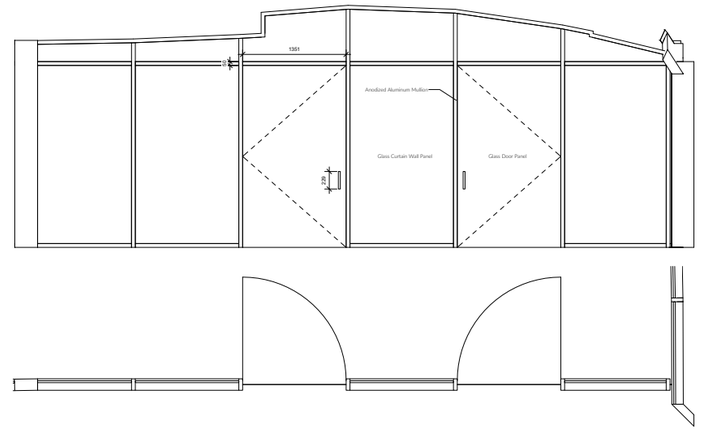
SHEET NAME: Curtain Wall Panels - Schedule and Graphics

REVISIONS

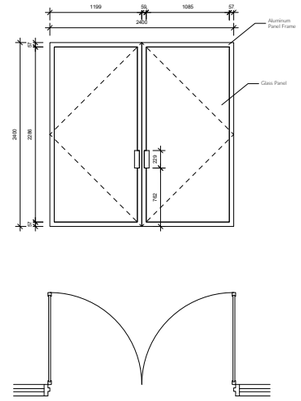
NO.	DATE	COMMENTS	ISSUED BY
1	17.02.2021	First Issue	Grand
2	17.03.2021	Added Key Plan	Grand

PROJECT NUMBER: 0001
SHEET ISSUE DATE: 2 FEBUARY 2019
PROJECT ADDRESS: AL AIN ZOO, AL AIN, UNITED ARAB EMIRATES

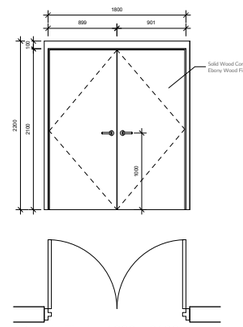
SHEET NUMBER: A105
DRAWING SCALES: As indicated



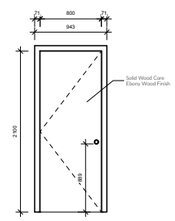
D1 Curtain Wall - Single Glass Door
1 : 20



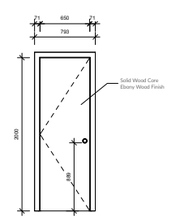
D2 Curtain Wall - Double Storefront Door
1 : 20



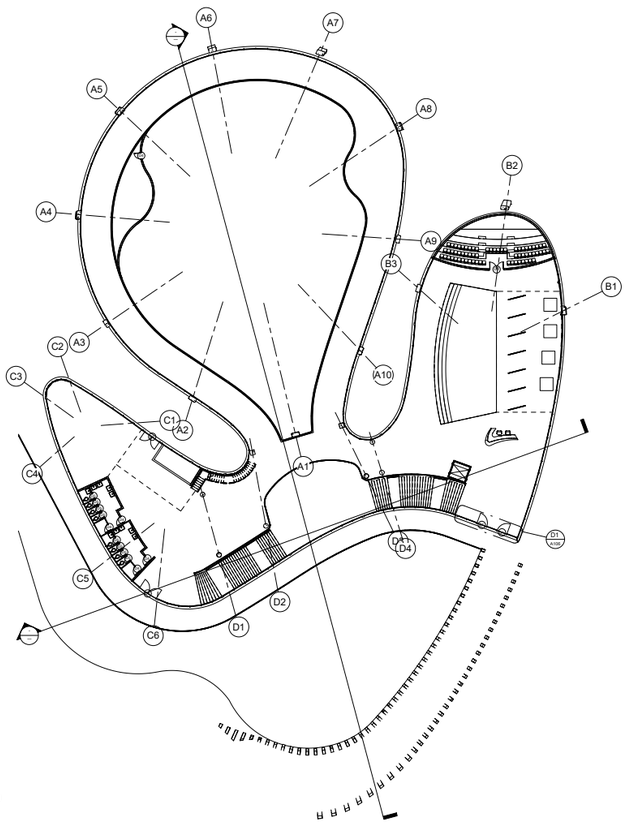
D3 Double Flush - 1800 x 2100
1 : 20



D4 Single Flush Wood Panel Door 800 x 2100
1 : 20



D5 Single Flush Wood Panel Door 650 x 2000
1 : 20



1 Doors - Ground Floor Key Plan
1 : 200

Door Schedule											
Family and Type	Type Mark	Quantity	Width	Height	Thickness	Door Material	Frame Material	Finish	Hardware	Hardware Group	Comments
M_Door-Curtain-Wall-Single-Glass: M_Door-Curtain-Wall-Single-Glass	D1	2	1351	2375	25	Glass	Aluminum	Black Anodized Aluminum	Lockset + Automatic Closer	1	
M_Door-Curtain-Wall-Double-Storefront: M_Door-Curtain-Wall-Double-Storefront	D2	2	2400	2400	25	Glass	Aluminum	Black Anodized Aluminum	Lockset + Automatic Closer	2	
M_Door-Passage-Double-Flush: 1800 x 2100mm	D3	4	1800	2100	45	Wood	Wood	Ebony Wood	Lockset	3	
M_Door-Interior-Single-Flush_Panel-Wood: 800 x 2100mm	D4	9	800	2100	35	Wood	Wood	Ebony Wood	Lockset	4	
M_Door-Interior-Single-Flush_Panel-Wood: 650 x 2000mm	D5	10	650	2000	35	Wood	Wood	Ebony Wood	Lockset	4	
Grand total: 27											

1. Keyliger KT3001-1200-32-01 + Dorma PORTEO Door Assistant
2. Keyliger KT3001-450-32-01 + Dorma PORTEO Door Assistant
3. Keyliger KT3001-450-32-01
4. SCHLAGE Orbit Knob Bath Lock F40 ORB 619 COL

FARASAT MIRZA
22A CORNICHE TOWER, KHALIFA STREET, AL MARKAZIYA, ABU DHABI, UNITED ARAB EMIRATES

THE FOOTPRINT
A PENGUINARIUM

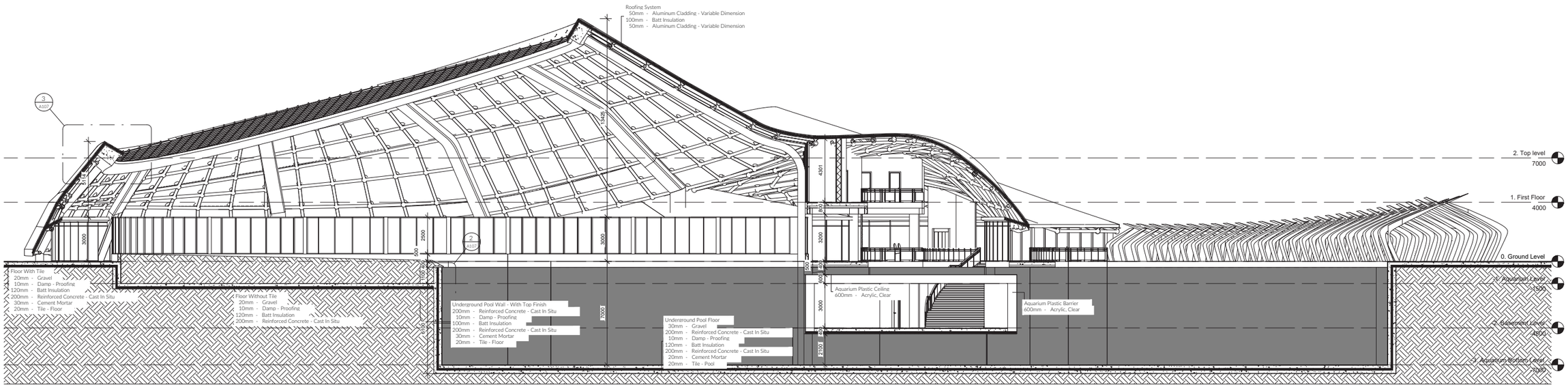
SHEET NAME: Doors - Schedule and Graphics

REVISIONS

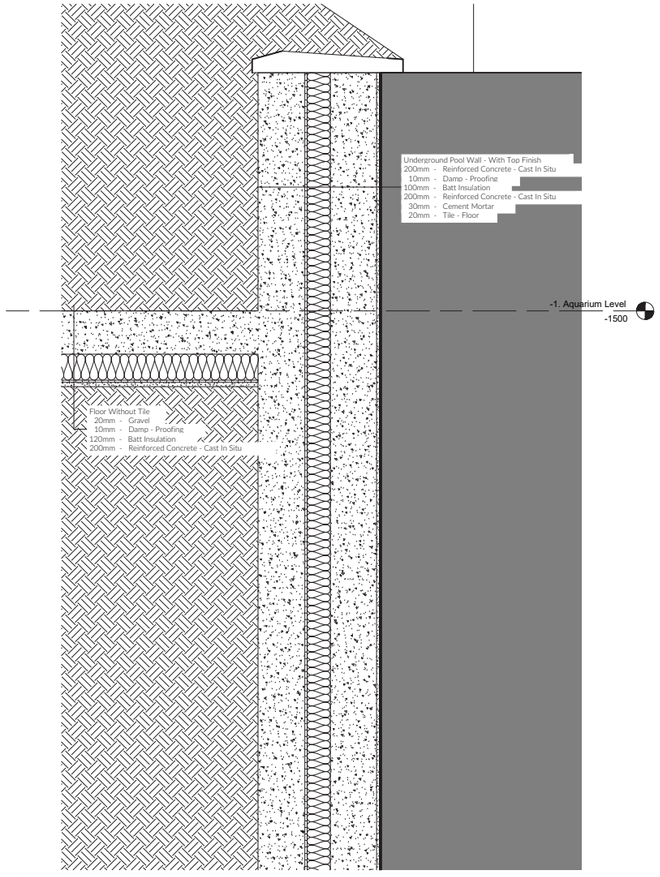
NO.	DATE	COMMENTS	ISSUED BY
1	17.02.2021	First Issue	Grand
2	17.03.2021	Added Key Plan	Grand

PROJECT NUMBER: 0001
SHEET ISSUE DATE: 2 FEBUARY 2019
PROJECT ADDRESS: AL AIN ZOO, AL AIN, UNITED ARAB EMIRATES

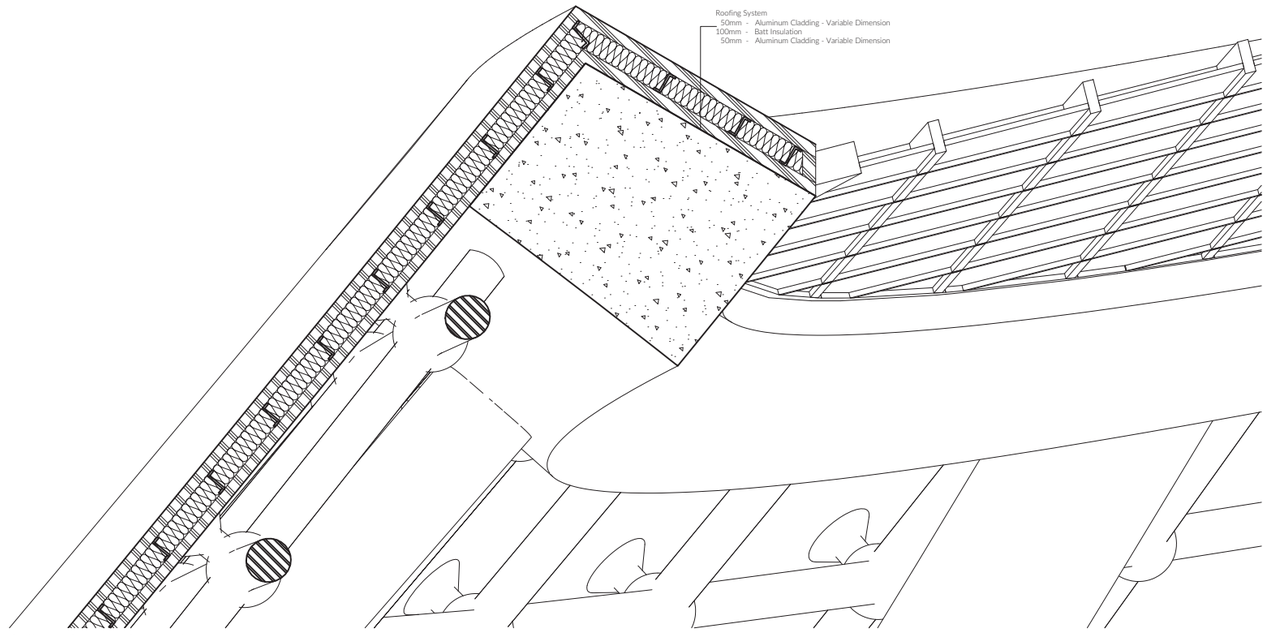
SHEET NUMBER: A106
DRAWING SCALES: As indicated



1 Section 1
1 : 100



2 Section 1 - Callout 1 - Pool Wall Detail
1 : 10



3 Section 1 - Callout 2 - Roof Detail
1 : 10

SHEET NUMBER
A107
DRAWING SCALES
As indicated

PROJECT NUMBER
0001
SHEET ISSUE DATE
10 FEBUARY 2019
PROJECT NAME
AL AIN ZOO, AL AIN, UNITED ARAB EMIRATES

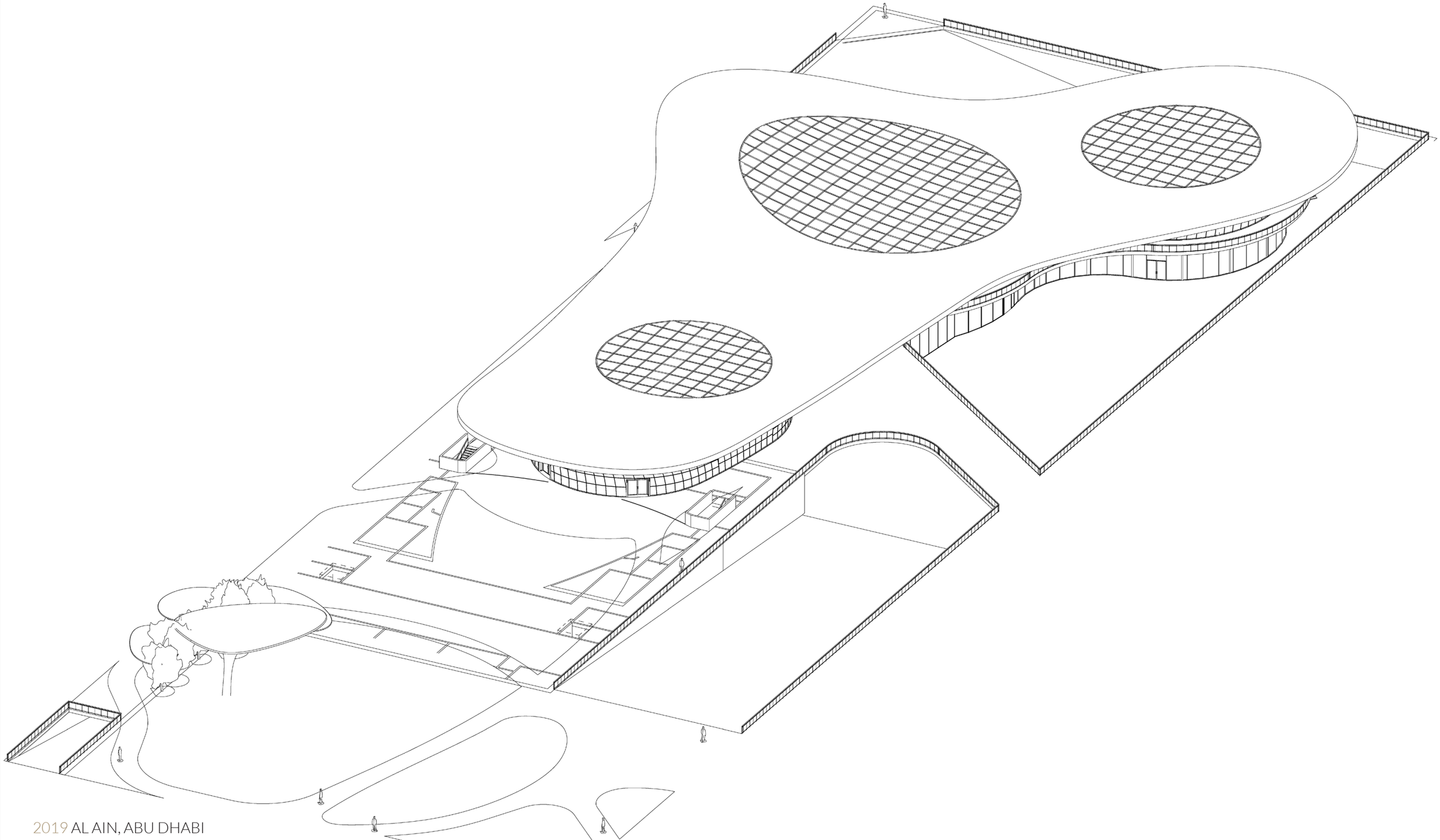
REVISIONS

NO.	DATE	COMMENTS	ISSUED BY
1	10-FEB-2019	First Issue	FARASAT

THE FOOTPRINT
A PENGUINARIUM

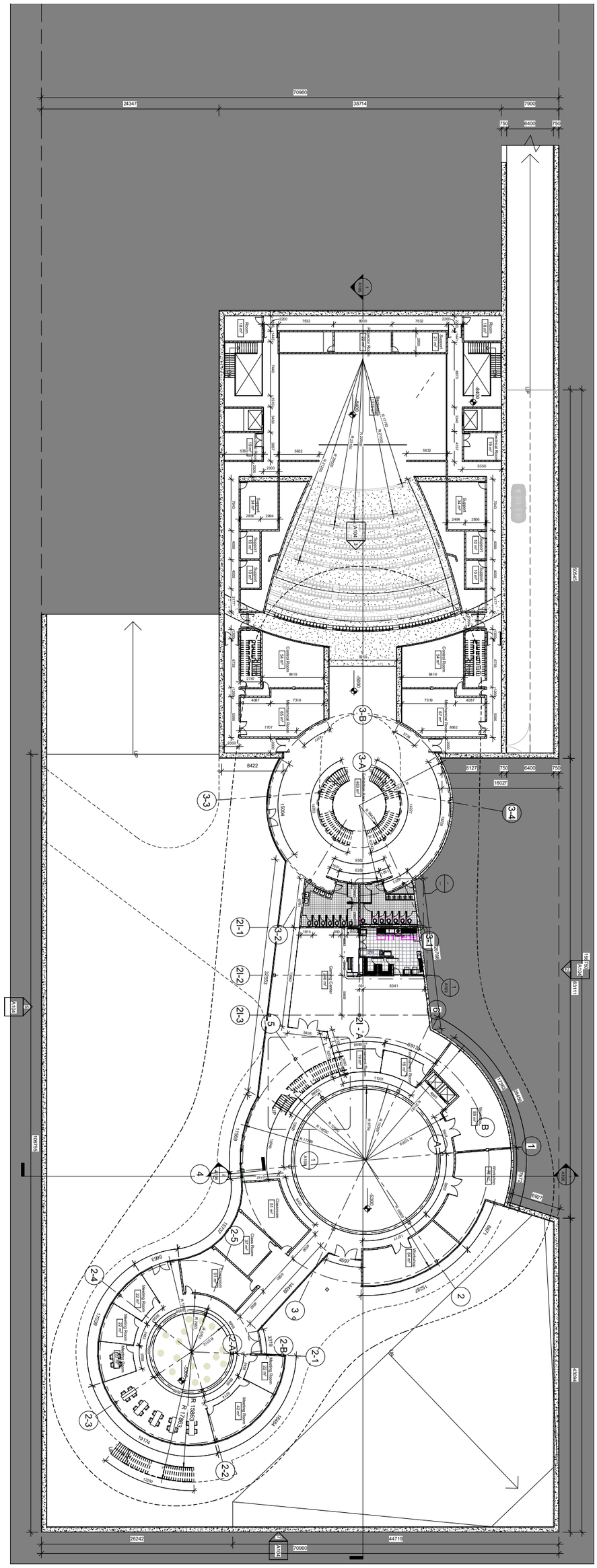
SHEET NAME
Section 1

FARASAT MIRZA
22A CORNICHE TOWER, KHALIFA
STREET, AL MARKAZIYA, ABU DHABI,
UNITED ARAB EMIRATES



2019 AL AIN, ABU DHABI

WORKING DRAWINGS - THE FOOTPRINT



SYMBOLS - BASEMENT FLOOR PLAN	
1300 LEVEL	FLOOR LEVEL SYMBOL
SECTION NUMBER / A107 SHEET NUMBER	SECTION SYMBOL
A	GRID SYMBOL

ABBREVIATIONS	
DN	DOWN (STAIRS)
DW	DISHWASHER
REF	REFRIGERATOR

FARASAT MIRZA

6A CORNICHE TOWER, KHALIFA STREET,
AL MARKAZYIA, ABU DHABI, UNITED
ARAB EMIRATES

THE YOUTH HUB

FORUM AND HOSTEL

SHEET NAME
Basement Level Plan

REVISIONS

NO.	DATE	COMMENTS	ISSUED BY
1	19 SEPT 2019	First Issue	Farasat M.

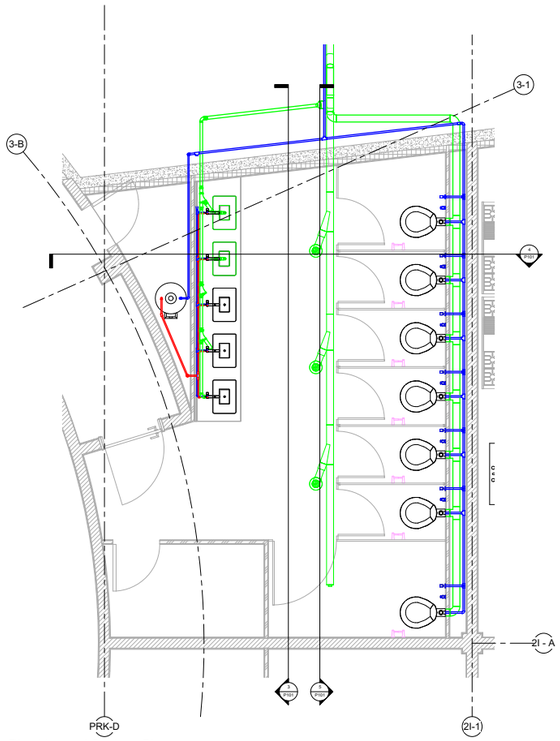
PROJECT NUMBER
0002

SHEET ISSUE DATE
19 SEPTEMBER 2019

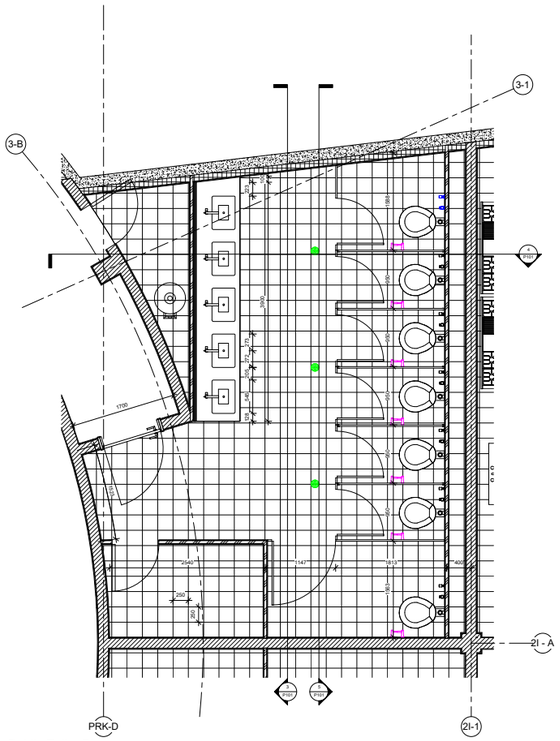
PROJECT ADDRESS
Al Jazira, Abu Dhabi, UAE

SHEET NUMBER
A101

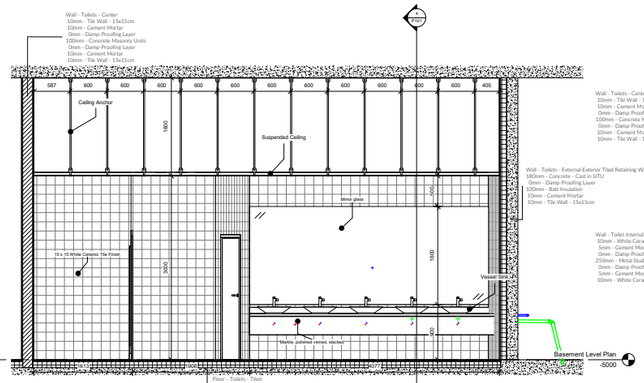
DRAWING SCALES
As indicated



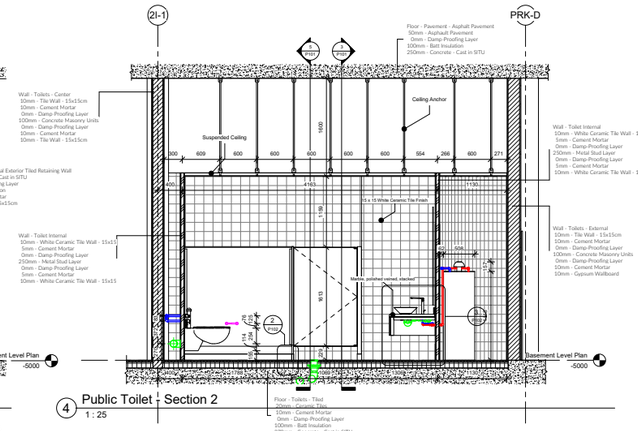
1 Plumbing and Sanitary Plan
1 : 25



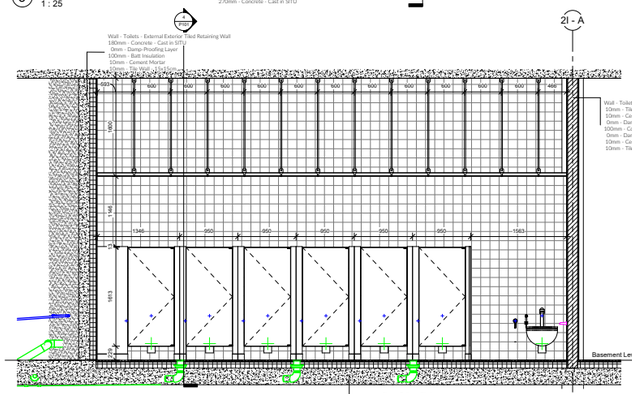
2 Public Toilet Plan
1 : 25



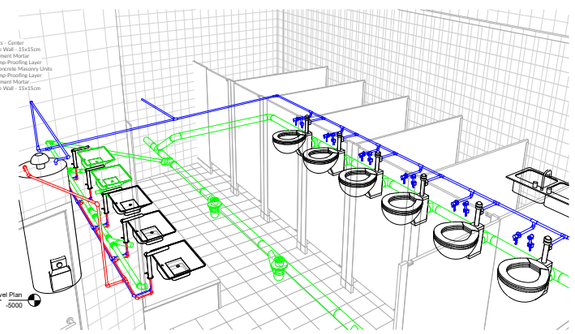
3 Public Toilet - Section 1
1 : 25



4 Public Toilet - Section 2
1 : 25



5 Public Toilet - Section 3
1 : 25



6 Plumbing 3D View

PIPES LEGEND
Sanitary System
Commercial Hot Water System
Commercial Cold Water System

FARASAT MIRZA
6A CORNICHE TOWER, KHALIFA STREET,
AL MARKAZIYA, ABU DHABI, UNITED
ARAB EMIRATES

THE YOUTH HUB
FORUM AND HOSTEL

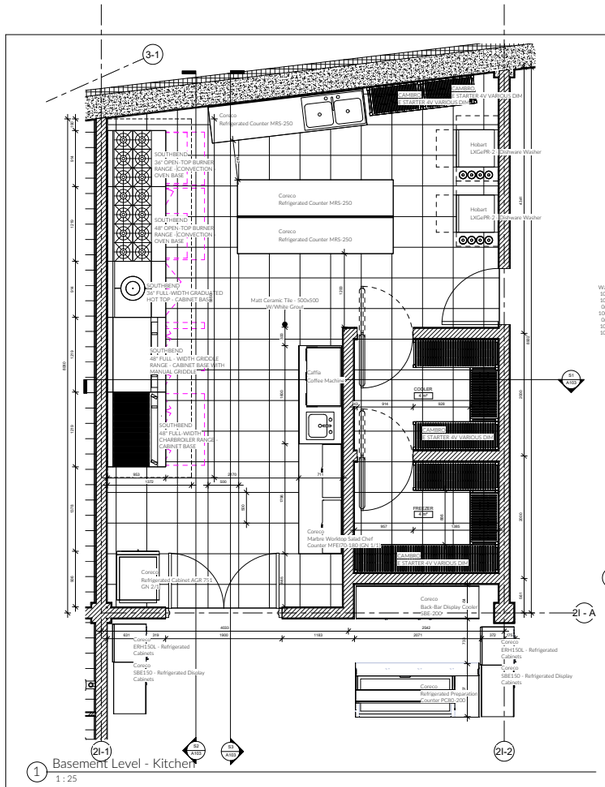
SHEET NAME
Public Toilet Drawings

REVISIONS

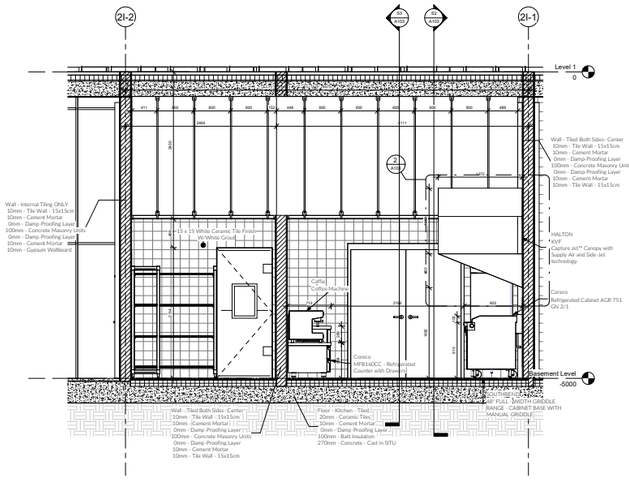
NO.	DATE	COMMENTS	ISSUED BY
1	26 SEPT 2019	First Issue	Farasat Mirza
2	26 SEPT 2019	Updated Material Names, Split Plumbing and Architectural Plans, Added Section 03, Updated Wall Structures	Farasat Mirza
3	15 OCT 2019	Added Third Section	Farasat Mirza

PROJECT NUMBER
0002
SHEET ISSUE DATE
26 SEPT 2019
PROJECT ADDRESS
Al Jazira, Abu Dhabi, UAE

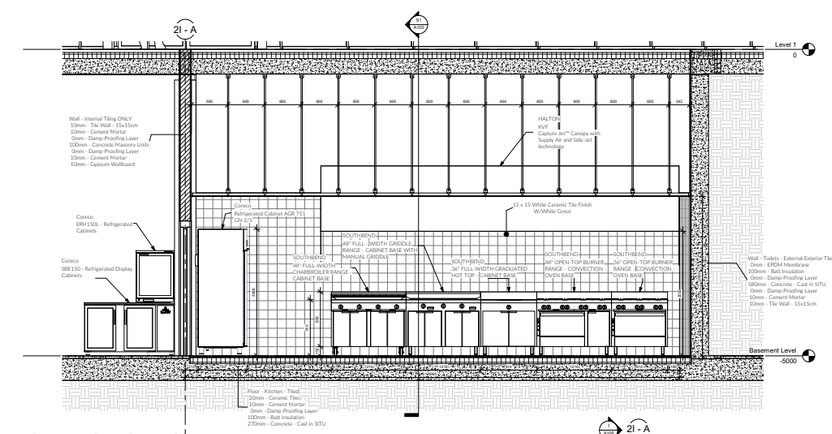
SHEET NUMBER
A102-A
DRAWING SCALES
As indicated



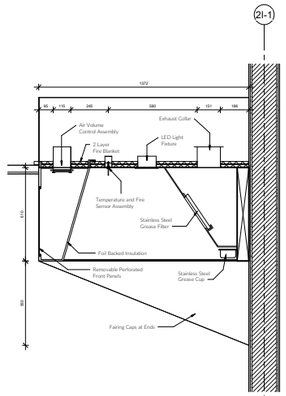
1 Basement Level - Kitchen
1 : 25



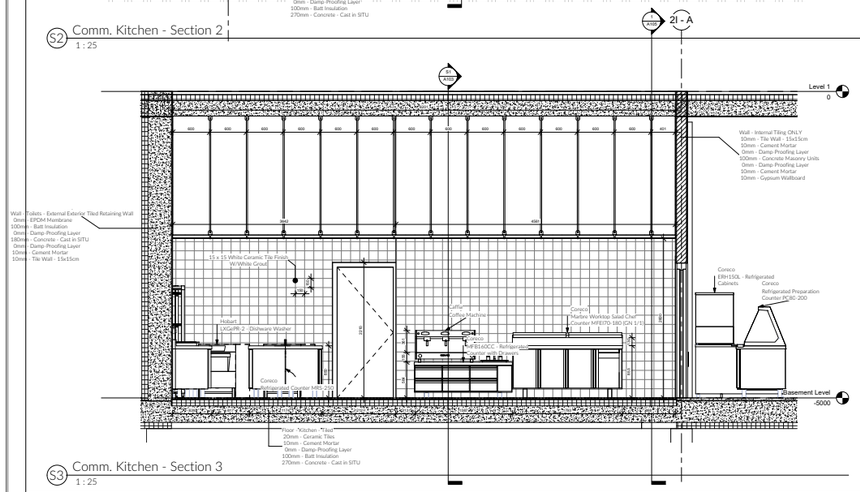
S1 Comm. Kitchen - Section 1
1 : 25



S2 Comm. Kitchen - Section 2
1 : 25



2 Comm. Kitchen - Hood Detail
1 : 10



S3 Comm. Kitchen - Section 3
1 : 25

FARASAT MIRZA
6A CORNICHE TOWER, KHALIFA STREET,
AL MARKAZIYA, ABU DHABI, UNITED
ARAB EMIRATES

THE YOUTH HUB
FORUM AND HOSTEL

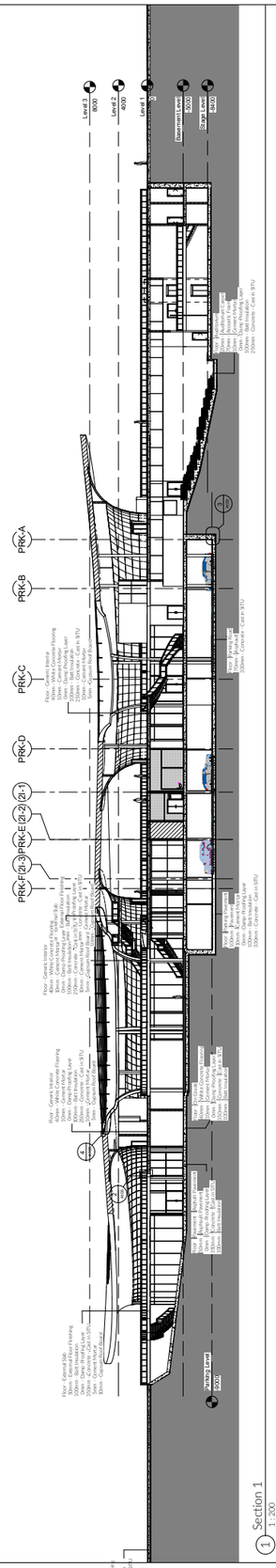
SHEET NAME
Commercial Kitchen Drawings

REVISIONS

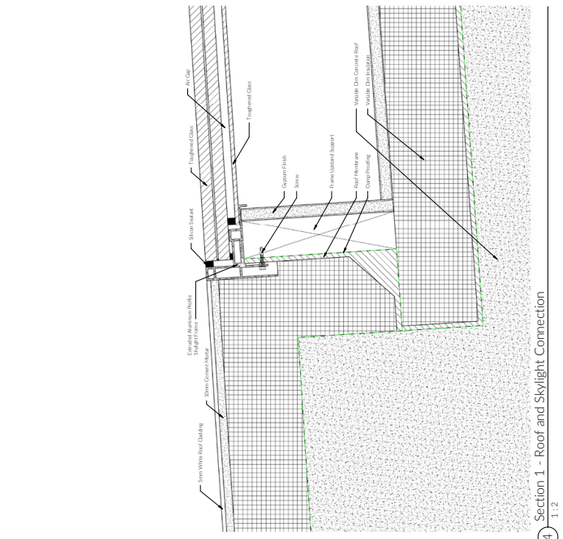
NO.	DATE	COMMENTS	ISSUED BY
1	15 OCT 2019	First Issue	Farasat M
2	15 Oct 2019	Added Water Hammering	Farasat M

PROJECT NUMBER
0002
SHEET ISSUE DATE
17 OCTOBER 2019
PROJECT ADDRESS
Al Jazira, Abu Dhabi, UAE

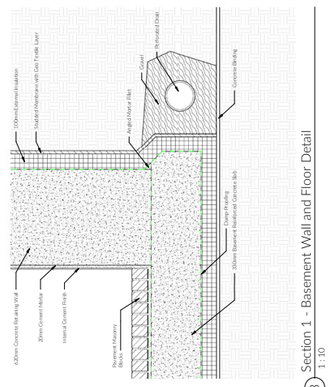
SHEET NUMBER
A103
DRAWING SCALES
As indicated



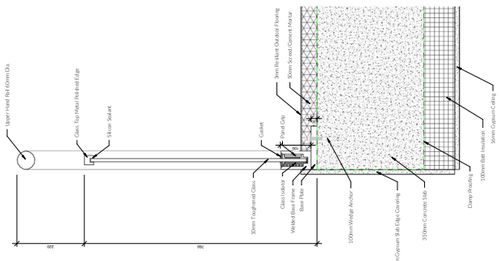
1 Section 1
1 : 200



4 Section 1 - Roof and Skylight Connection
1 : 2



3 Section 1 - Basement Wall and Floor Detail
1 : 10



2 Section 1 - Balcony Detail
1 : 5

FARASAT MIRZA

6A CORNICHE TOWER, KHALIFA STREET,
AL MARKAZYIA, ABU DHABI, UNITED
ARAB EMIRATES

THE YOUTH HUB

FORUM AND HOSTEL

SHEET NAME
Section 1

REVISIONS

NO.	DATE	COMMENTS	ISSUED BY
1	15 NOV 2019	Issue Issue	Faisal M

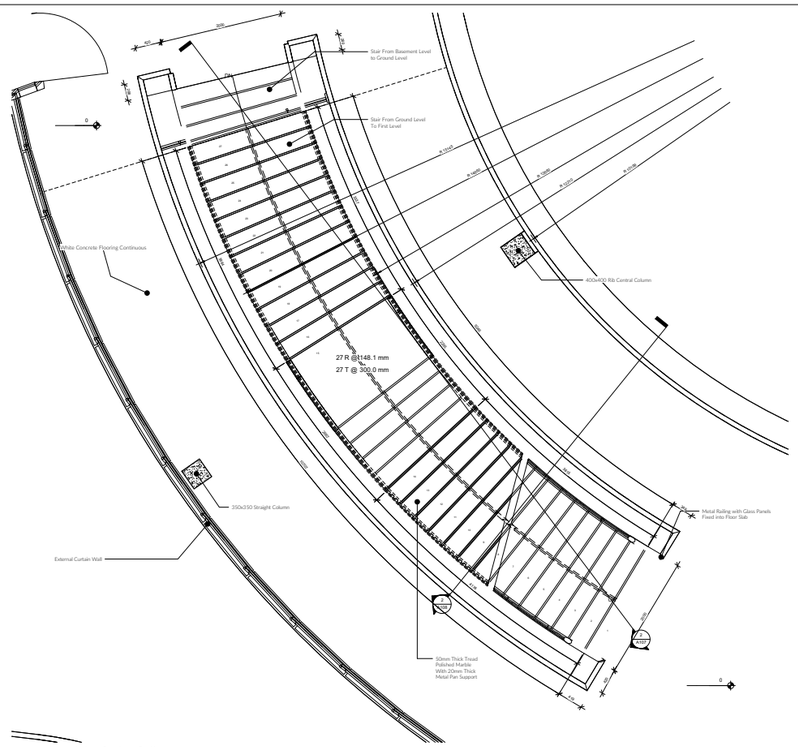
PROJECT NUMBER
0002

SHEET ISSUE DATE
07 NOVEMBER 2019

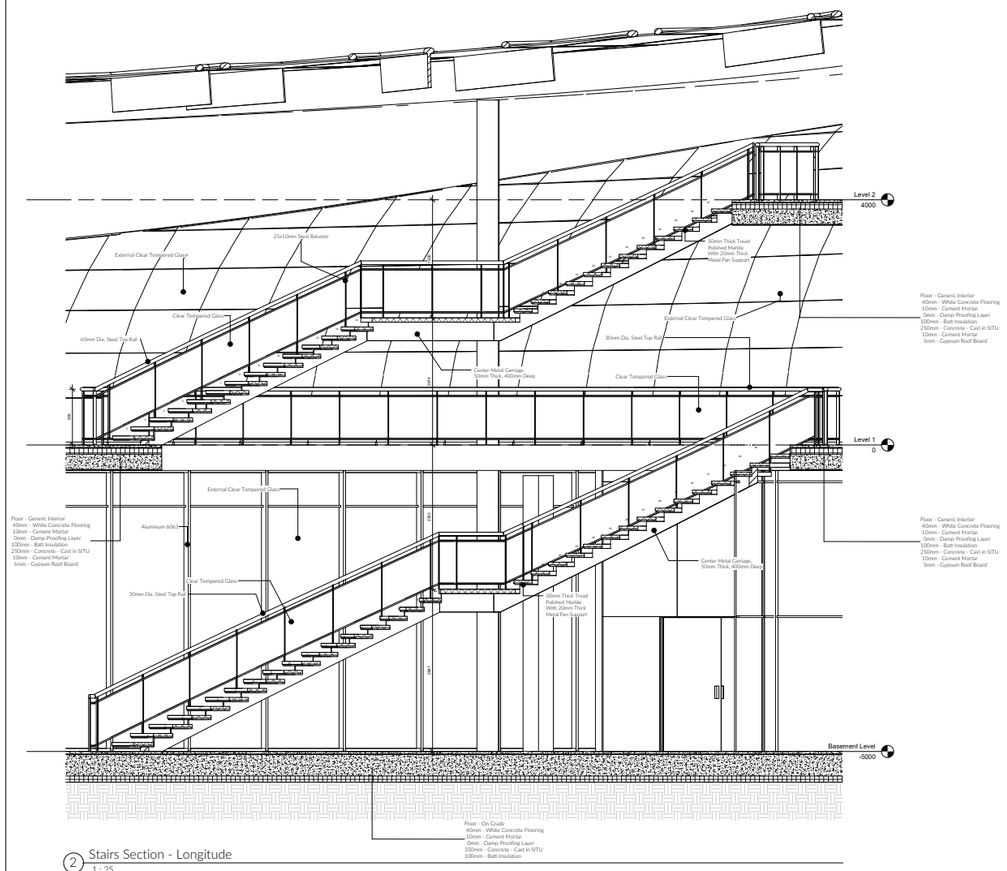
PROJECT ADDRESS
Al Jazira, Abu Dhabi, UAE

SHEET NUMBER
A105

DRAWING SCALES
As indicated



1 Level 1 - Stairs Callout
1 : 25



2 Stairs Section - Longitude
1 : 25

FARASAT MIRZA

6A CORNICHE TOWER, KHALIFA STREET,
AL MARKAZYIA, ABU DHABI, UNITED
ARAB EMIRATES

THE YOUTH HUB

FORUM AND HOSTEL

SHEET NAME
Central Grand Stairs

REVISIONS

NO.	DATE	COMMENTS	ISSUED BY
1	15 NOV 2019	Issue Issue	Faisal M
2	21 NOV 2019	Central Grand Stair Plan to fix the sign issue. Updated Dimension Lines	Faisal M

PROJECT NUMBER
0002

SHEET ISSUE DATE
21 NOVEMBER 2019

PROJECT ADDRESS
Al Jazira, Abu Dhabi, UAE

SHEET NUMBER
A107

DRAWING SCALES
1 : 25

FABRICATION

2019 THE FRAGMENTS TOWER - STRUCTURAL MODEL

LASER CUT MODELS

FABRICATION SUMMARY

All models where the structure consists of regularly shaped forms and elements are well suited to be built by means of laser cut parts. As laser cutters operate in only two dimensions, a form that has a more complex form tends to require other means of fabrication.

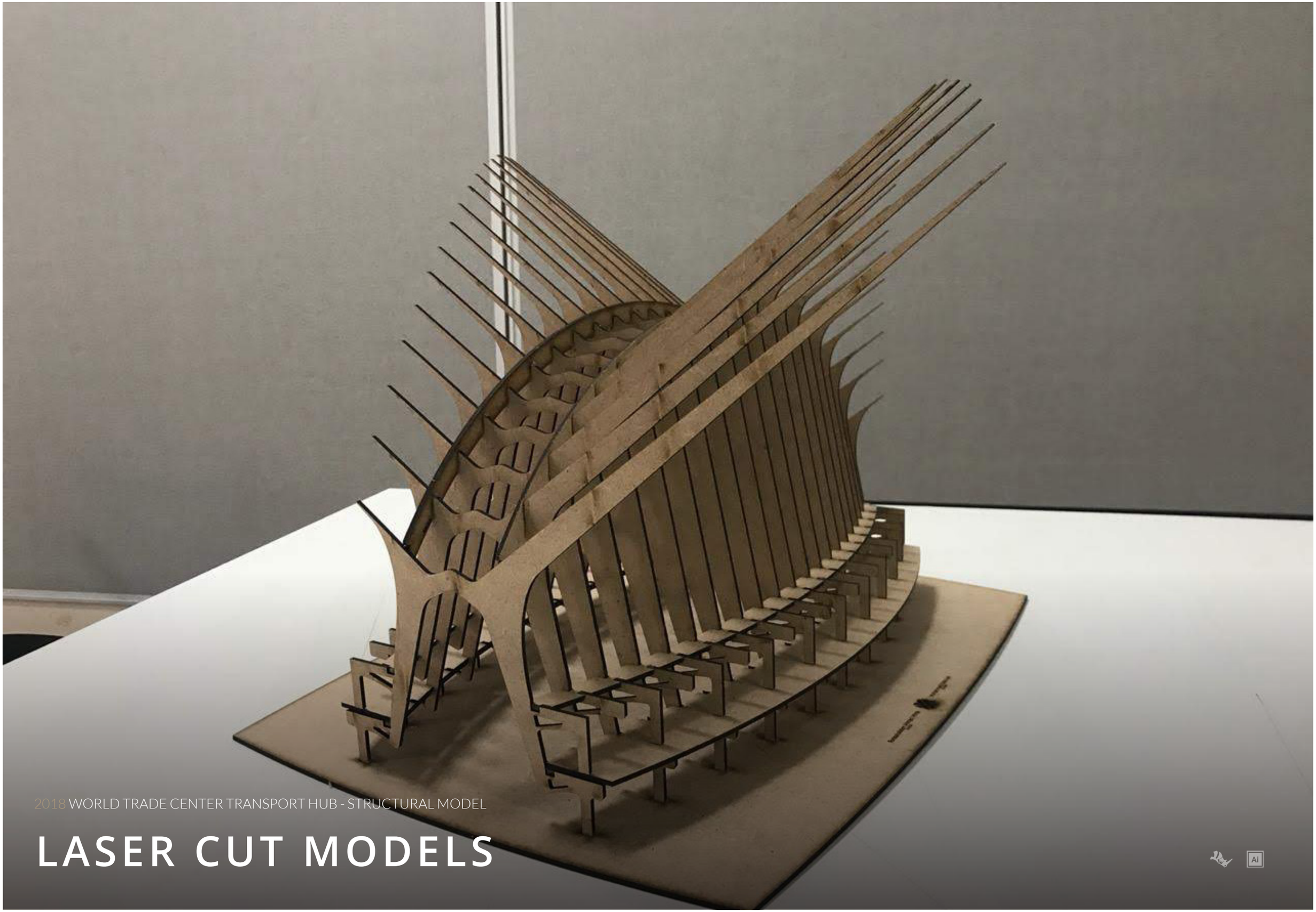
MODEL PREPARATION

An architectural model, typically either a Rhino or BIM model are used a reference for an entirely new Rhino model that is custom built for laser cutting making sure all parts fit together and are able to be assembled once they are cut. Several factors affect the model which must be known before modeling in software can start, namely material thickness and type of material.

THE FRAGMENTS TOWER

In the case of the Fragments Tower, a 1:250 scale model was constructed. The model works just as a real building would. With a central core from which slabs extend. The core provides most of the structural load bearing capacity. The columns at the external envelope of the build reinforce and rigidity to the building, helping to resist torsional loads.

Sandwiching the structural model are four white acrylic 'shards' that give the tower its distinctive appearance.



2018 WORLD TRADE CENTER TRANSPORT HUB - STRUCTURAL MODEL

LASER CUT MODELS

FABRICATION SUMMARY

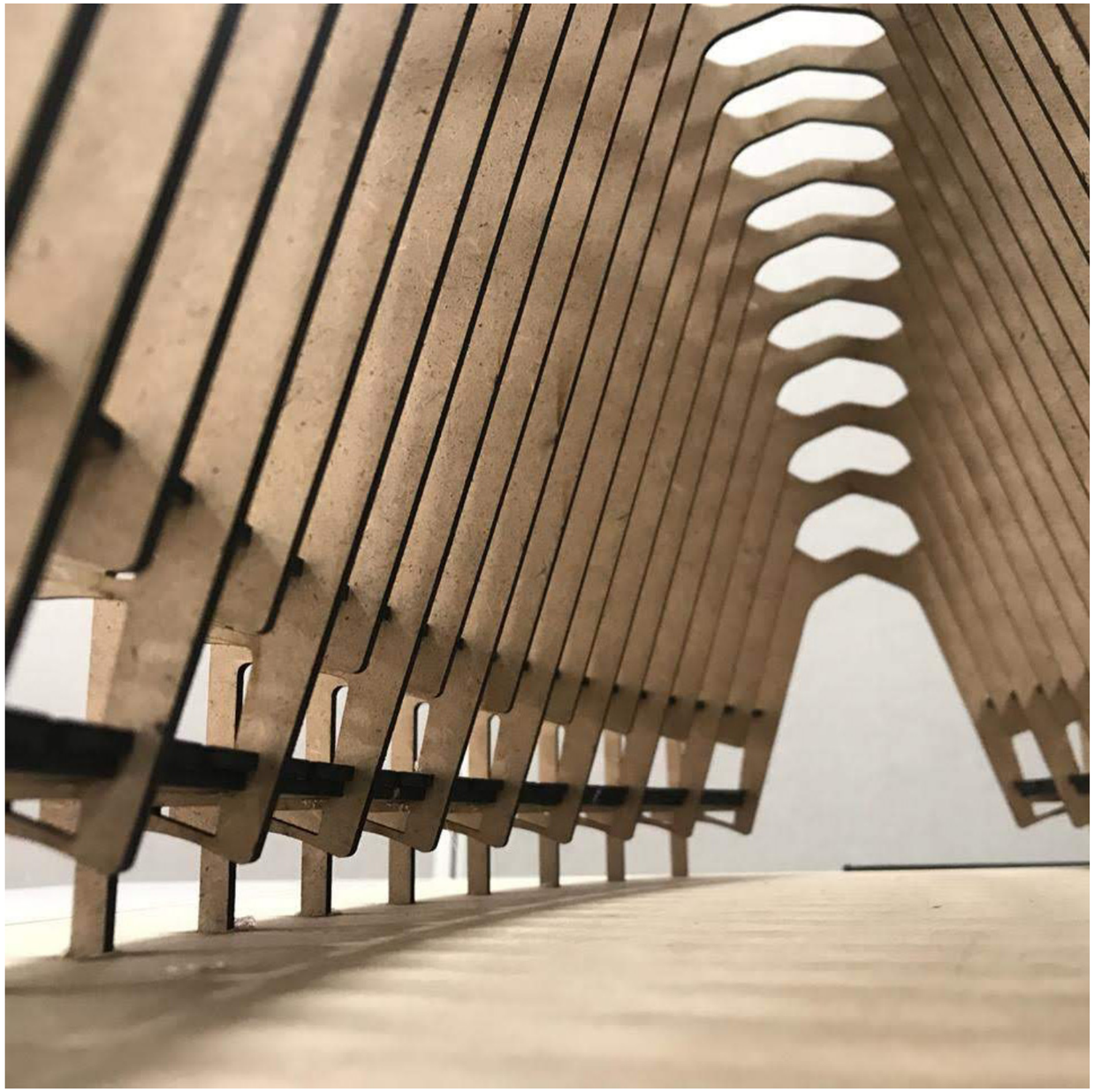
The model of the World Trade Center Transport by Santiago Calatrava was an exercise to help third year students understand how large span structures work.

THE FIRST ATTEMPT

Two models were created as the first one did not have the strength required to bear the weight of the structure. Several fabricated parts had cross sections that were too thin and would snap on the slightest touch.

THE SECOND ATTEMPT

A great deal was learned from the first attempt and the model was revised to account for the issues faced without sacrificing the final aesthetic of the model. The finished model was surprisingly strong and durable.



2018 THE FOOTPRINT PENGUINARIUM

3D PRINTED MODELS

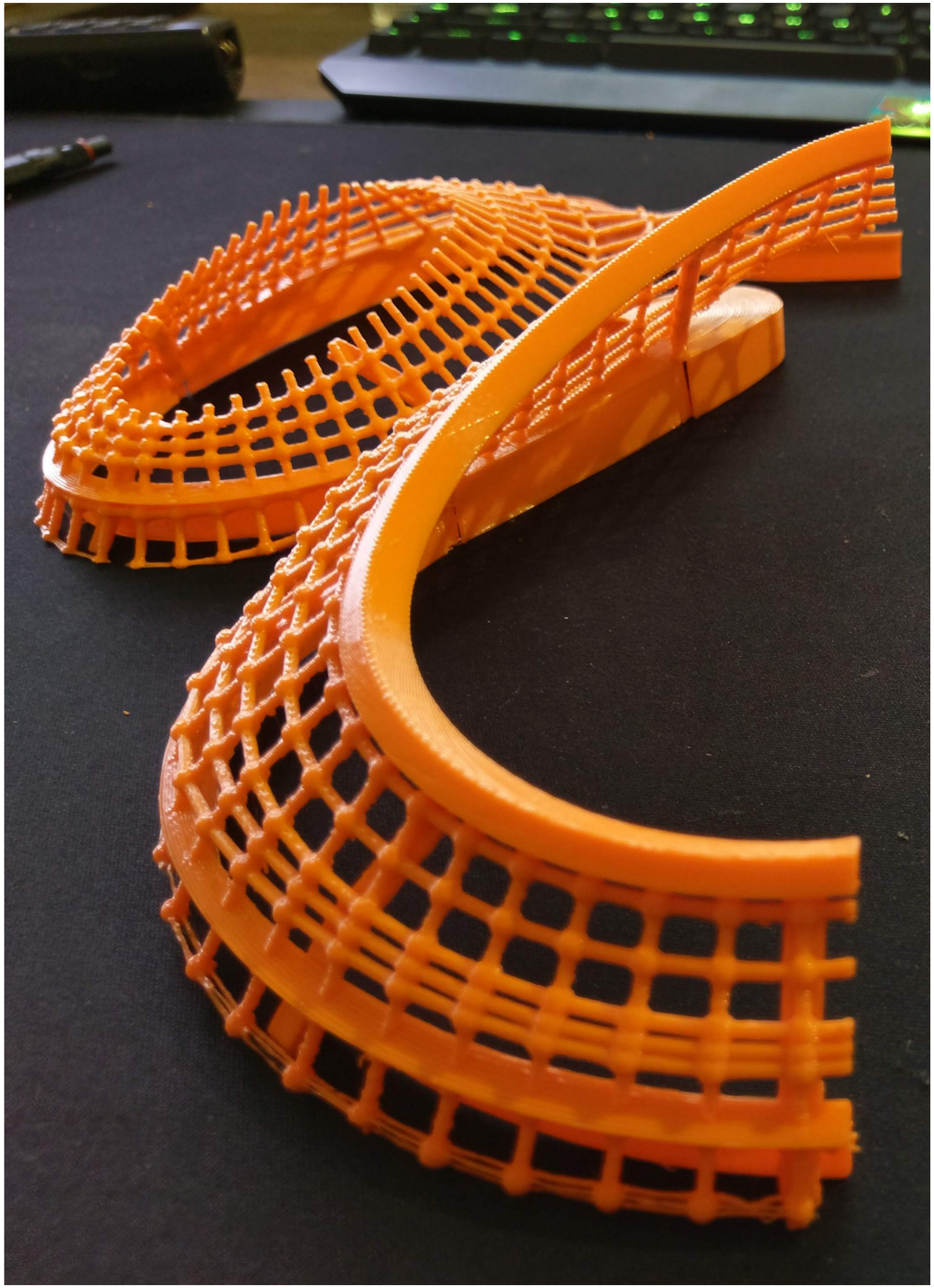
FABRICATION SUMMARY

3D printing was, up until recently, unattainable for the average person. With the recent advancements and new open source technologies, it has become something any creator can have access to. I got into 3D printers and 3D printing in the fall of 2018 when I discovered just how inexpensive 3D printers had become. I got some money together and bought a Creality CR10S. This machine, for all its simplicity, can bring the most out of this world objects to the real world. It is not as easy to operate as many assume but the output you get for your effort is unparalleled.

PREPARING A MODEL

A 3D printer needs a model that has been specifically designed for it to get the best print quality and quickest turn around. A model that typically comes out of a CAD, BIM or even 3D modeler will likely face issues being printed.

I have found that it is most efficient to use the original architectural file as a reference to quickly build a new file specifically designed for 3D printing considering all best practices.



RESEARCH

DESIGNING A NEXT GENERATION AIRPORT

AL AIN INTERNATIONAL

2018 LIGHTING AND ACOUSTICS

RESEARCH SUMMARY

The first part of the graduation project is to create a thesis on the chosen typology of building. The thesis goes through everything required to be fully prepared to start designing the project in the second phase of the graduation project course. The thesis is divided into 6 parts:

INTRODUCTION

The introduction identifies the project as a next generation airport. It looks at common issues with the project and lists goals that should be achieved by projects end.

Then it looks at the typology of the type, going into the history of airports and identifying the most used configurations of airport.

SITE ANALYSIS

The site analysis section identifies Al Ain International Airport as the site of choice and gives reasons why. Then it takes a deep dive and looks into the details of the site.

CASE STUDIES

Three case studies are the backbone of this research where each was modeled in a BIM environment from which data was extracted and analyzed for use in the subsequent parts of the report.

GENERIC DATA

Generic data was collected which describes the requirements of the different facilities, stakeholders and laws.

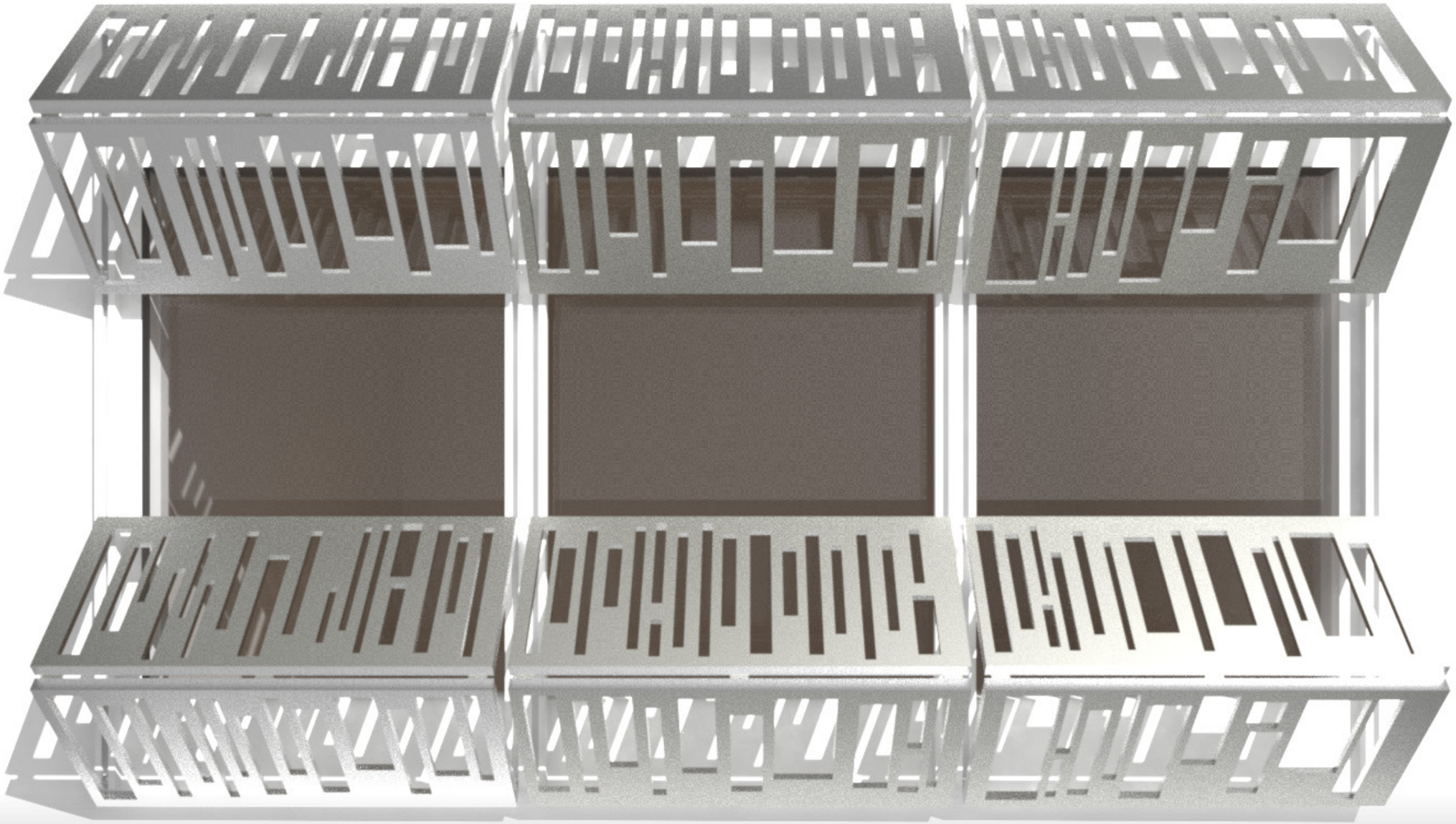
PROGRAM

A program was generated from the generic data and data from the case studies.

CONCEPT

A quick concept was used to illustrate what the end project might look like.

You can find the full thesis at FarasatMirza.com/AirportThesis



2018 LIGHTING AND ACOUSTICS

SUN SCREENS

RESEARCH SUMMARY

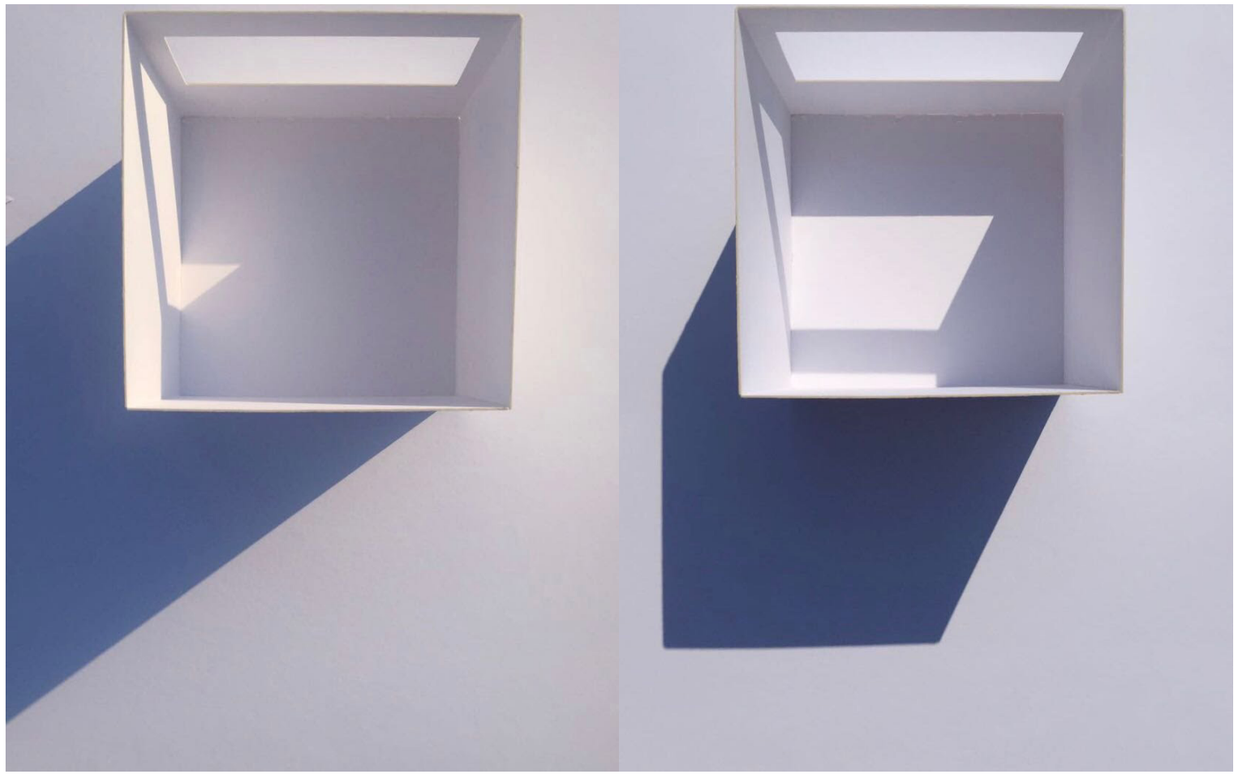
As part of a course on lighting and acoustics, students were asked to design a sunscreen system that would optimize the light and heat entering a room through an opening. To do this, readings were first taken at various times of day, analyzed and then a sunscreen was designed using various software like SketchUp and Velux.

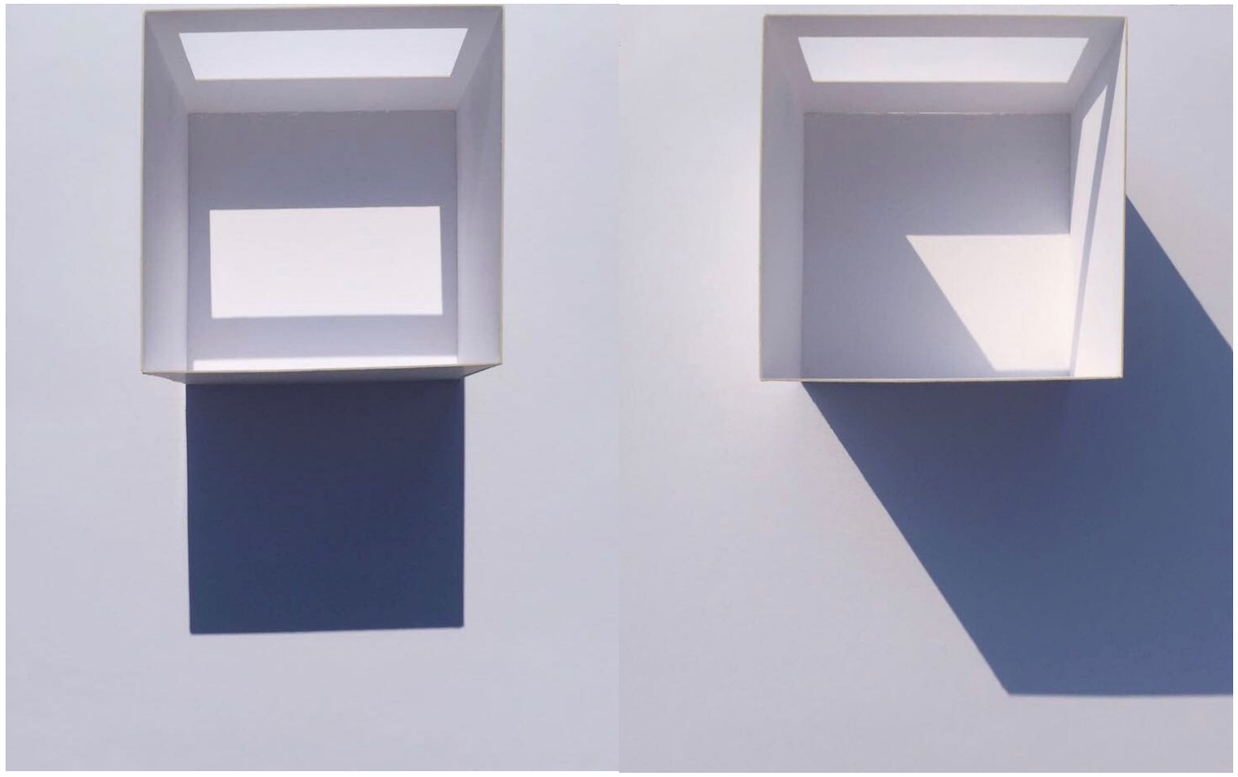
MODEL READINGS AND ANALYSIS

Readings were taken during the winter season. At 10AM, the sun is in the east and enters the room. It lights up part of the floor and the western wall. At 12PM, the sun is directly south and lights up the entire floor. At 2PM, the sun is in the west and enters the room. It lights up part of the floor and the western wall. At 4PM, the sun is further west than at 2PM. Light enters the room but only lights up the eastern wall. The floor is left untouched.

SUNSCREEN DESIGN

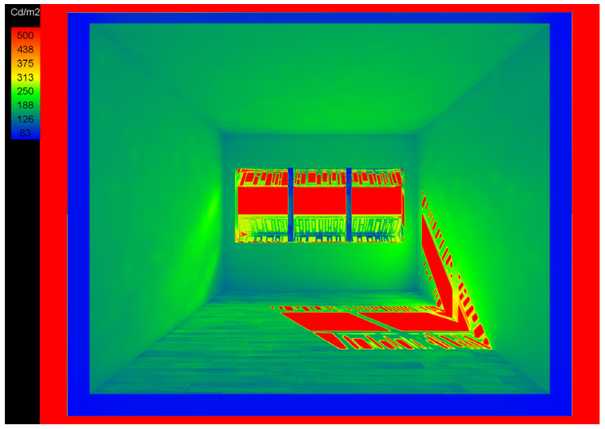
This design allows for the room to be heated naturally during winter while reducing the heat entering during the summer. As can be seen in the false color rendering, from October to February, the winter months, sunlight is let into the room. This allows the room to be heated in the winter, reducing the energy needed to heat the room artificially. In the summer months from March to September, less light is let into the room which reduces the heat entering the room. Again, this means less energy is required to cool the room through artificial means.





RESULTS WITH SUNSCREEN

ANNUAL LIGHTING - FALSE COLOR - 10AM



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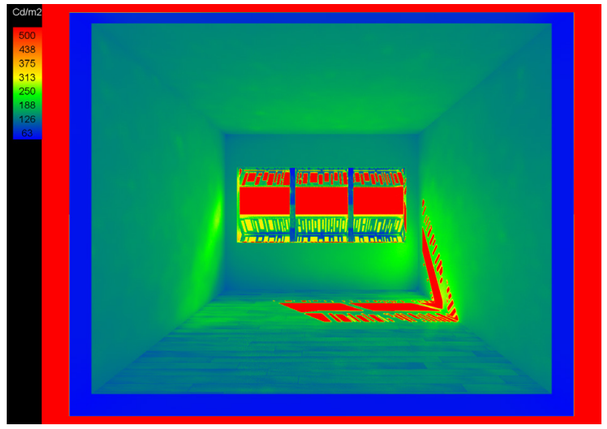

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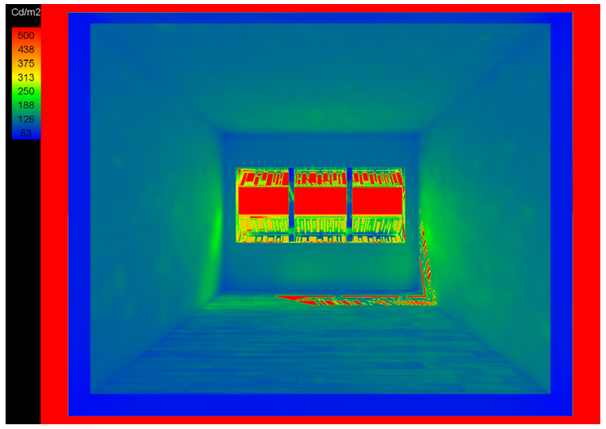

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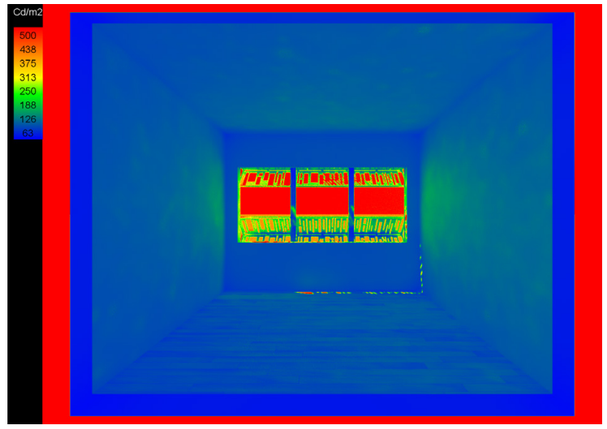

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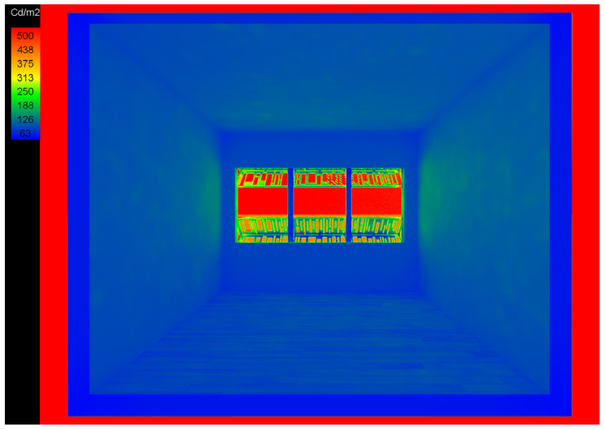

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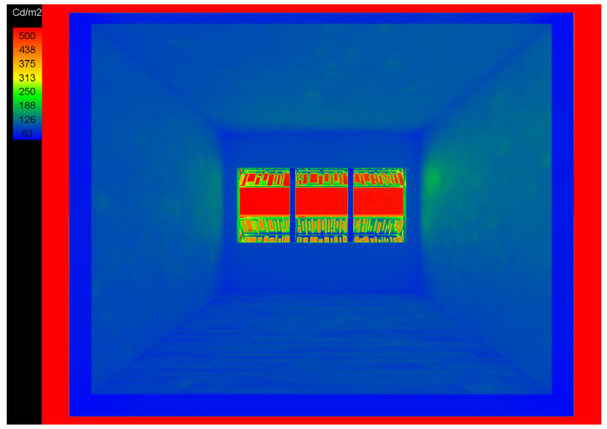

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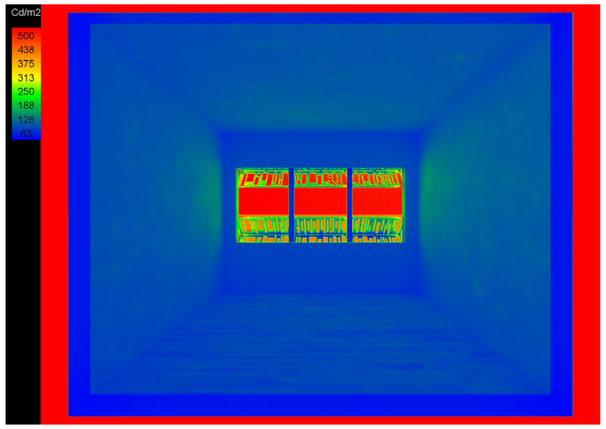

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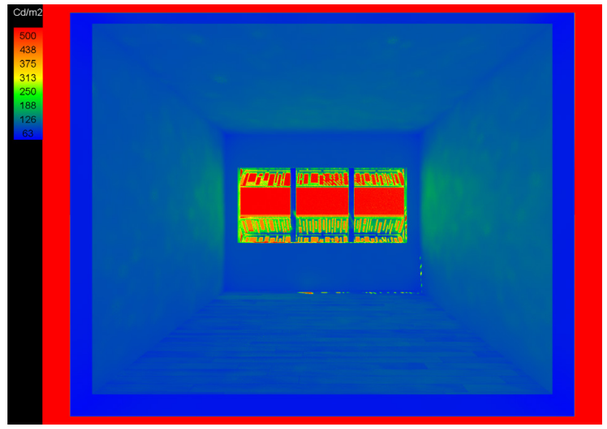

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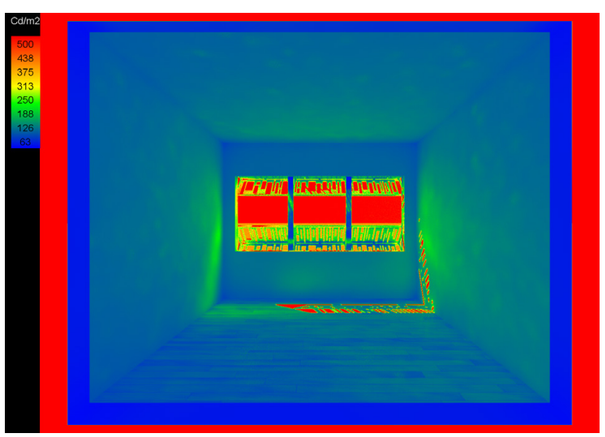

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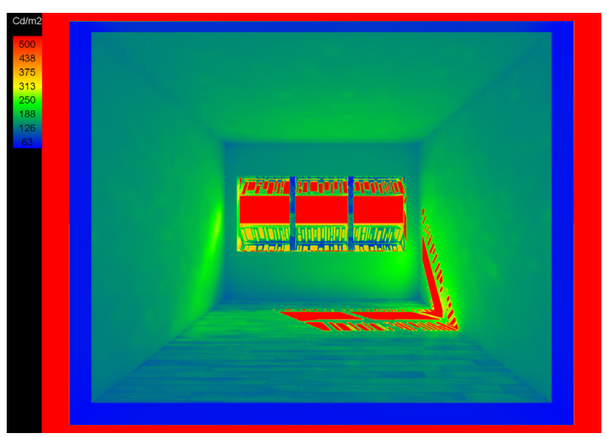

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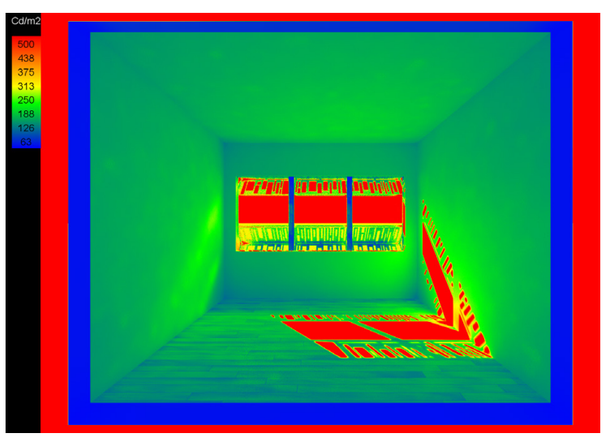

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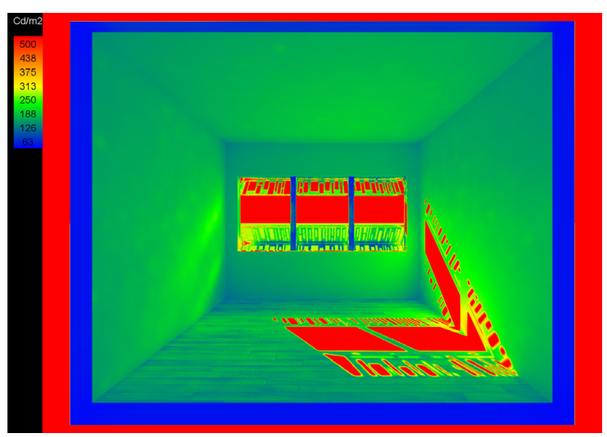
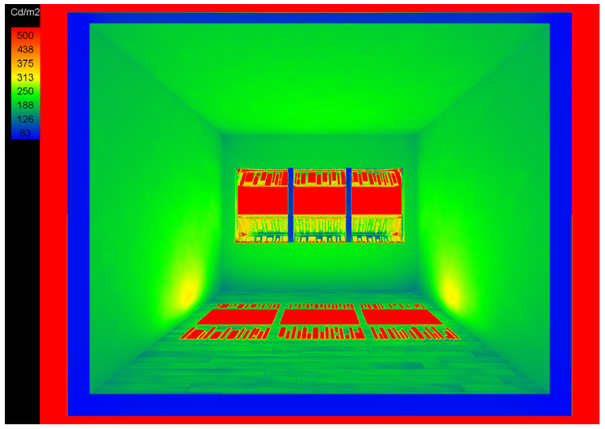


December

RESULTS WITH SUNSCREEN

ANNUAL LIGHTING - FALSE COLOR - 12AM



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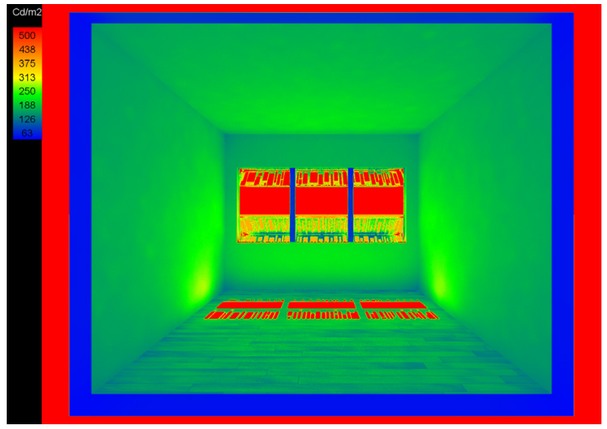

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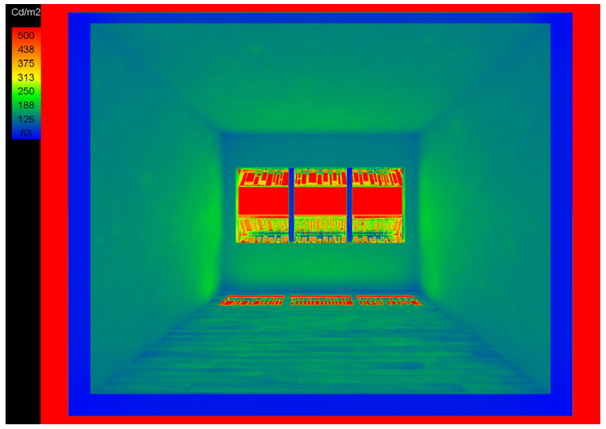

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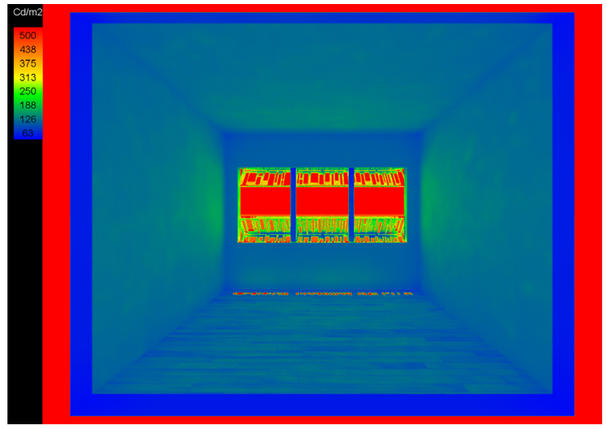

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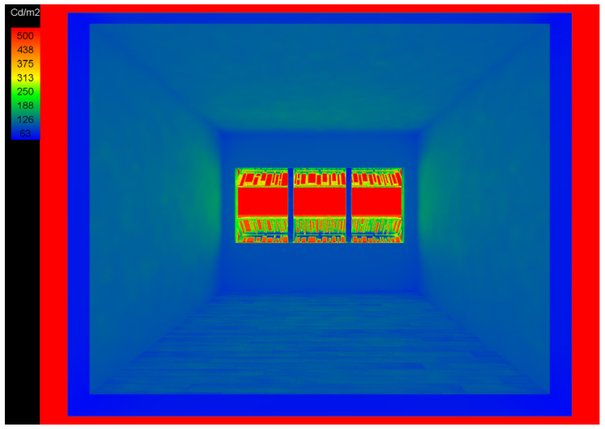

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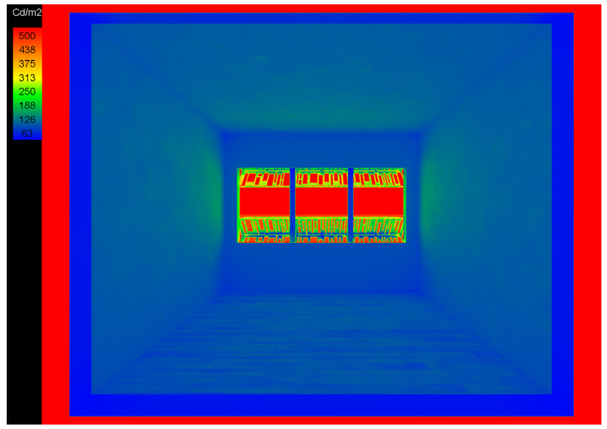

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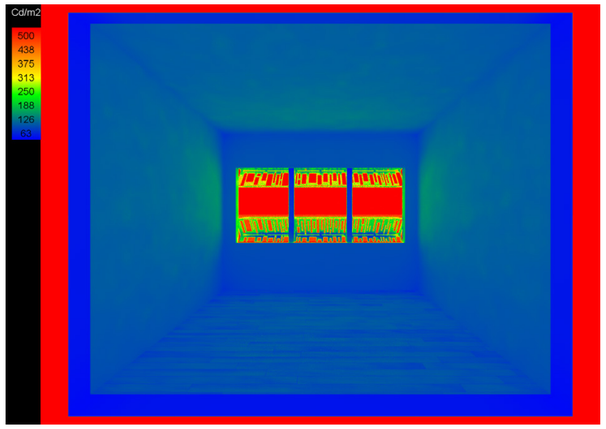

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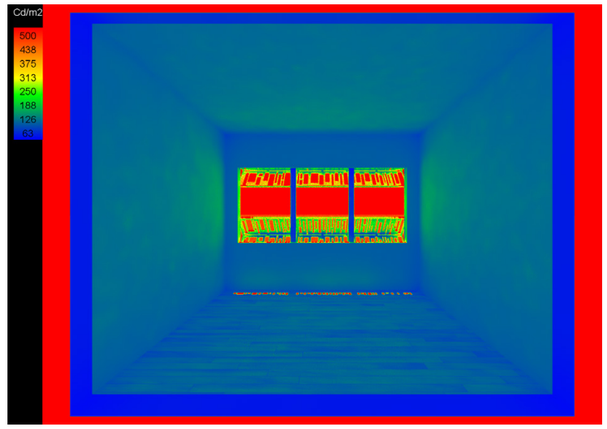

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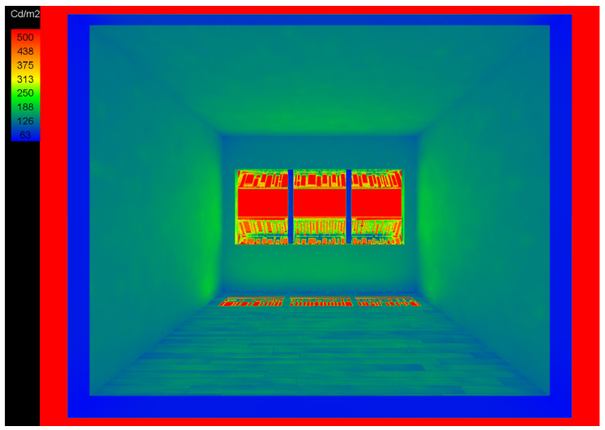

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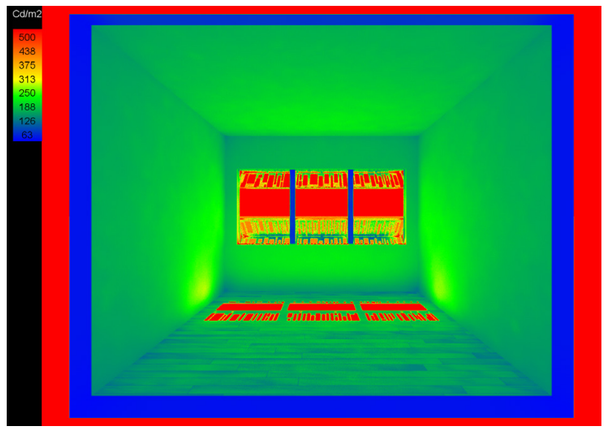

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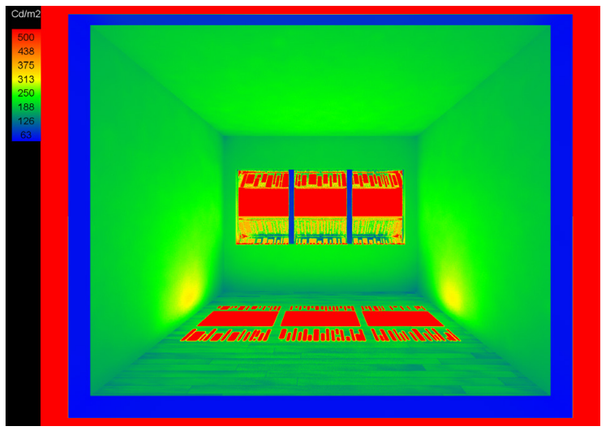

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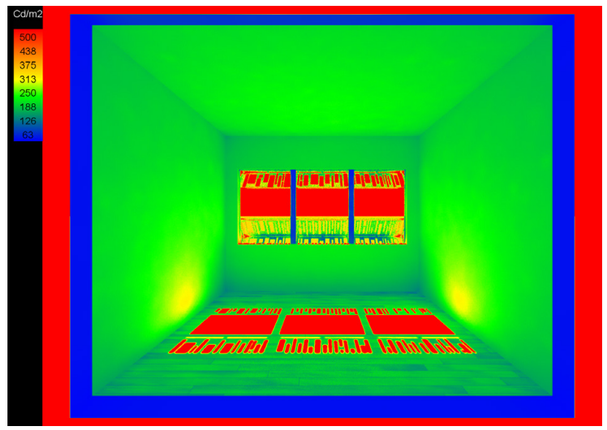


December

2018 ENERGY AND SYSTEMS

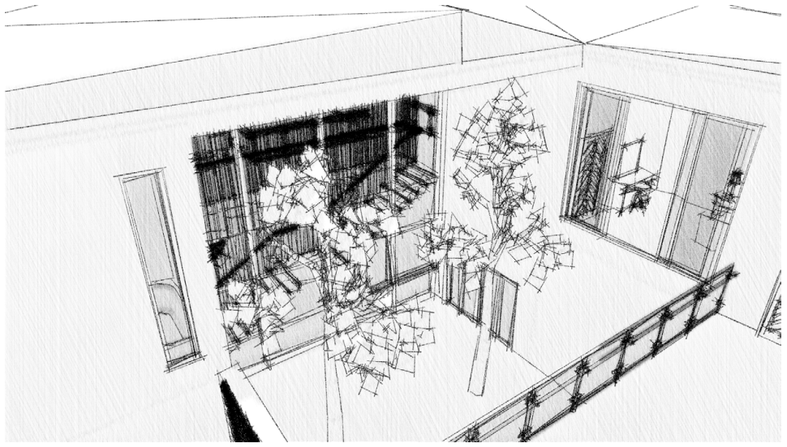
SUSTAINABLE COURTYARD VILLA

RESEARCH SUMMARY

The challenge with this project was to build the most sustainable house possible with predefined prefabricated elements. These elements, referred to as modules, were 4x4x4 meter boxes which were to respected during the design of the project.

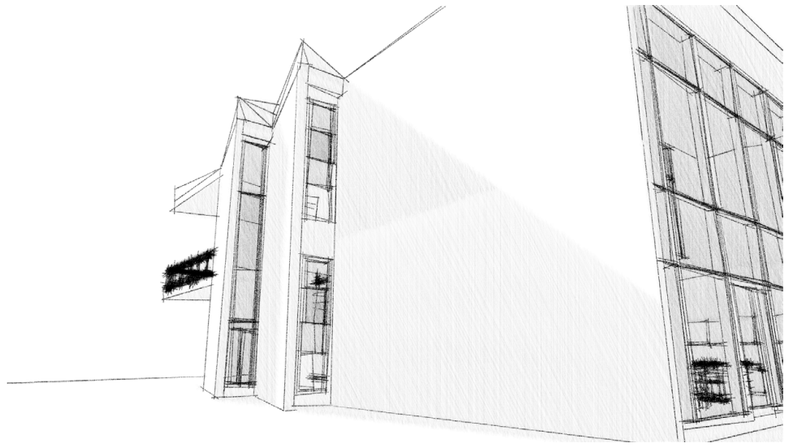
Conceptually, we set out to use the modules to create the most sustainable house possible by placing the modules to optimize, natural ventilation, sunlight and heat gain.

SUSTAINABLE FEATURES



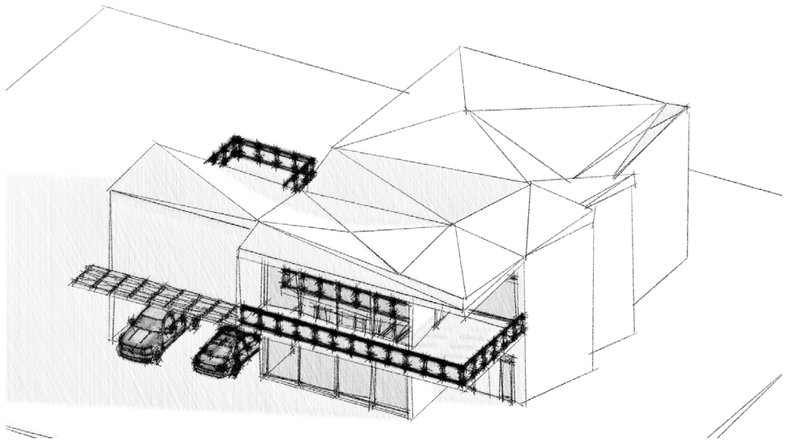
COURTYARD

The house is designed around the courtyard. For centuries, courtyards were incorporated into houses for the purpose of natural ventilation. The courtyard provides fresh air to the house and reduces odors. Courtyards also have a passive cooling effect which brings down the overall temperature of the house down. In addition, a courtyard filled with plants or a garden can reduce temperature even more.



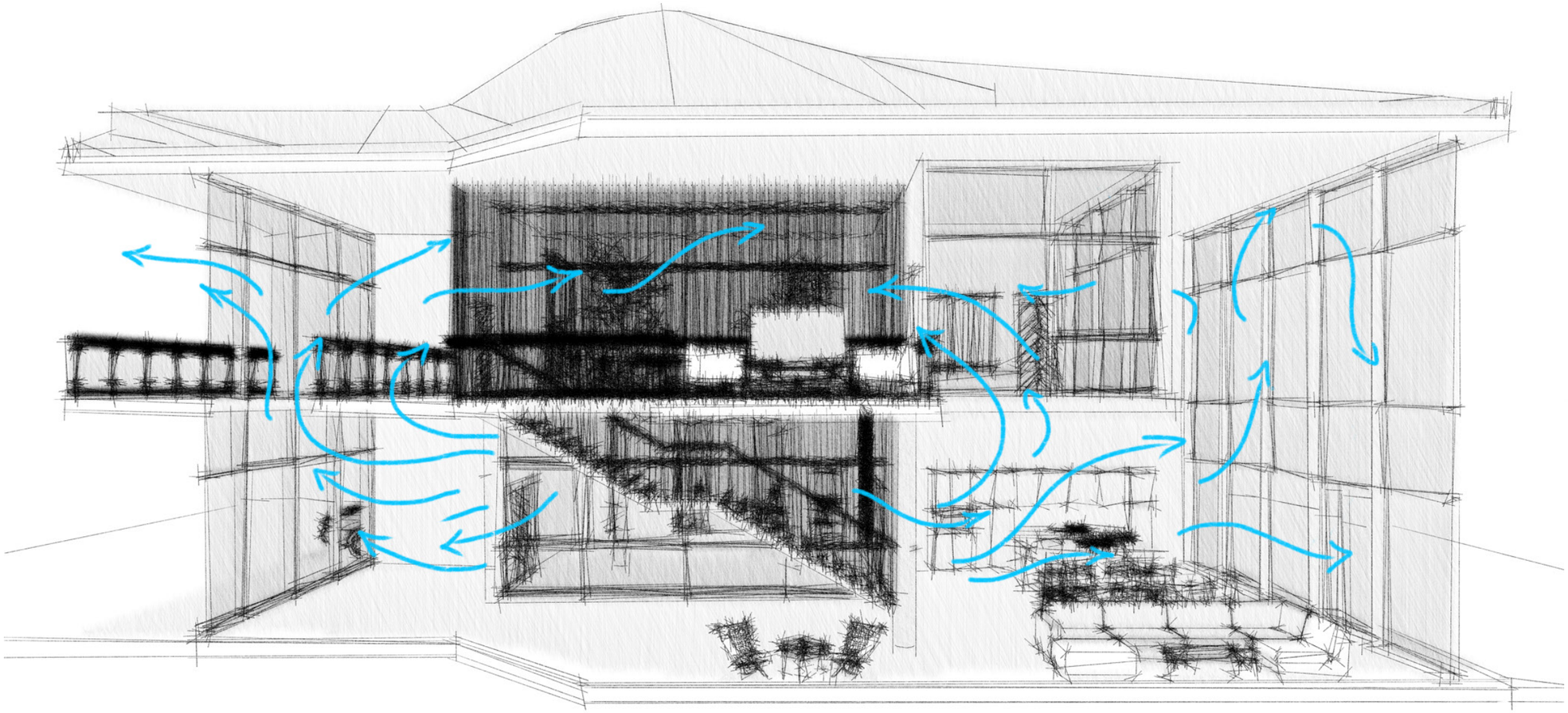
NORTH ANGLED WINDOWS

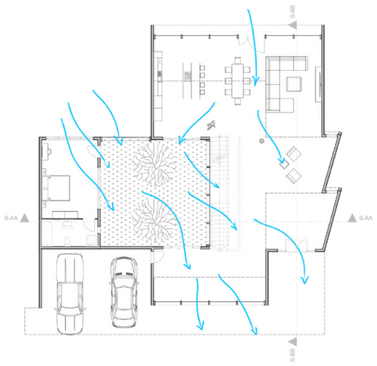
In order to reduce the number of openings facing unfavorable orientations, we used what we call angled windows. These windows are located on the east facade of our building but face north. This reduces the overall amount of direct sunlight entering the building. The reduction of direct sunlight leads to lower heat gain and overall better sustainability for the building.

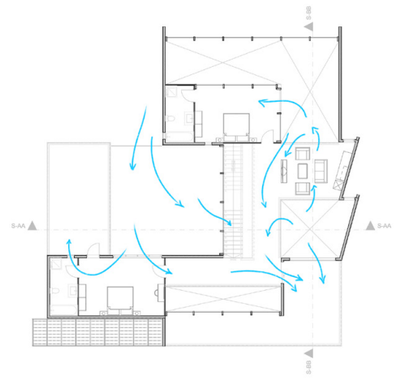


GEOMETRIC ROOF

One of the largest surfaces on any building that contributes to heat gain is the roof. Our roof minimizes the heat gain by using geometric triangular shapes. The design of the roof is such that sunlight doesn't cover the entire surface area of the roof at all times. The short rises and dips in the roof create shade on the side opposite the sun, reducing the heat gain on the roof.







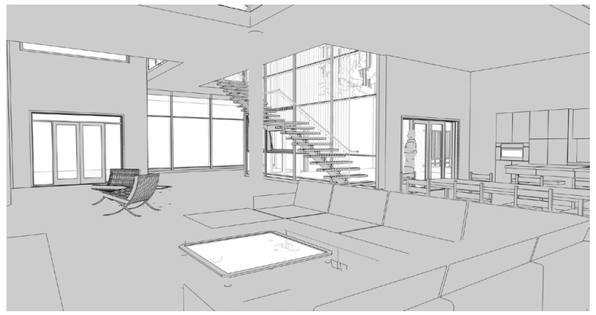
WIND FLOW

Openings were strategically placed to let air in and circulate through the villa. The villa is specially oriented to catch the predominant winds in Abu Dhabi and force them through the villa from the courtyard.

SUN PATH ANALYSIS

IMPACT OF SUN ON INTERIOR

Summer Solstice - 21 June



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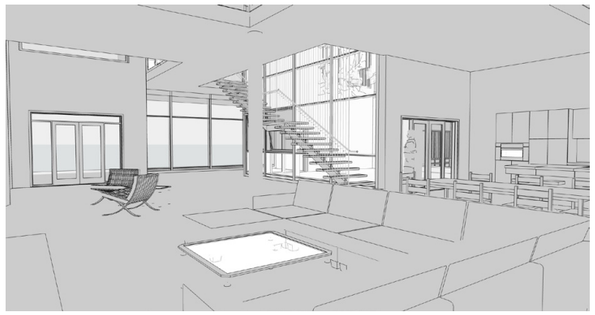

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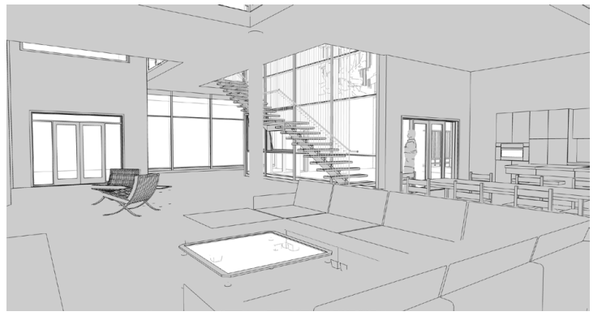

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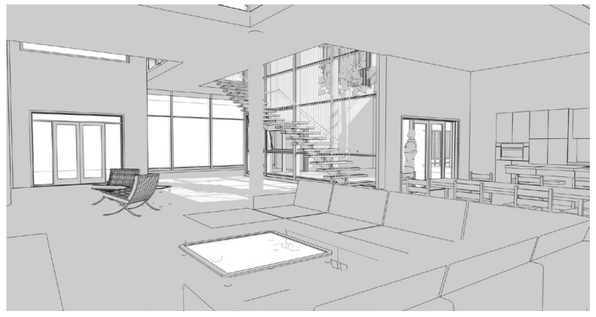

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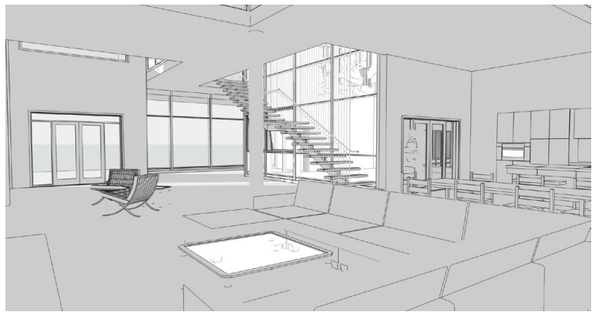
Winter Solstice - 21 December



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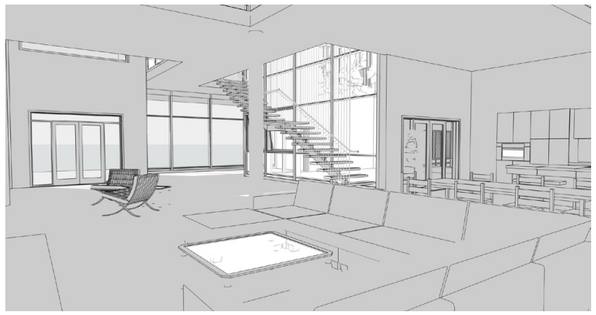

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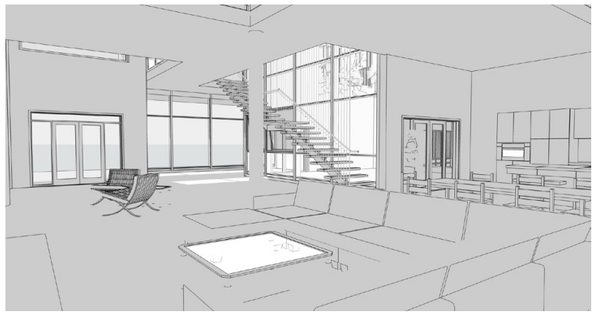

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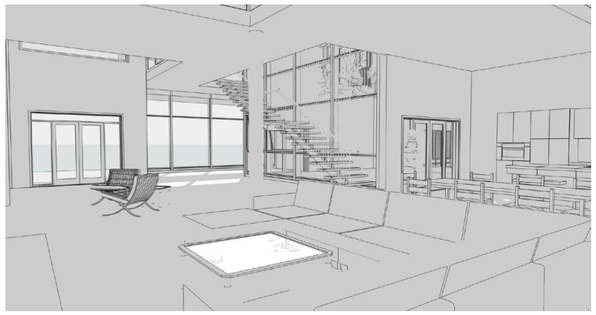

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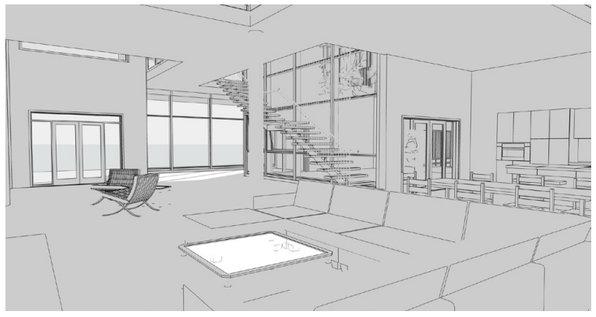

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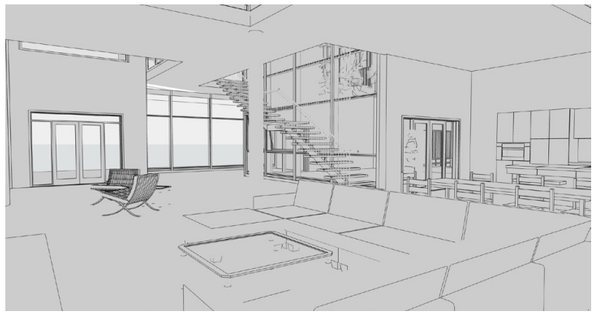


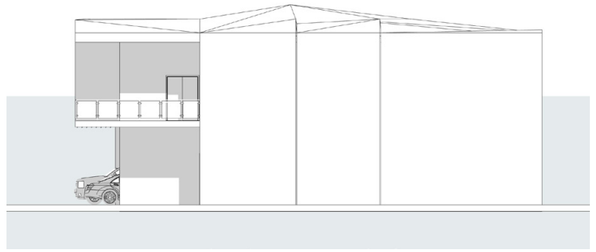
18:00

SUN PATH ANALYSIS

IMPACT OF SUN ON ELEVATIONS

EAST ELEVATION

Summer Solstice - 21 June



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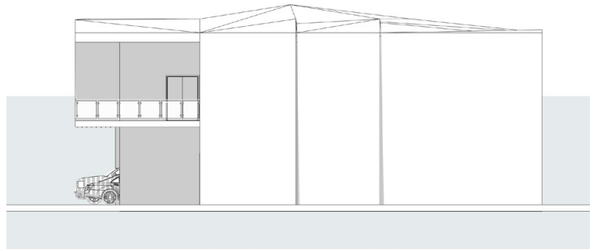
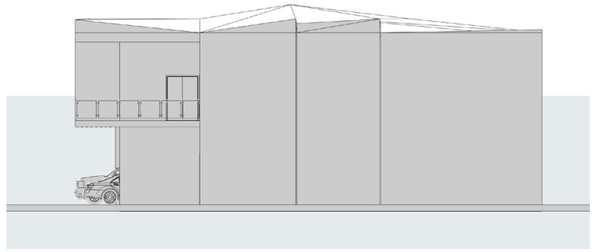
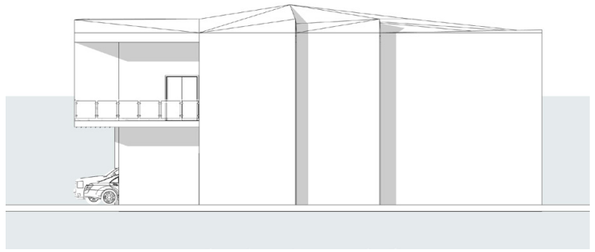


12:00



16:00

Winter Solstice - 21 December



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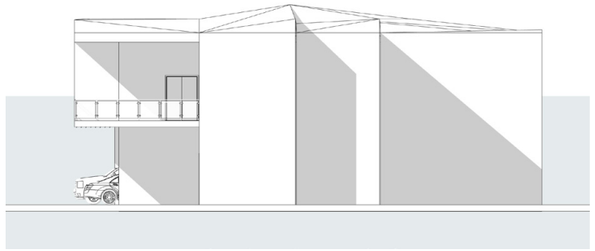

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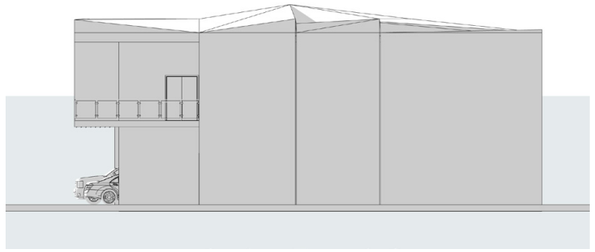

16:00

SOUTH ELEVATION

Summer Solstice - 21 June

08:00

12:00

16:00

Winter Solstice - 21 December

08:00

12:00

16:00

DESIGN STUDIO COMPETITION TECHNICAL FABRICATION RESEARCH

END

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