

Civic Space: Kuwait

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submitted to Illinois Institute of Technology in fulfillment of the requirements for the degree of Master of Architecture

Supervised by
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2 Site Analysis

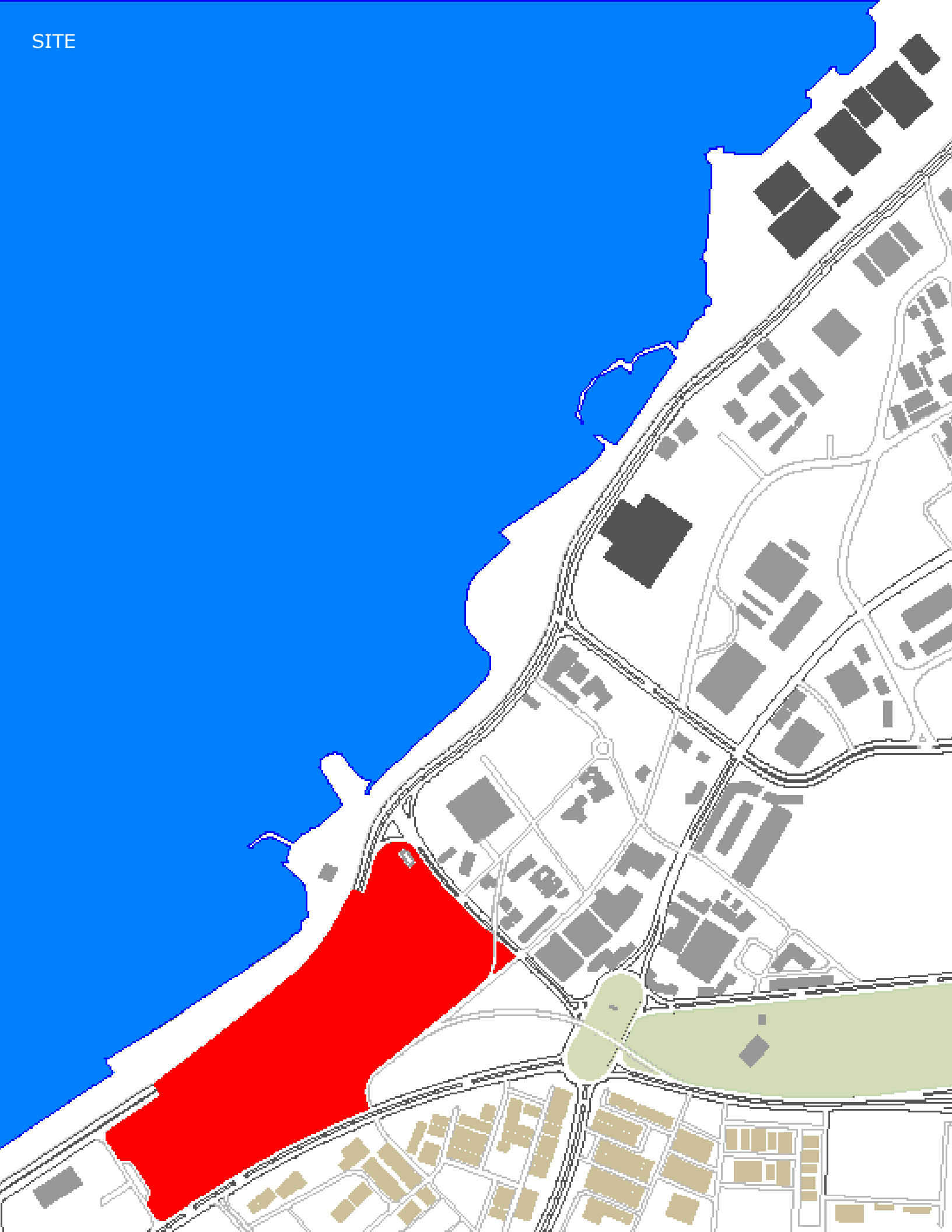
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Abstract 1

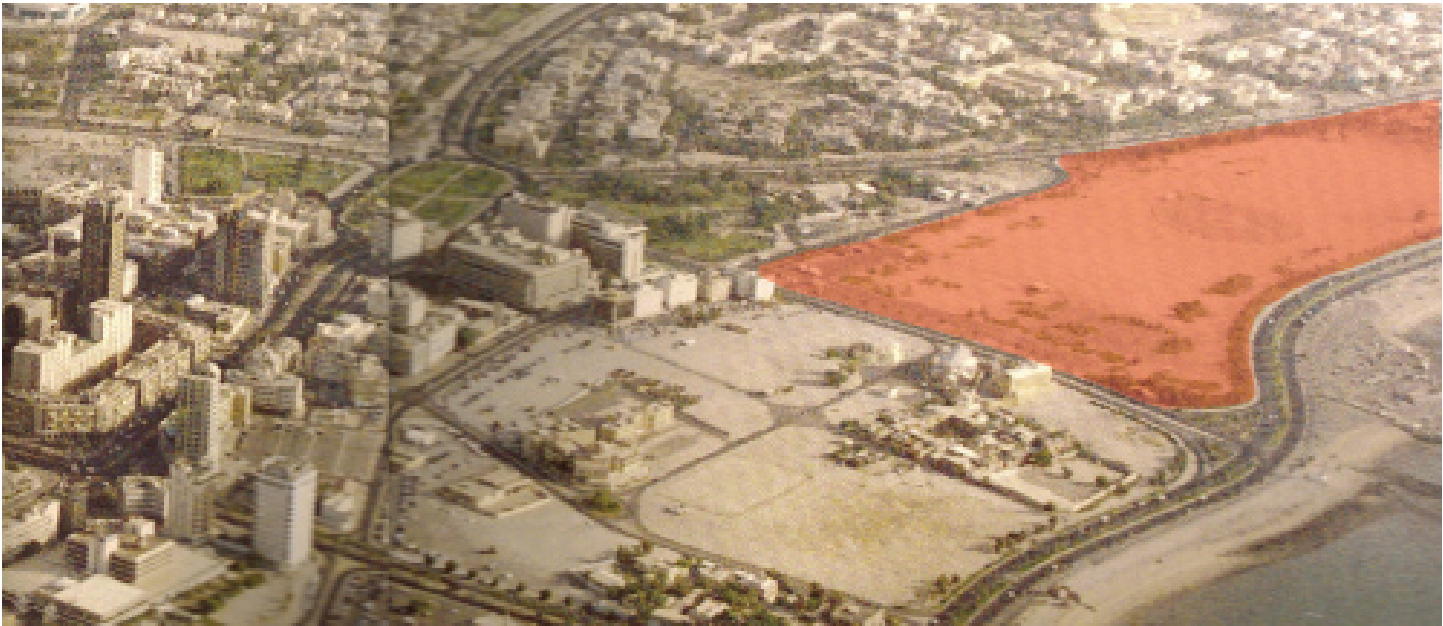


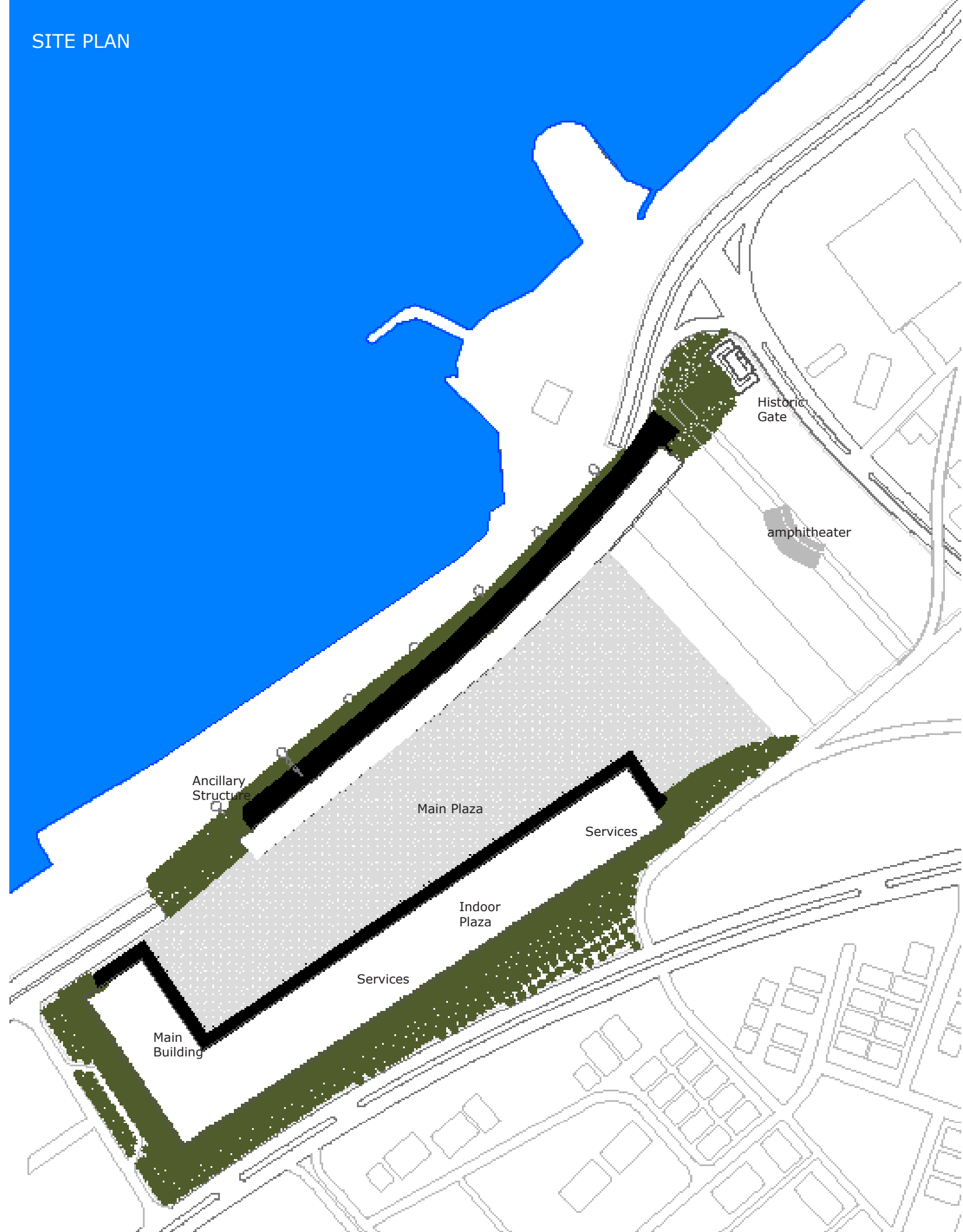
Problem Definition

Kuwait City today suffers from an in-cohesive urban image. The city lacks a civic space, a theme, and a pedestrian friendliness. This lacking urban image is the result of disconnected developments and the absence of a comprehensive urban vision. This project proposes the development of a civic space, hoping to ignite an urban renewal desire for a cohesive and vital urban environment. This civic space will be located at an urban nexus known as the Flag Square. The square marks the north-western edge of down town Kuwait; it is adjacent to the waterfront on one side, and to residential and industrial zones on the other. This three million square feet plaza was dedicated for Kuwait civic celebrations ever since modernization began in the latter part of the twentieth century. These celebrations include the National Day, Liberation Day, New Year Day, Eid al-Fitr, and Eid al-Adha. However, the square is just an empty lot that does not speak of any local cultural aspiration and does not portray the dignity of this capital city. The project is to develop this piece of land and transform it to a well designed urban civic landmark that will serve the needs of the Kuwaiti people.

Case Statement

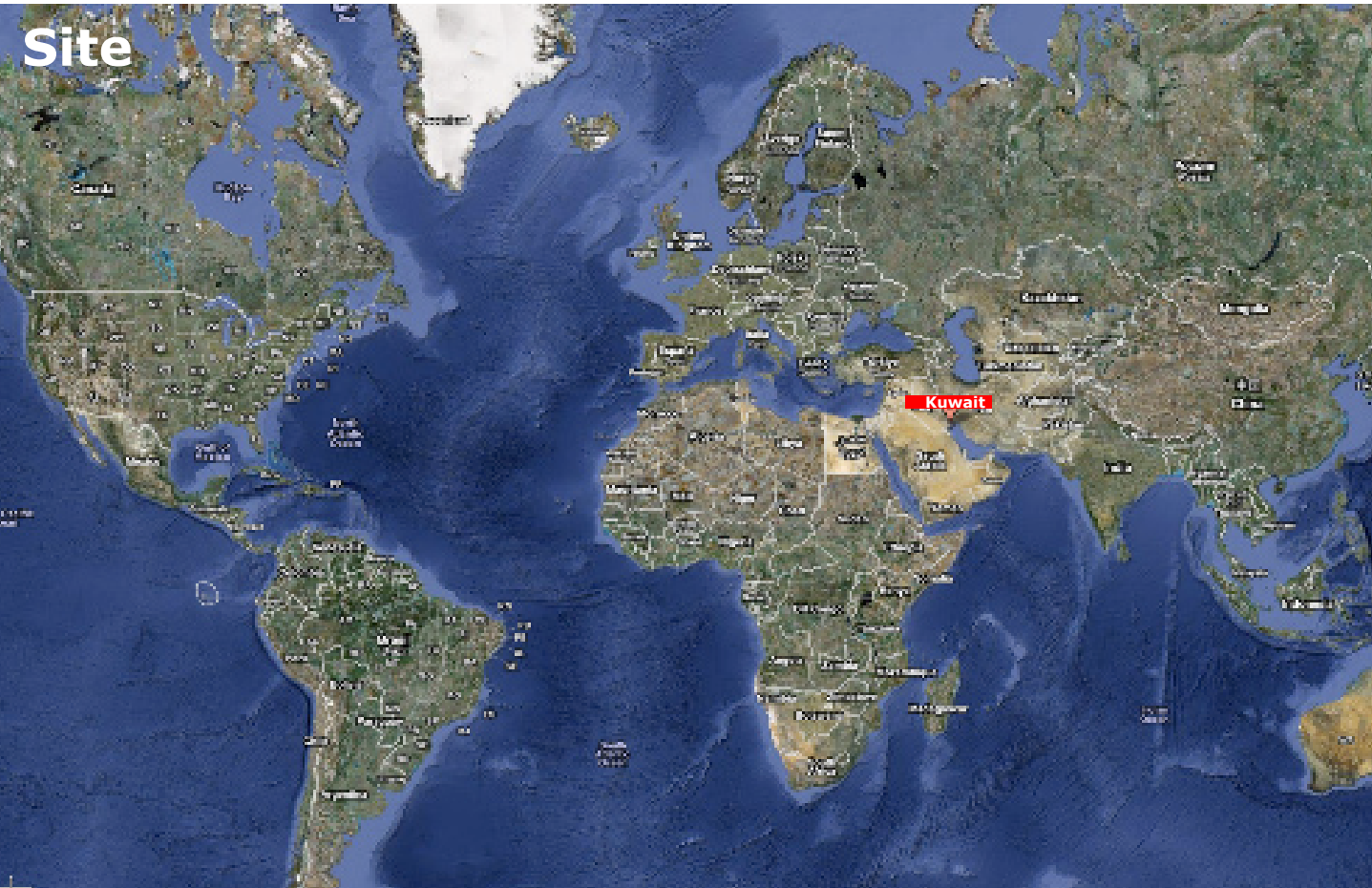
The design will transform an empty lot to an urban artifact. The urban plaza will house local civic events. This plaza will be the largest and most comprehensive civic space in Kuwait.







Site Analysis 2



Introduction

Kuwait is located in the north east corner of the Arabian Peninsula. A flat desert surface covers most of Kuwait, with the highest point in the country being one thousand feet above sea level. Kuwait has nine islands, with the largest island Bubiyan connected to the country by a bridge.

Site

This civic space will be located at an urban nexus known as the Flag Square. The square marks the northwestern edge of down town Kuwait; it is adjacent to the waterfront on one side, and to residential and industrial zones on the other.

Geographic Coordinates

29°30'N, 45°45'E

Area

3000000 SF

Context

The street is adjacent to important buildings. These buildings are Sheraton hotel, Meridian, AL-Mothana mall, Al-Salheyah mall, Kuwait Church, Al-Salheyah cemetery and Sahat Al-Alam.

Edges

The street joins with Fahad Al-Salem Street and Al-Jahra Street through a major junction at Sheraton roundabout.

Accessibility

There are three major highways that lead to the site, they are the First Ring Road, Al-Jahra Street and the Gulf Street. In addition, there are three minor streets which are Abu Baker Street, Monketh Street and Al-Watyah Street.

Visibility

The site has prominent views to Kuwait City and the Water-front.

Landmarks

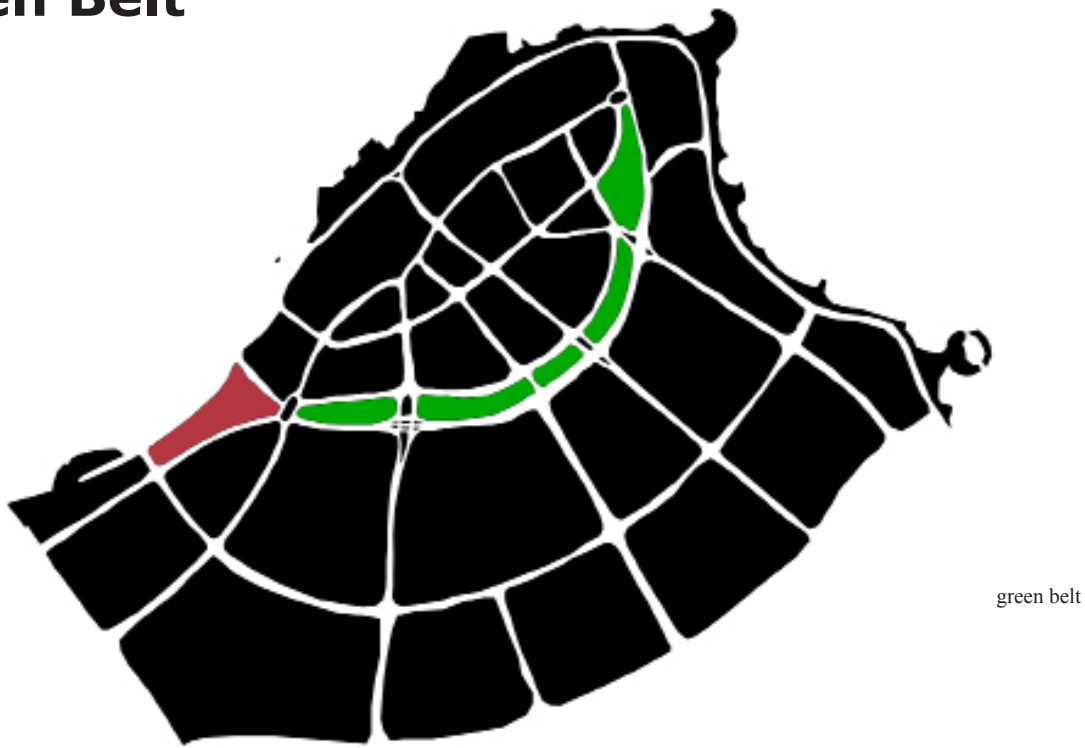
The street is adjacent to important landmarks. These landmarks are Kuwait Church, hotels and malls, historical gates, Behbahani old houses and Majles Al-Omah.



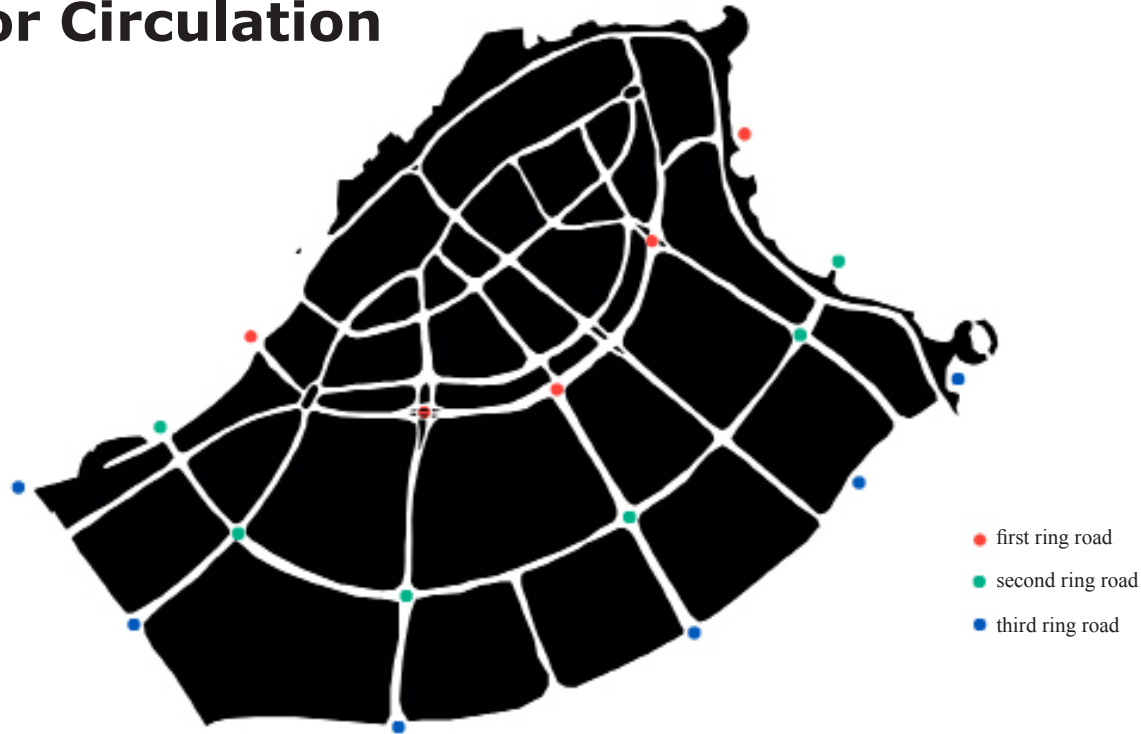
Old Kuwait Town



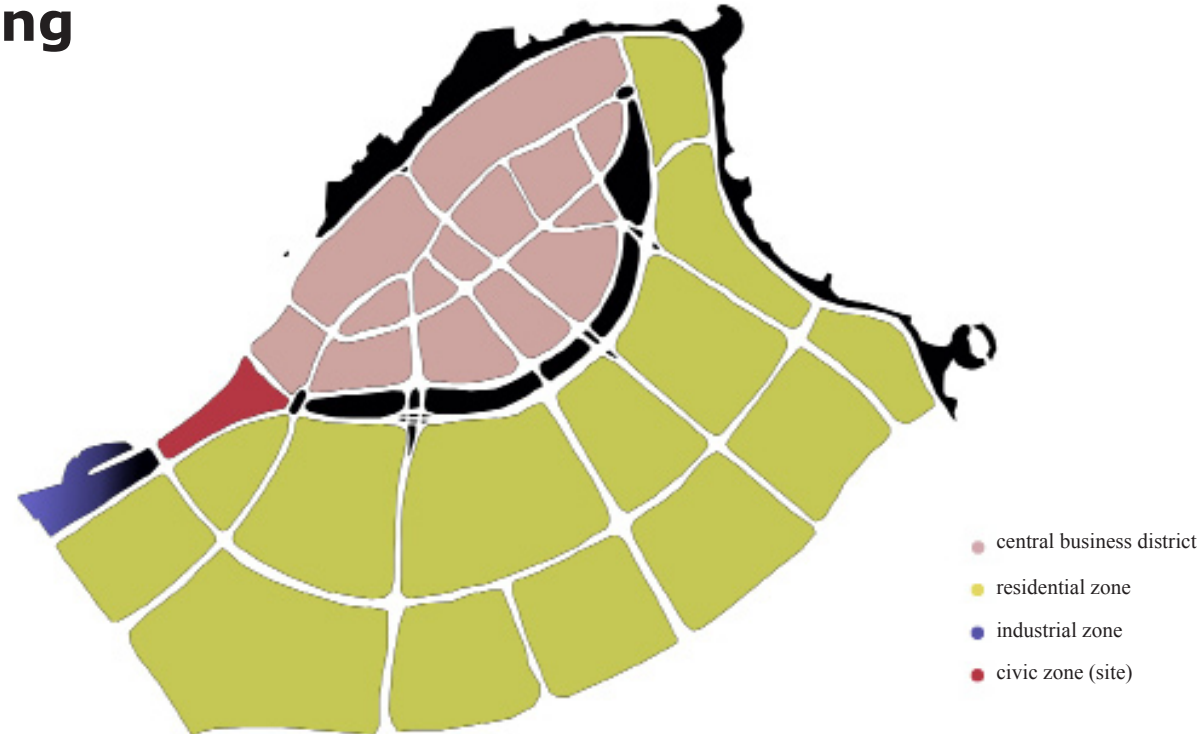
Green Belt



Major Circulation



Zoning

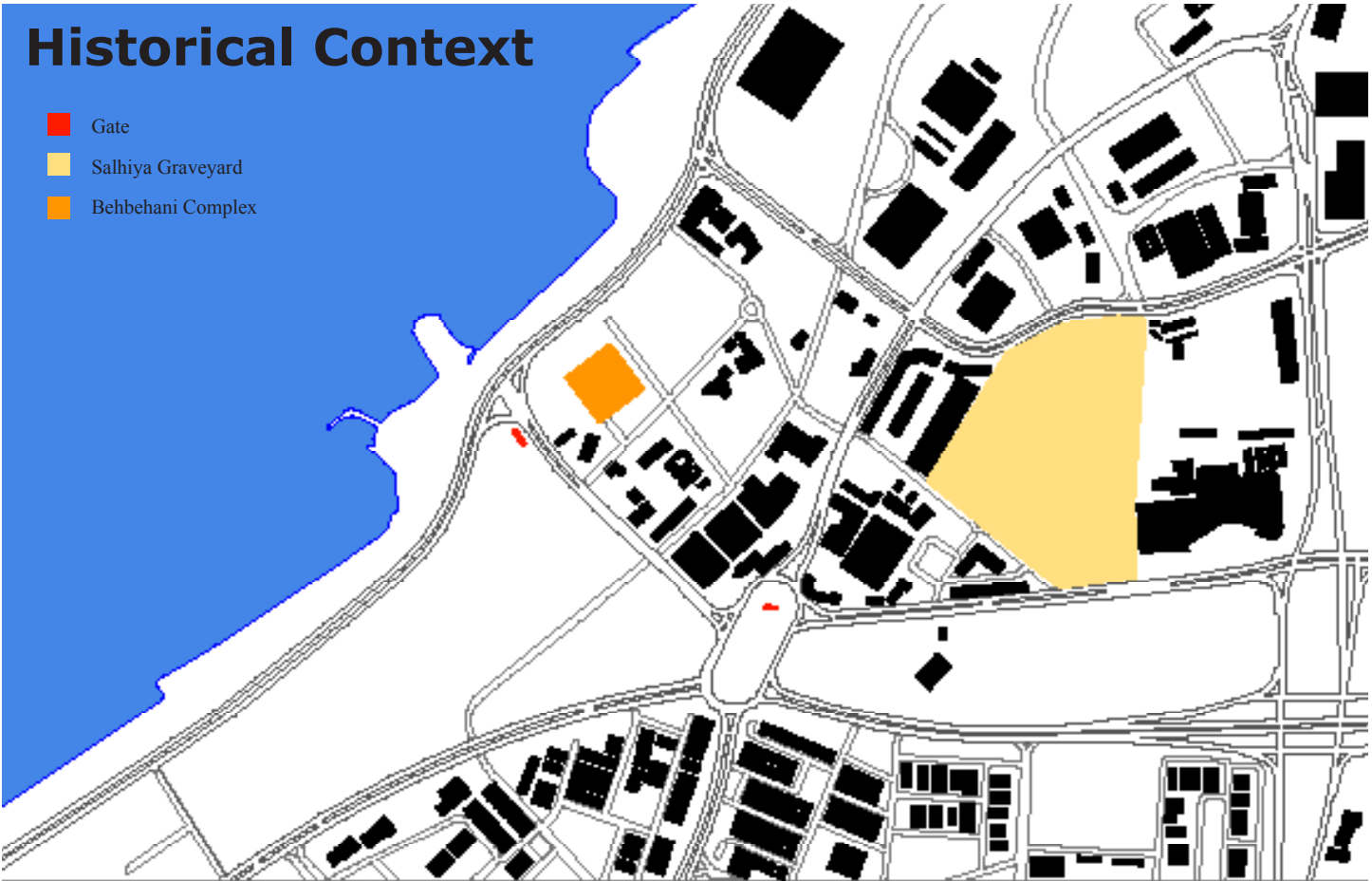


Site

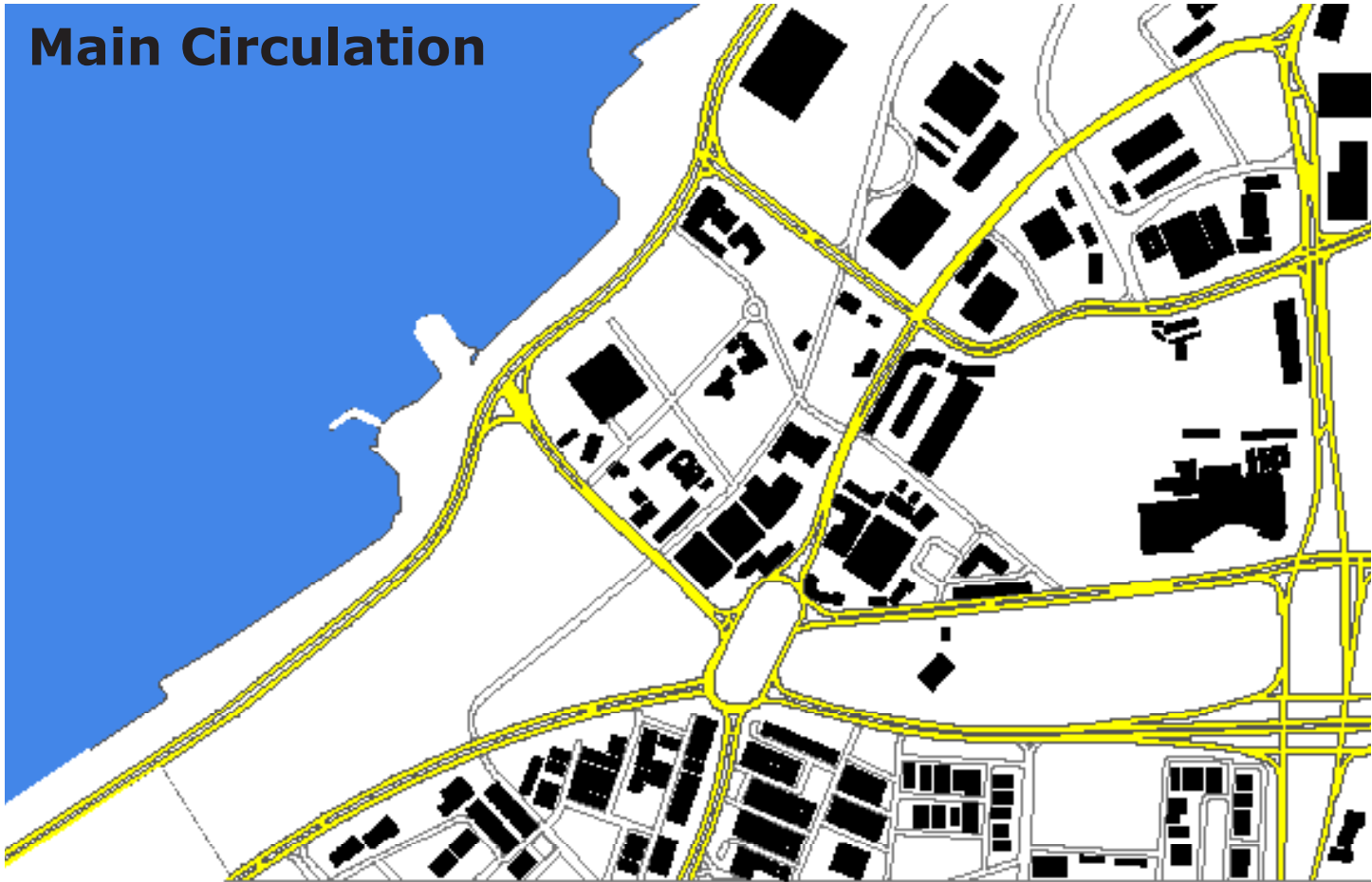


Historical Context

- Gate
- Salhiya Graveyard
- Behbehani Complex

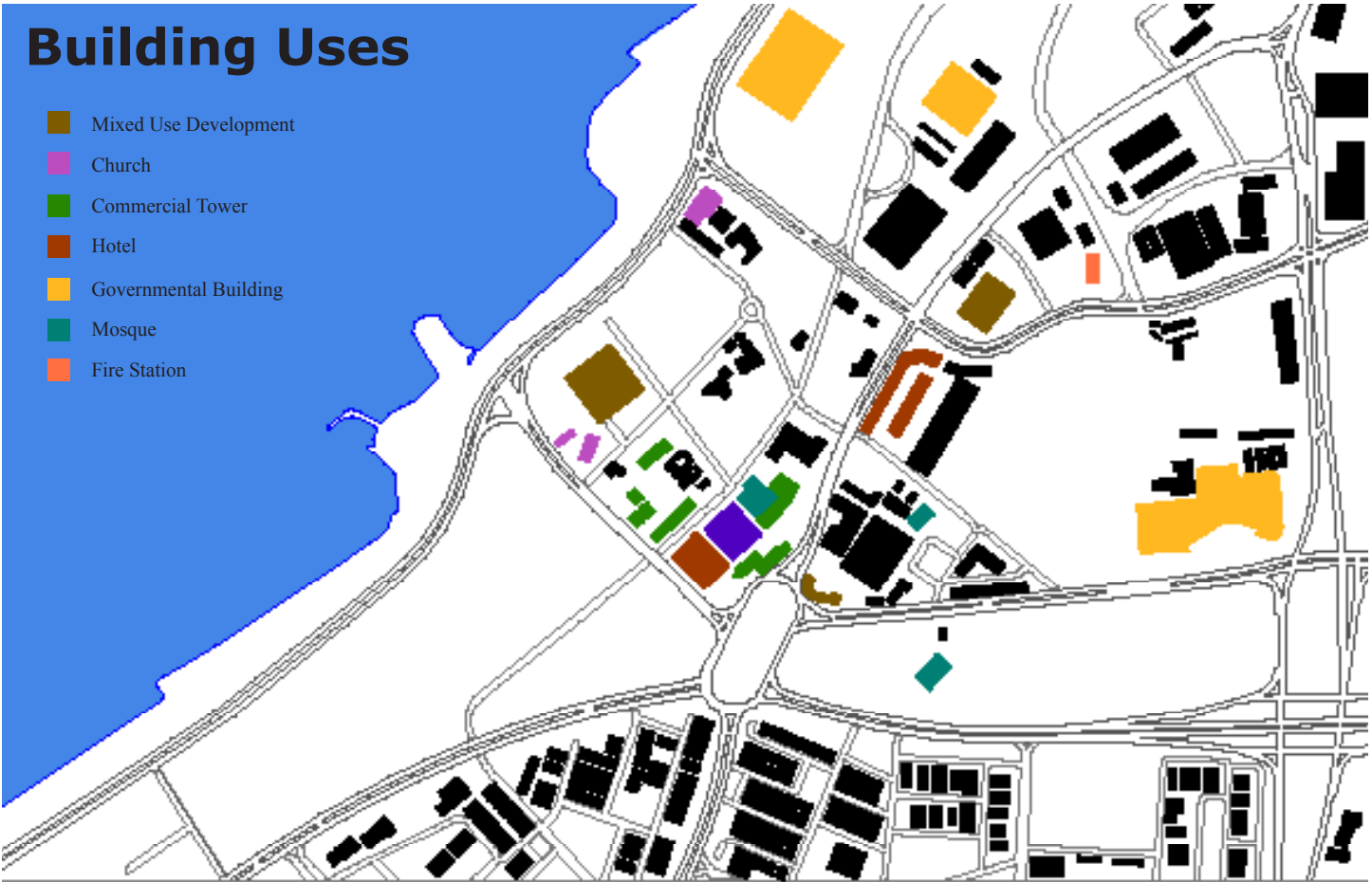


Main Circulation



Building Uses

- Mixed Use Development
- Church
- Commercial Tower
- Hotel
- Governmental Building
- Mosque
- Fire Station

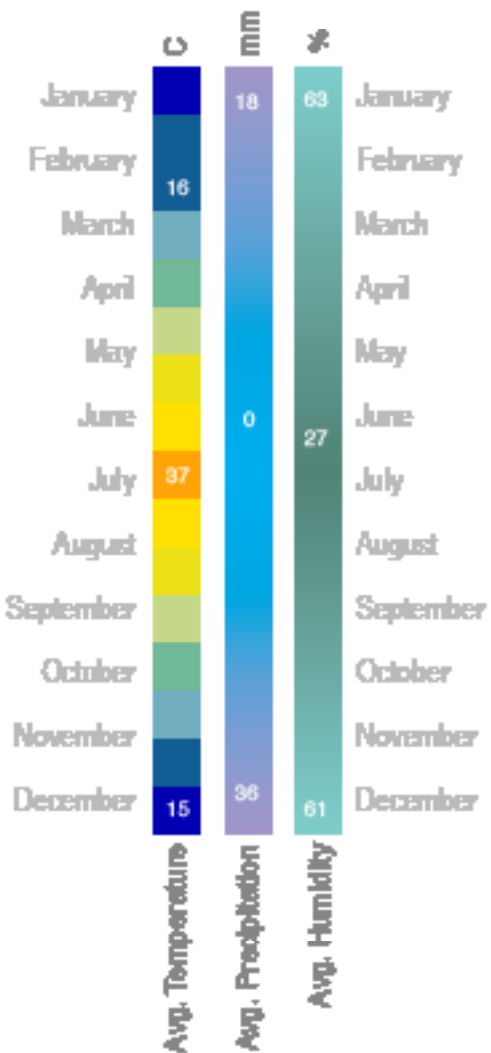


Views



Climate

Data collected around 1955-1965



All the data above comes from Kuwait Urban and Medical Ecology 1971.

Climate

The climatic conditions in Kuwait are hot, arid, with minimal rainfall. Hot and dry summer winds are usually experienced for the greater part of the year. The naturally available water in Kuwait is rare and it varies in its quality. The factors of hot and dry weather, soil characteristics, wind speed and availability of local and regional sources of sand allow for the environmental ecosystem balance between the natural elements including the weather, water resources, soil, vegetation and animal life in the desert of Kuwait rather fragile.

Prevailing Wind

The prevailing wind direction in Kuwait is north-western with winds blowing in this direction representing 60% of total wind throughout the year. North-western winds are hot and dry during the summer due to the long distance they travel over the deserts of Saudi Arabia, Syria, Jordan and Iraq. These winds can attain a speed of 19 m/s, which far exceeds the threshold shear velocity that is required to transport a particle of average size. During the spring season, the contribution of south-eastern wind increases to match that of the north-western wind. This change is accompanied by an increase in the high wind velocities. Maximum wind speed can reach 29.5 m/s whilst maximum reported gust speed is 37.6 m/s. Strong south-eastern winds can cause very severe dust storms which can impair visibility to few meters. April is well known for its sudden dust storms, which are accompanied by thunderstorms. During the winter season, the wind is north-western mainly. South-eastern winds over a period up to few days can occur during winter due to the effect of Mediterranean depressions.

Precipitation

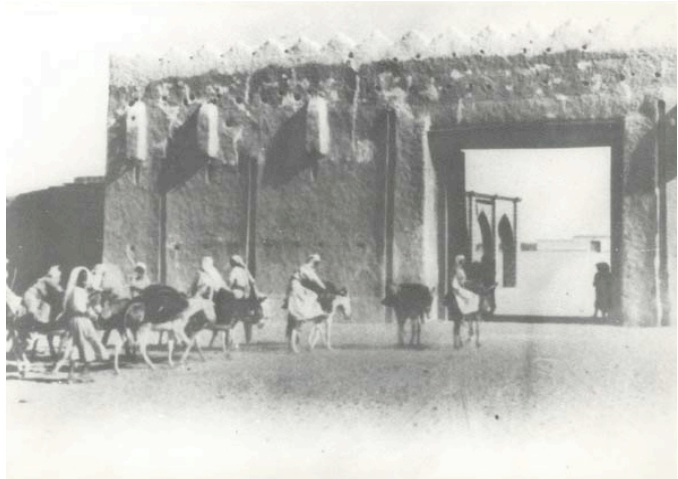
The mean total rainfall rate is about 118mm a year. The rainfall in Kuwait has no specific trend. In average eight days of the year can be considered as rainy. Still, the rainy days might exceed 40 days in some years and the mean total rainfall rate can reach 336mm. Rain affects patches in Kuwait rather than the whole country. Rain can start in November and continue very intermittently till April. Occasional rain in October and May can happen sometimes with January being the rainiest month of the year.

Temperature

The average annual temperature is 26 C. In July, the average temperature is 37.4 C and the maximum can reach 45 C. The diurnal range (difference between the day and night temperatures) in the summer is about 17 C leaving the nights unpleasantly hot. The maximum recorded temperature was 50.8 C in June 1954. The weather is warm to hot in October and mild to cold, with thunderstorms sometimes, in November. The weather is coldest in January with temperature reaching about 12 C. Minimum record temperature measured in 1964 of -4 C. During the spring season, the temperature varies substantially and this can happen during the same day.



History of Sahat Al'alam 3



old kuwaiti gate



old kuwaiti neighbourhood



old ship building craft in kuwait

Early Settlement

The population of Kuwait State was concentrated at Kuwait Town, which was known as the settlement spot since the 18th century. The settlement was established due to immigration of people from neighboring Arabian Peninsula followed by other neighboring countries.

Economic Activities

Work in the past was directly related to the sea. Such work included fishing, diving for pearls and trading. In addition, there were the handcraft work that included shipbuilding and maintenance, diving equipment manufacture and maintenance, and other related products that were needed by the people at the time. Also, there was active trade dealing with the nomadic tribes coming through the desert from North and South.

Urban Structure of the Town

The growth of the town took an oval shape as a result of its location on the peninsula. The town was divided into three sectors, which are coastal, commercial and residential. A wall extending from the western side of the sea to the eastern side surrounded the town. The purpose of the wall was to protect the inhabitants from attacks from the desert tribes. The wall had a number of gates with cemeteries located outside the wall.

Population and Town Expansion

There were no recorded population statistics, except what has been mentioned in historical references that the population was 10,000 in 1765 and increased to 75,000 by 1950. Due to the gradual expansion of the population the surrounding wall was rebuilt three times.

The Economic Upheaval

In the late forties, oil became the main source of income in Kuwait. A demand called for a change from the traditional life pattern from random growth to deliberate planning.

The Image of the City

In its earlier attempts to catch up with modernity the local image was lost. The Western image of the modern city replaced the Kuwaiti local image. The old city was demolished and replaced by the prevailing international trends.

Green Belt

In 1952, British Architects Anthony Minoprio and Hugh Spencely were commissioned for a master plan for Kuwait. The plan was to demolish the old Kuwaiti wall but keep the gates. The wall was replaced by a green belt that acted as a cultural center and a buffer zone separating Kuwait city from the residential area.



Program 4

1952

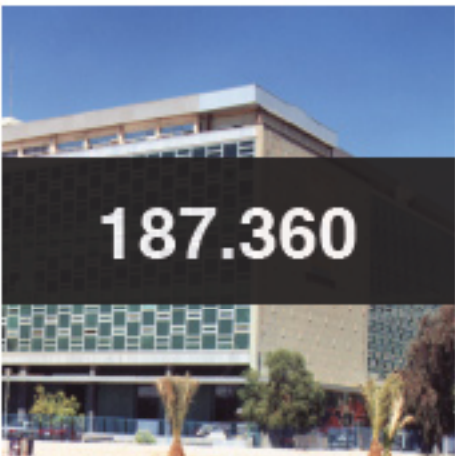
1965



Population



Oil Revenue
KD



Price for Property
Landed with a house.
KD Per Square Meter

Stakeholders

Main stakeholder
Legally owns the development
City of Kuwait

Direct stakeholder
Defines the programs of the development
Visitors
Kuwaiti citizens
Employees
Schools

Indirect stakeholder
Benefit from the development
City of Kuwait
Community
non-profit organizations
Businesses
Tourism
Economy

General stakeholder
Impact the development
Environment
Cultural Context
Urban Plan
Adjacent buildings
Building Codes & Zoning

Demographic Profile

Population
2,691,158 (2009)
includes 1,291,354 non-nationals

Age structure
0-14 years: 26.4% (male 361,150/female 348,518)
15-64 years: 70.7% (male 1,219,075/female 683,587)
65 years and over: 2.9% (male 49,163/female 29,665)

Median age
total: 26.2 years
male: 28.1 years
female: 22.7 years

Population growth rate
3.547%

Birth rate
21.81 births/1,000 population

Death rate
2.35 deaths/1,000 population

Net migration rate
16.02 migrant(s)/1,000 population

Urbanization
urban population: 98% of total population
rate of urbanization: 2.5% annual rate of change

Sex ratio
at birth: 1.04 male(s)/female
under 15 years: 1.04 male(s)/female
15-64 years: 1.78 male(s)/female
65 years and over: 1.66 male(s)/female
total population: 1.54 male(s)/female

Total fertility rate
2.76 children born/woman

Ethnic groups
Kuwaiti 45%, other Arab 35%, South Asian 9%, Iranian 4%, other 7%

Religions
Muslim 85% (Sunni 70%, Shia 30%), other (includes Christian, Hindu, Parsi) 15%

Languages
Arabic (official), English widely spoken
Literacy

*This Price is for 1955, not 1952.
All the data above comes from Kuwait Urban and Medium Ecology 1971.



Relationship to Business District



Relationship to Residential Zone



Relationship to Water-front



Daily Recreation
Minimum-use expected occupancy 500 people



Political Rallies
Partial-use expected occupancy 10,000 people

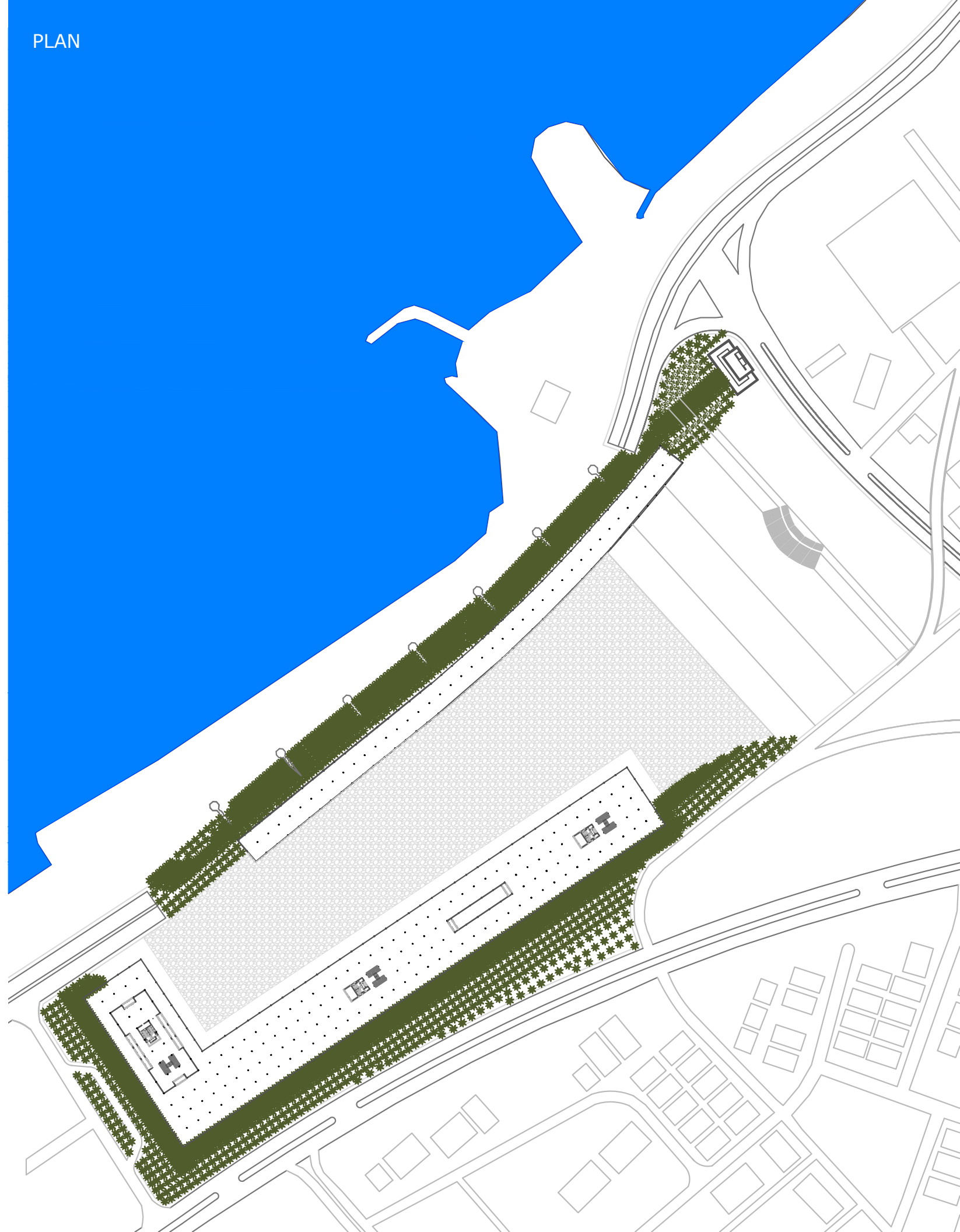


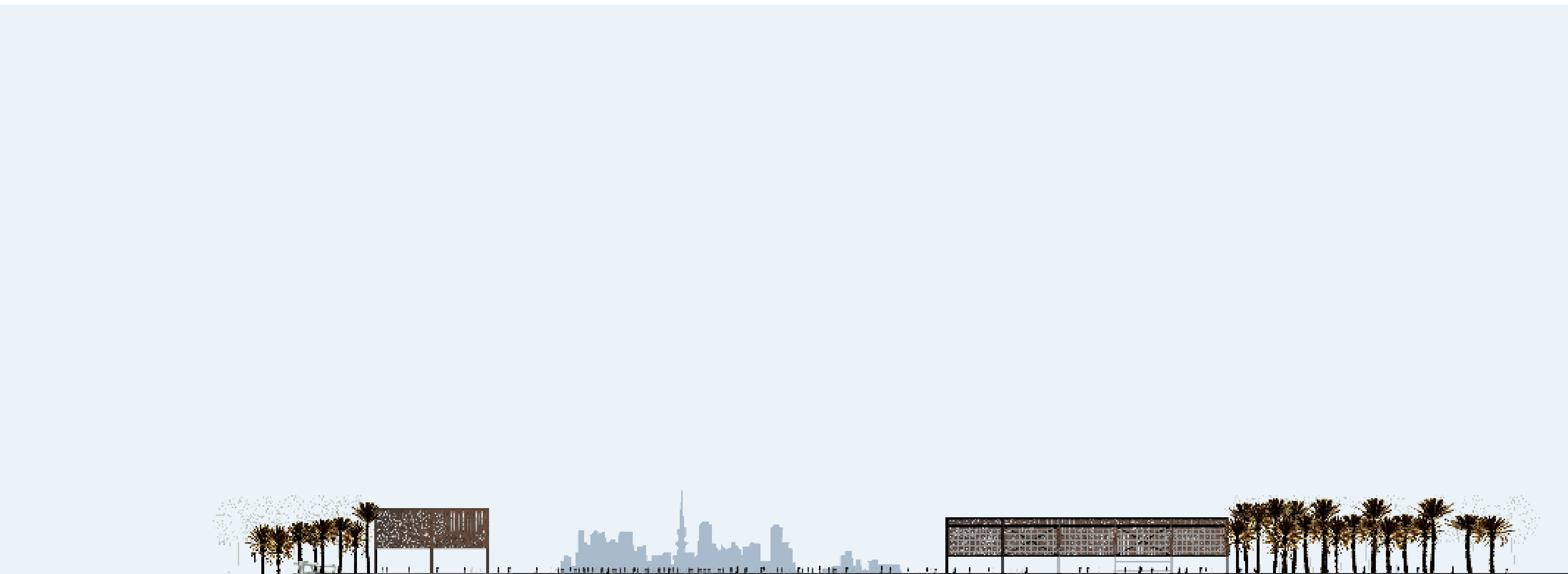
National celebrations & Religious
Full-use expected occupancy 200,000 people



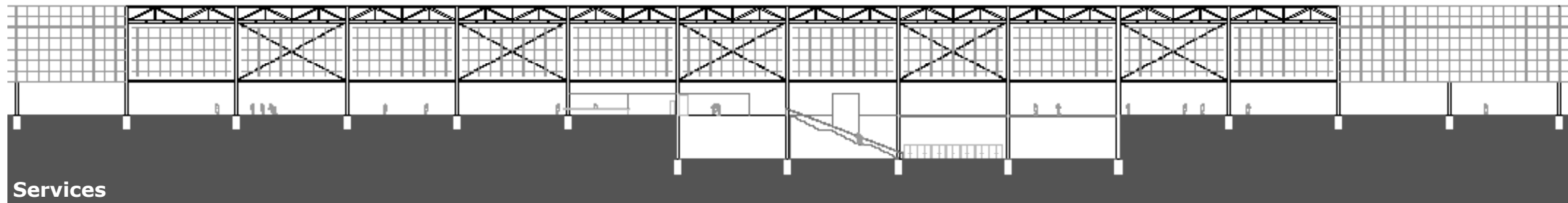
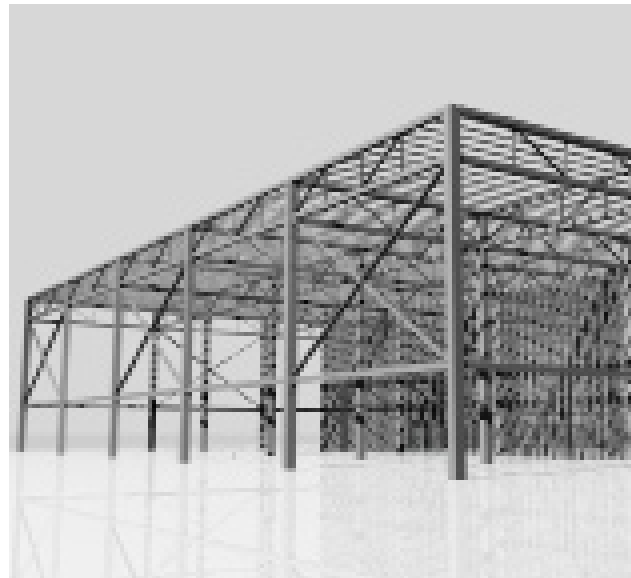
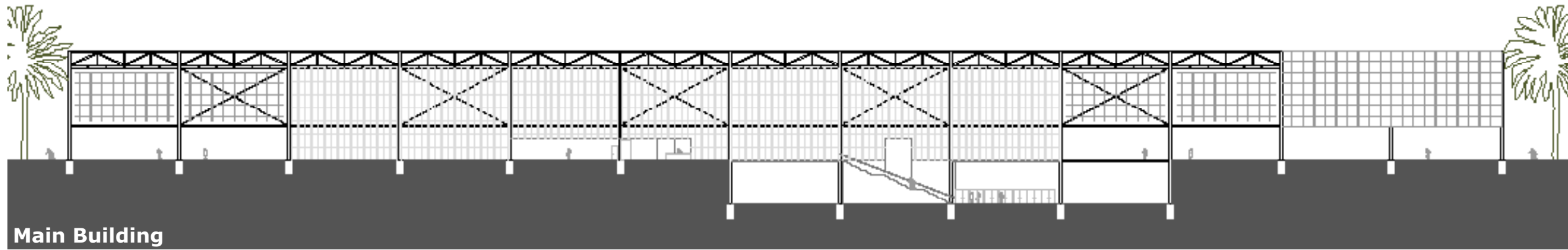
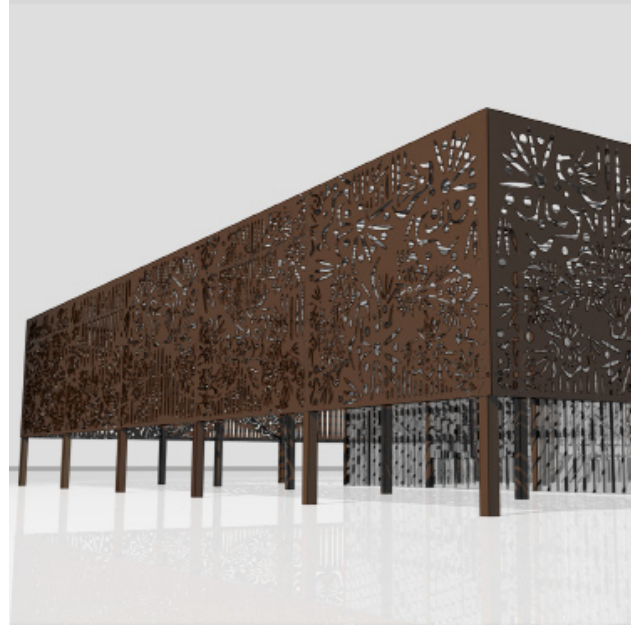
Detail Documents 4

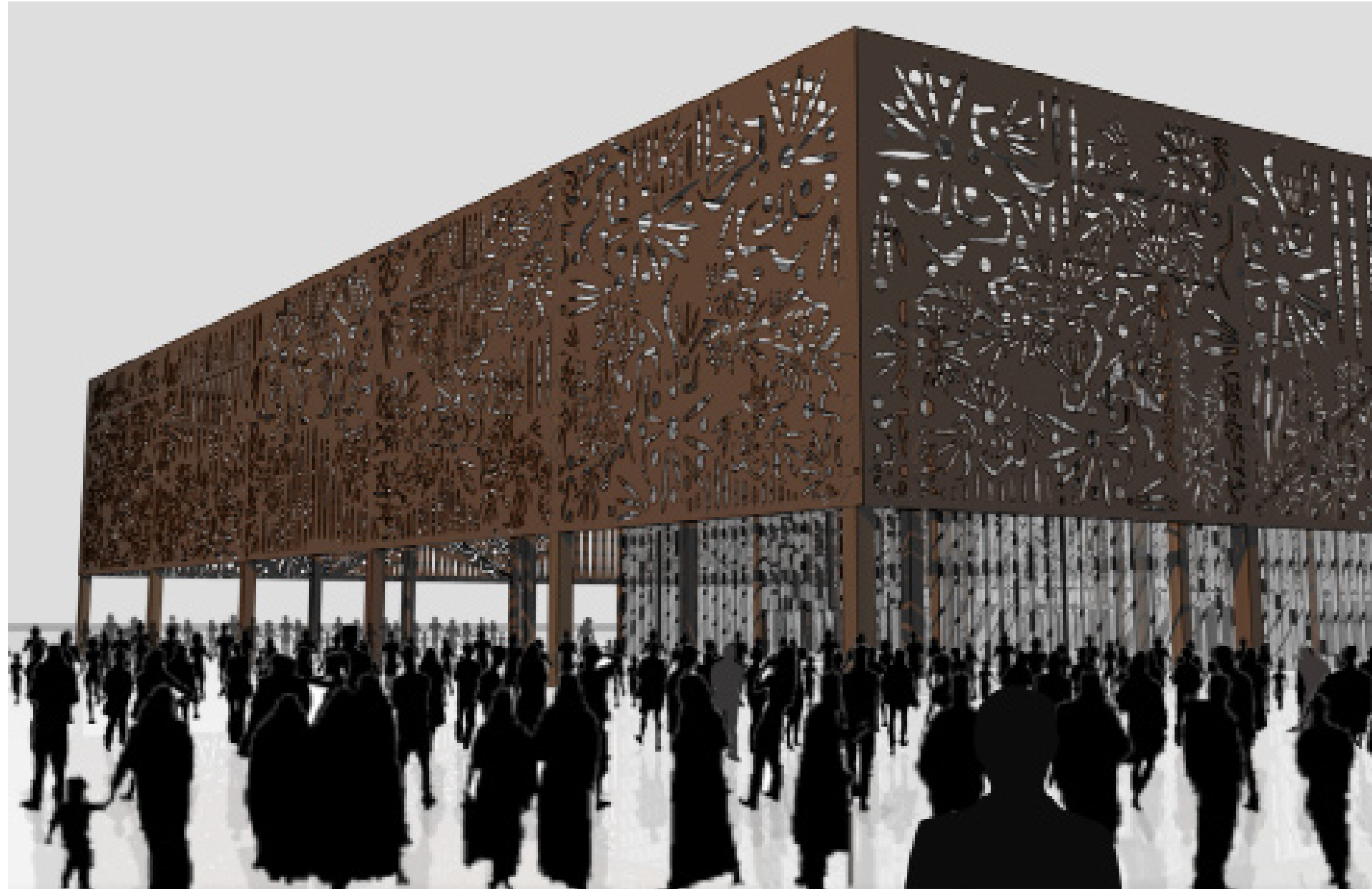
PLAN

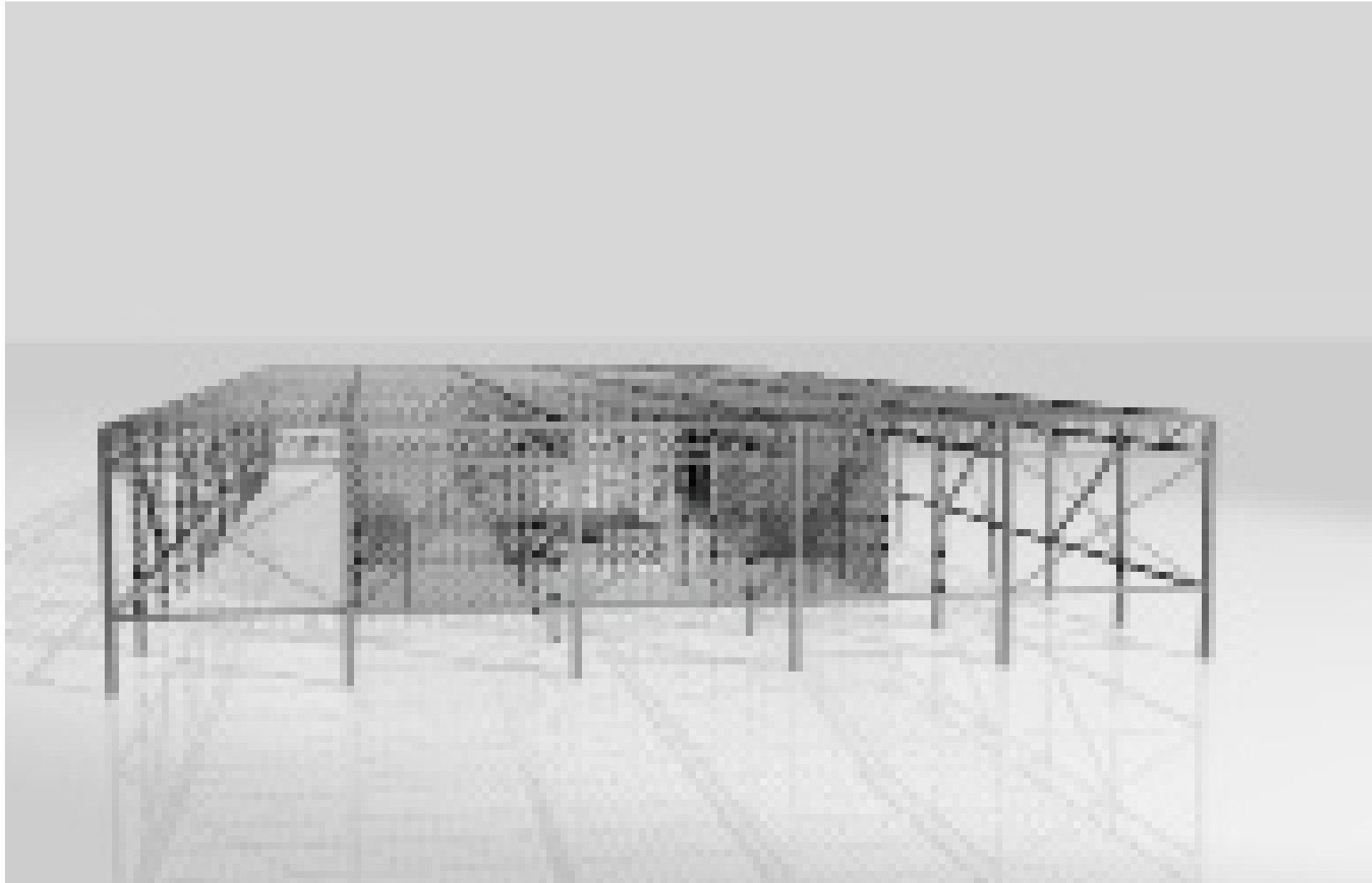




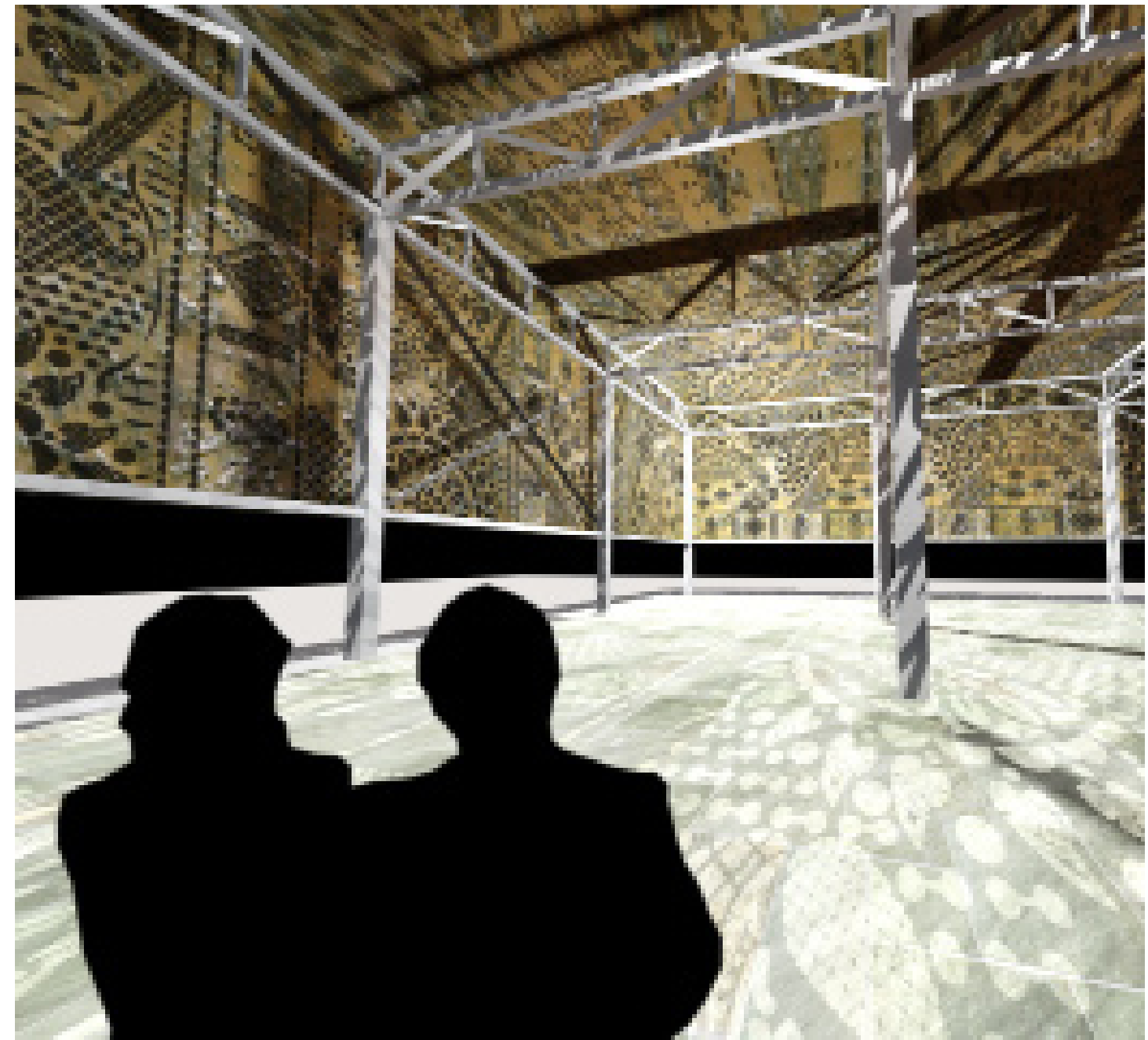
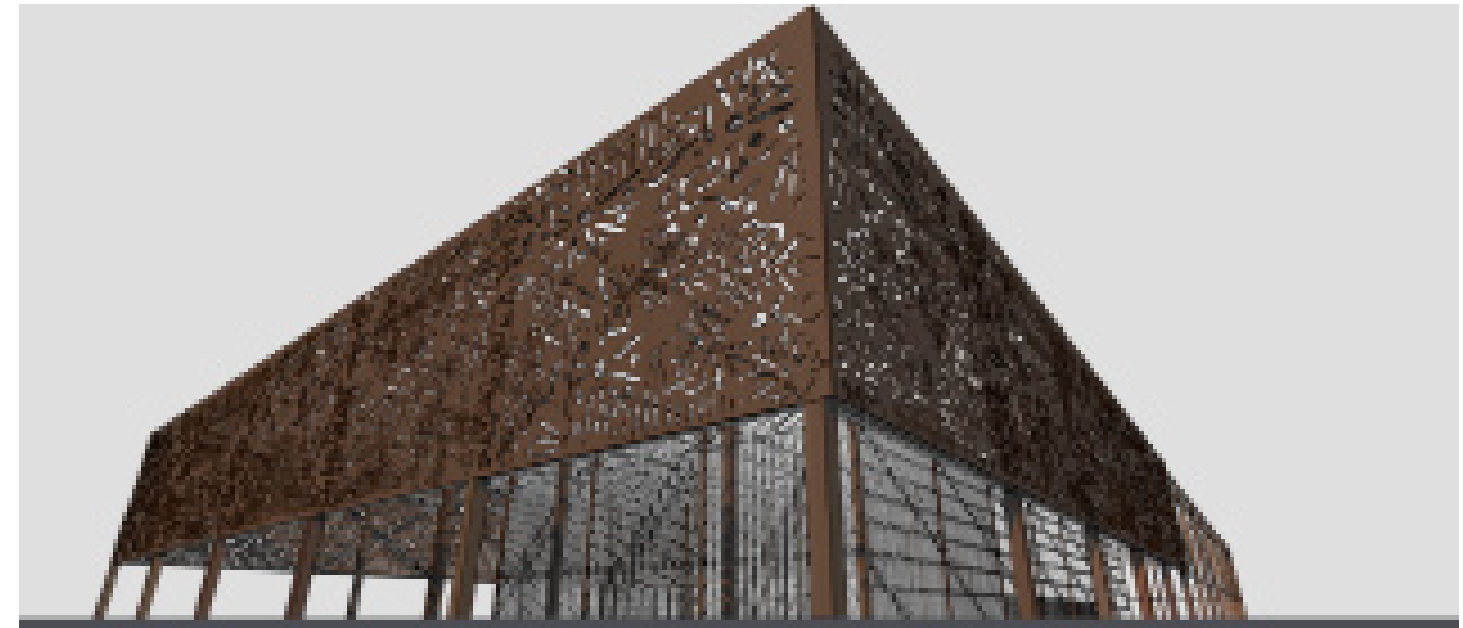
Section/Elevation







Structure-Cor10 steel

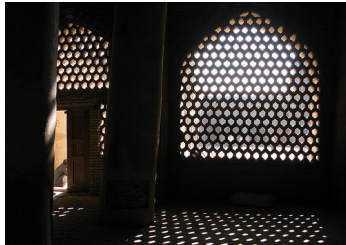




Henna



Date Palm Tree



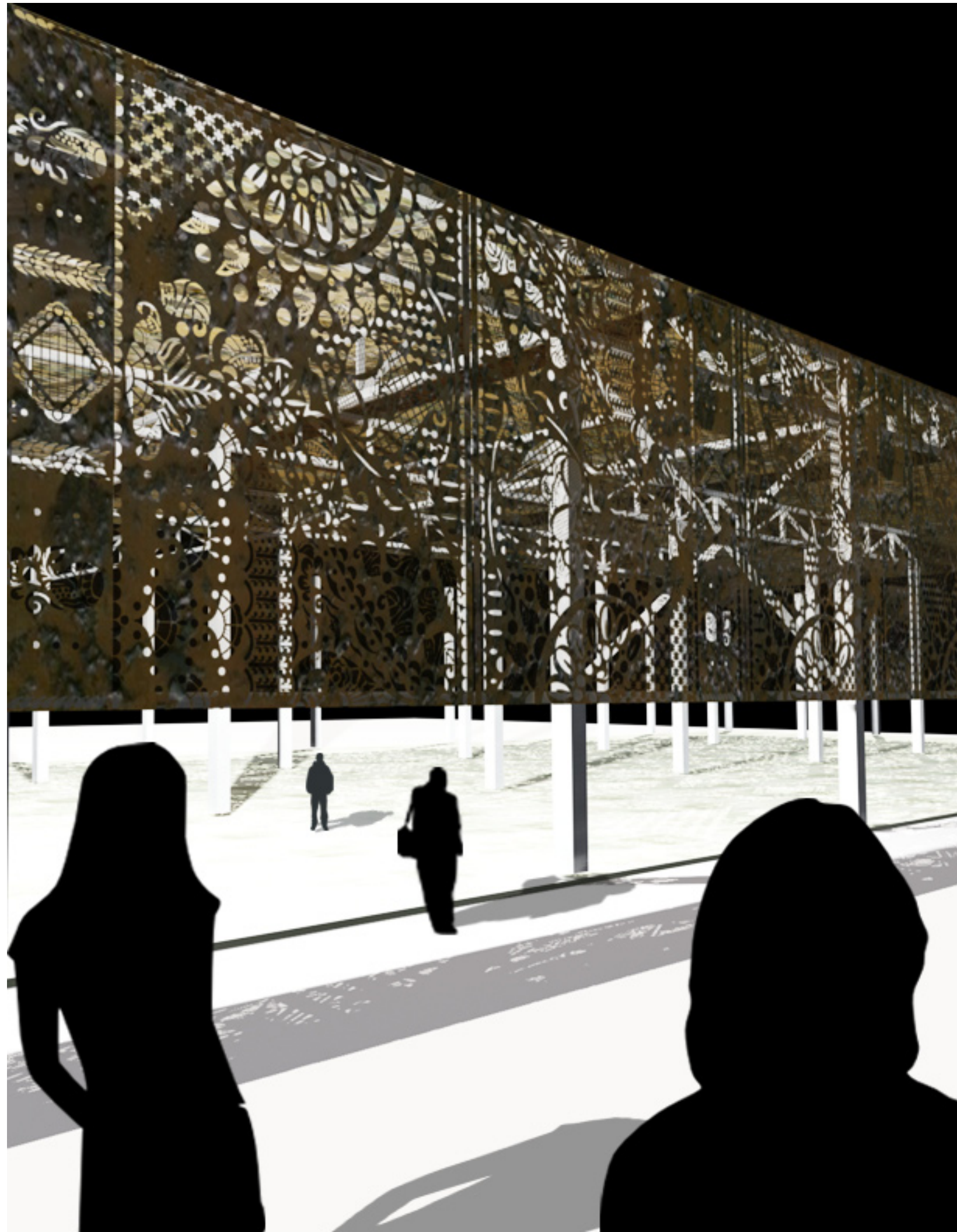
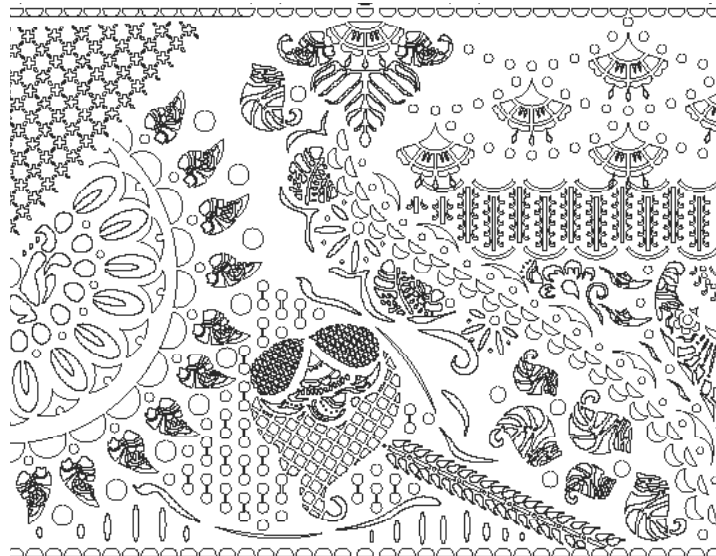
Mashrabea

Al'mashrabeeya: the screen

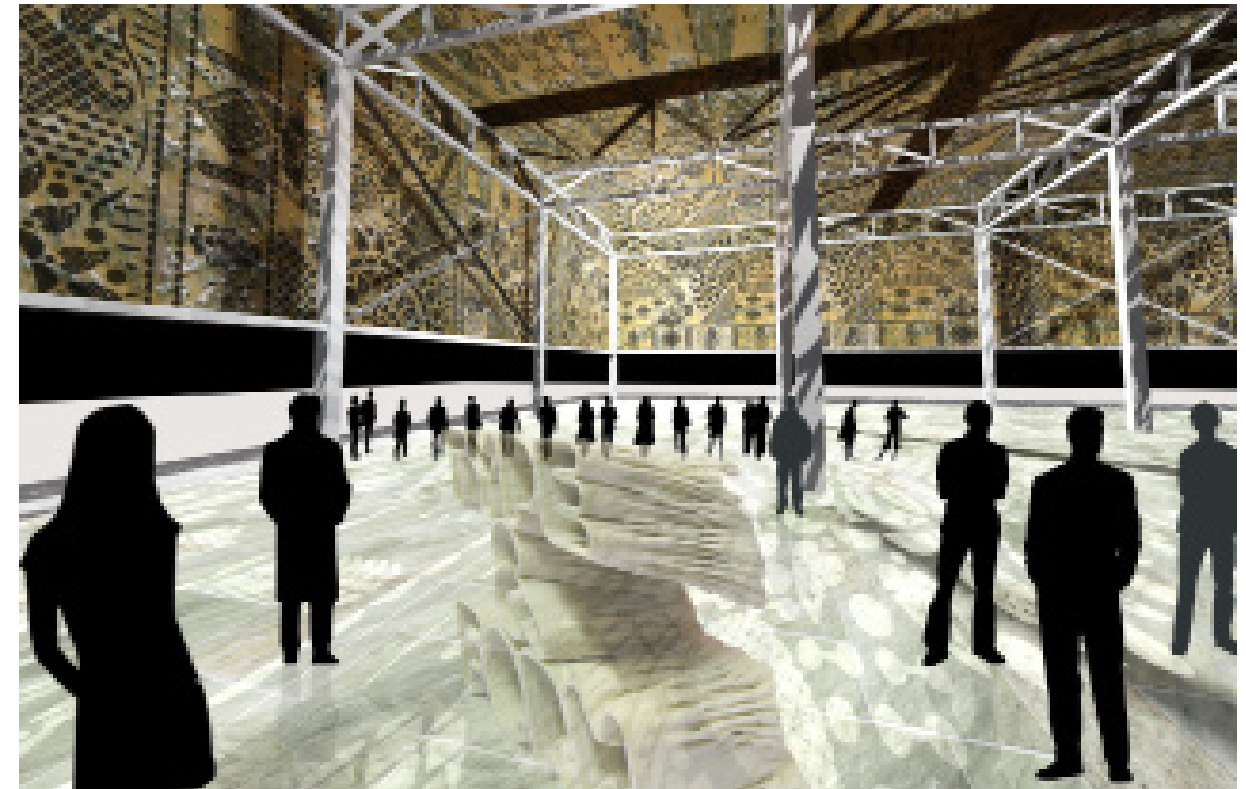
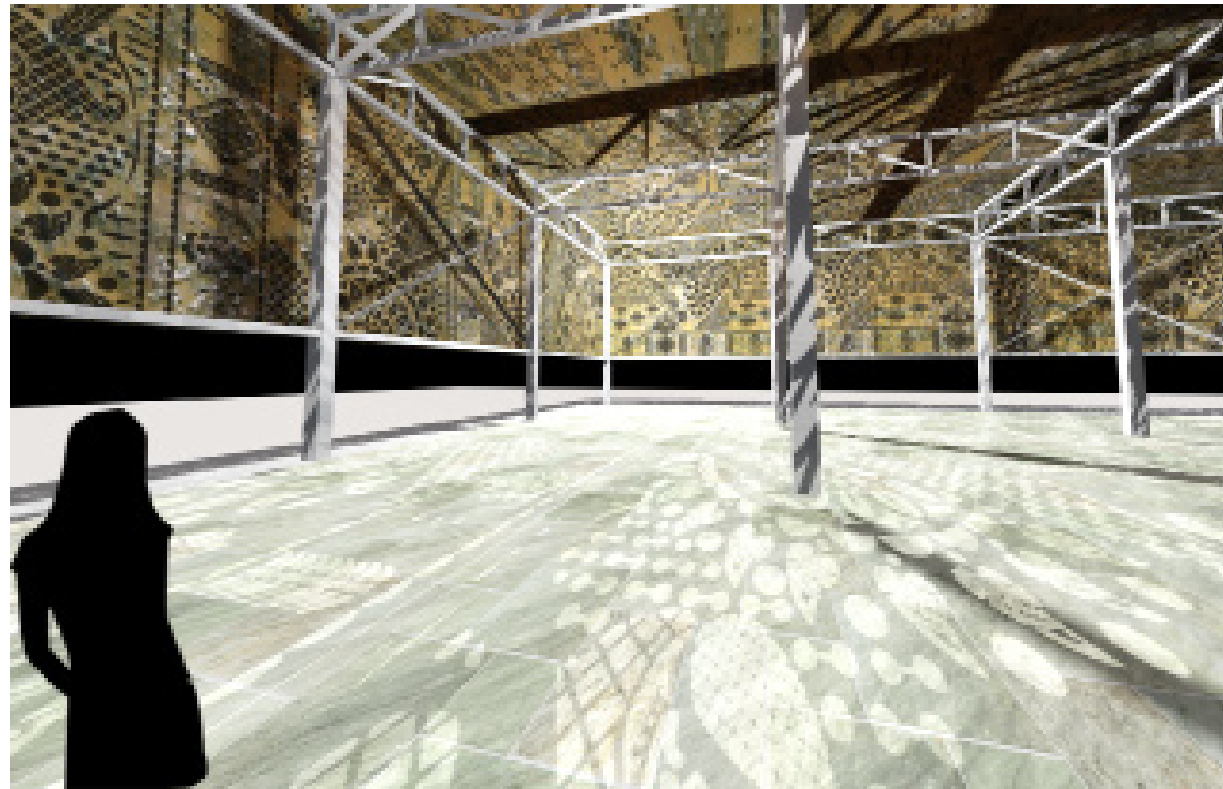
The screen is inspired by Henna patterns which is part of the Kuwaiti heritage. The patterned mashrabeeya envelopes the three sides of the pavilion that are exposed to the direct sun and creates an architectural visual identity. The patterns provide shading while also creating a dynamic play of light and shade in the interior spaces. Also, the designs of the pattern are smaller openings in the bottom part and larger openings in the higher parts allowing cool air to move fast above the head and slow in lower parts. This provides a significant amount of air moving in the space without causing it to be uncomfortable.

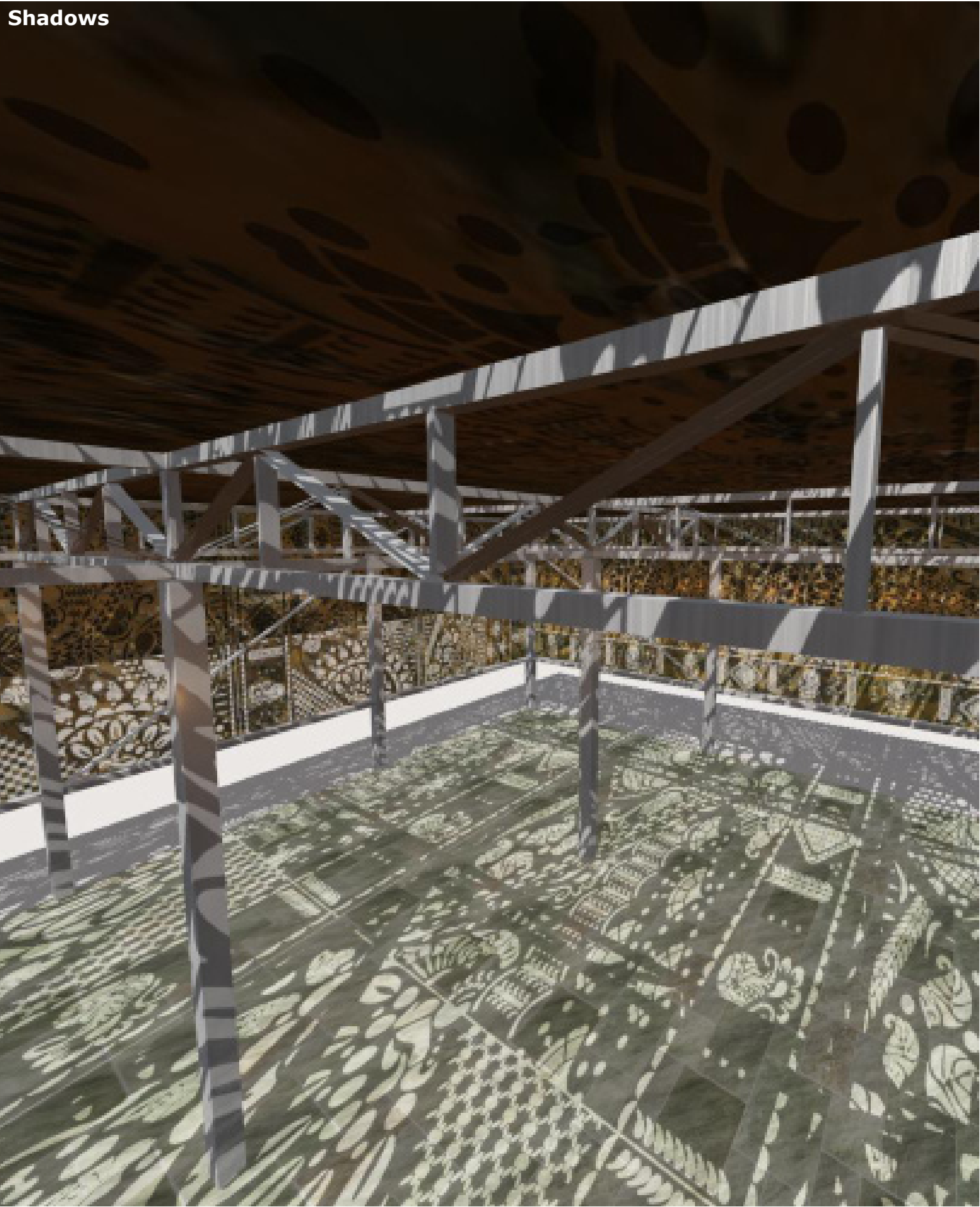
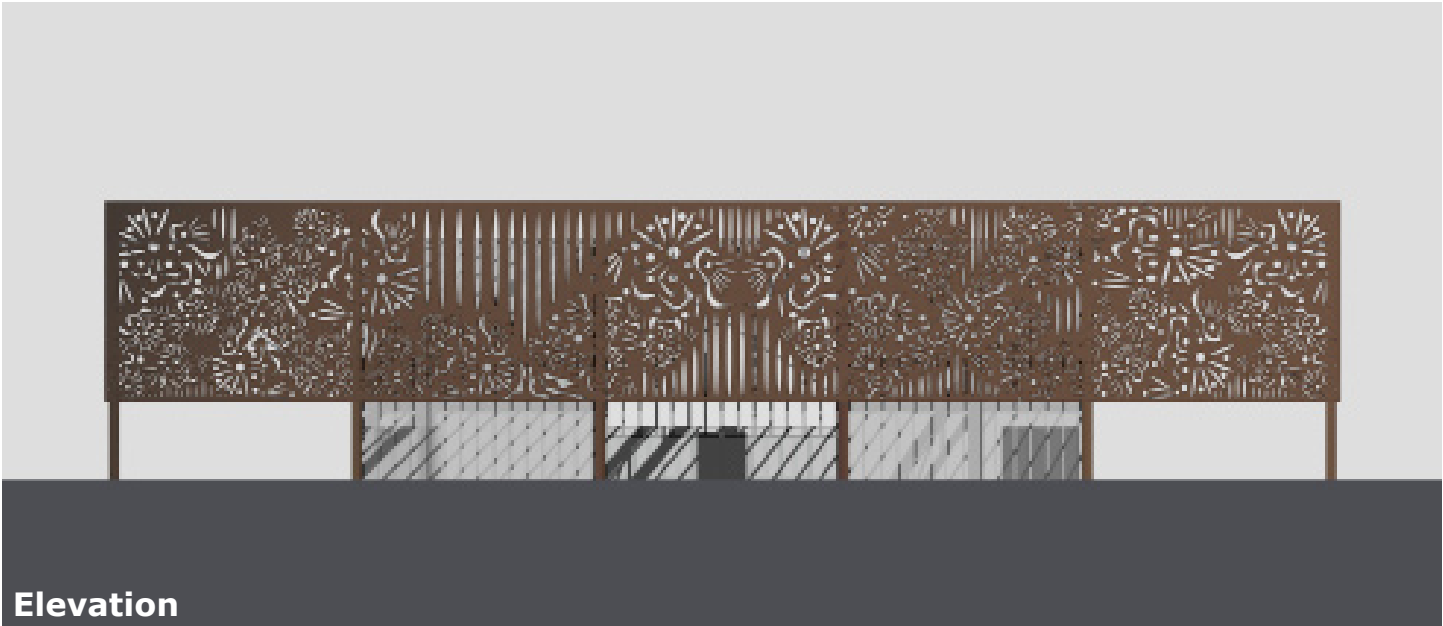
Ancillary Structure

Ancillary structures are formal in character and generally related to surrounding buildings. Each individual structure keeps in character with the style of nearby buildings. These structures are located at prominent locations within the civic space. Some of these ancillary structures have minor commercial uses like snacks and beverages, others serve as civic elements for general public use along the beach.

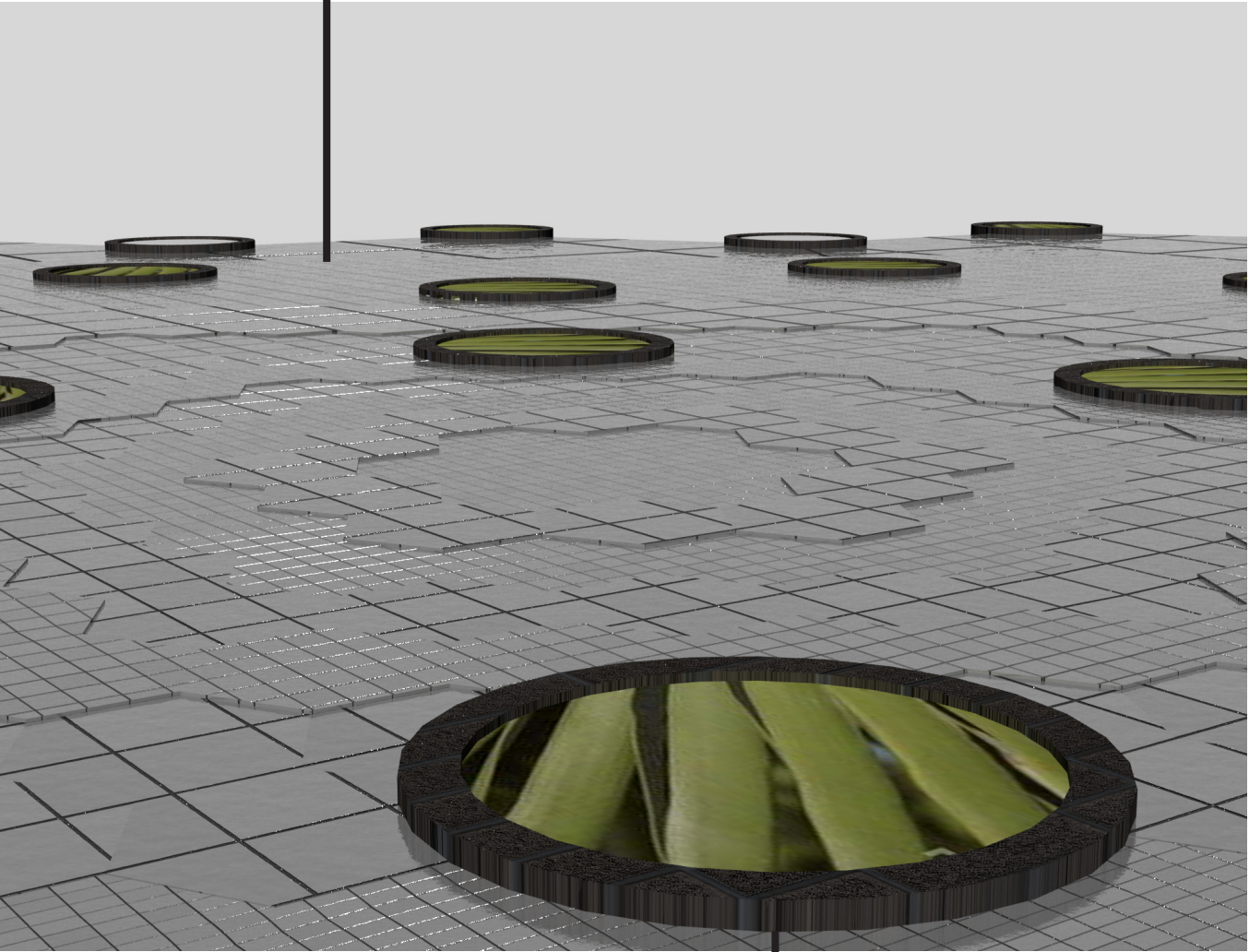
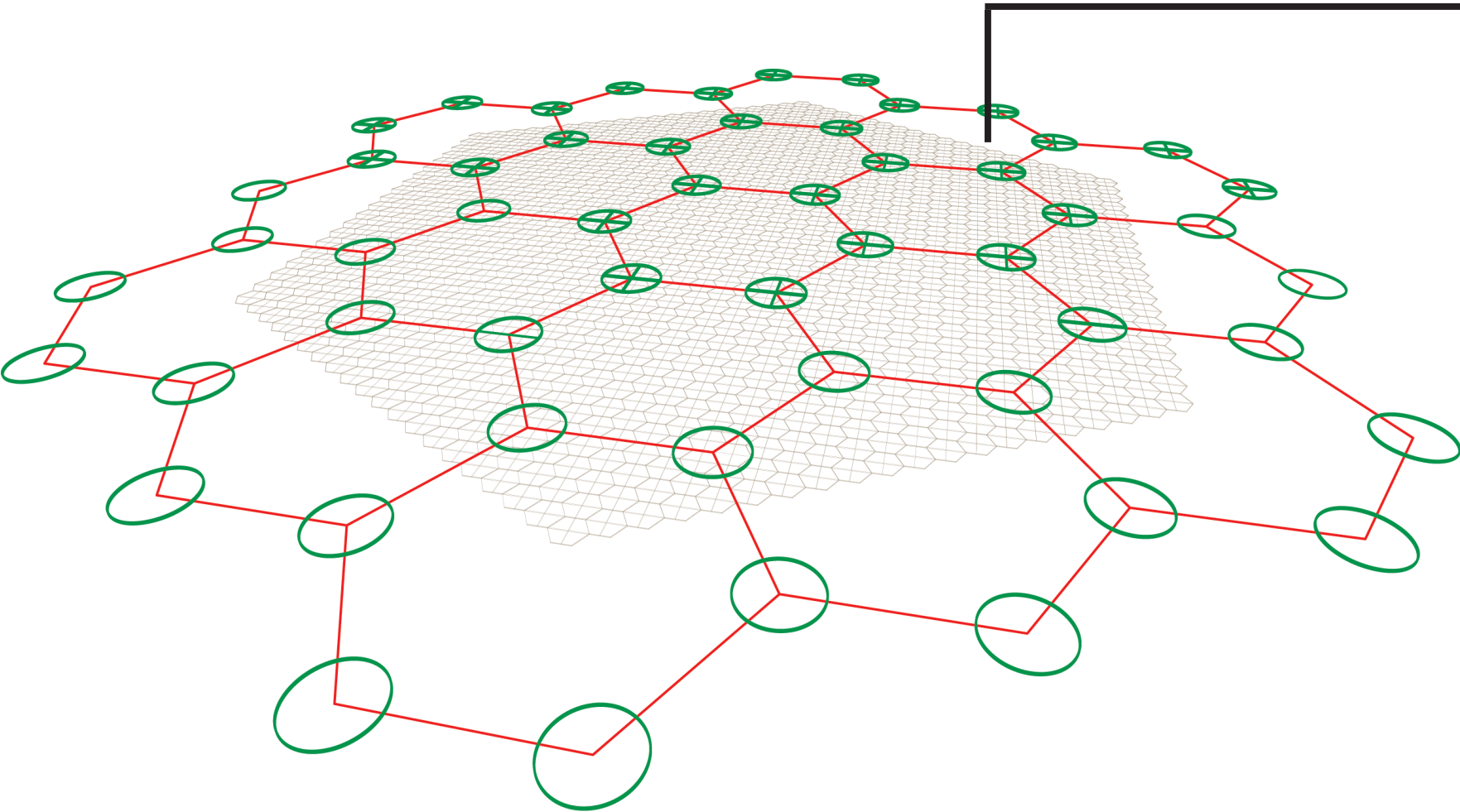


Different Events



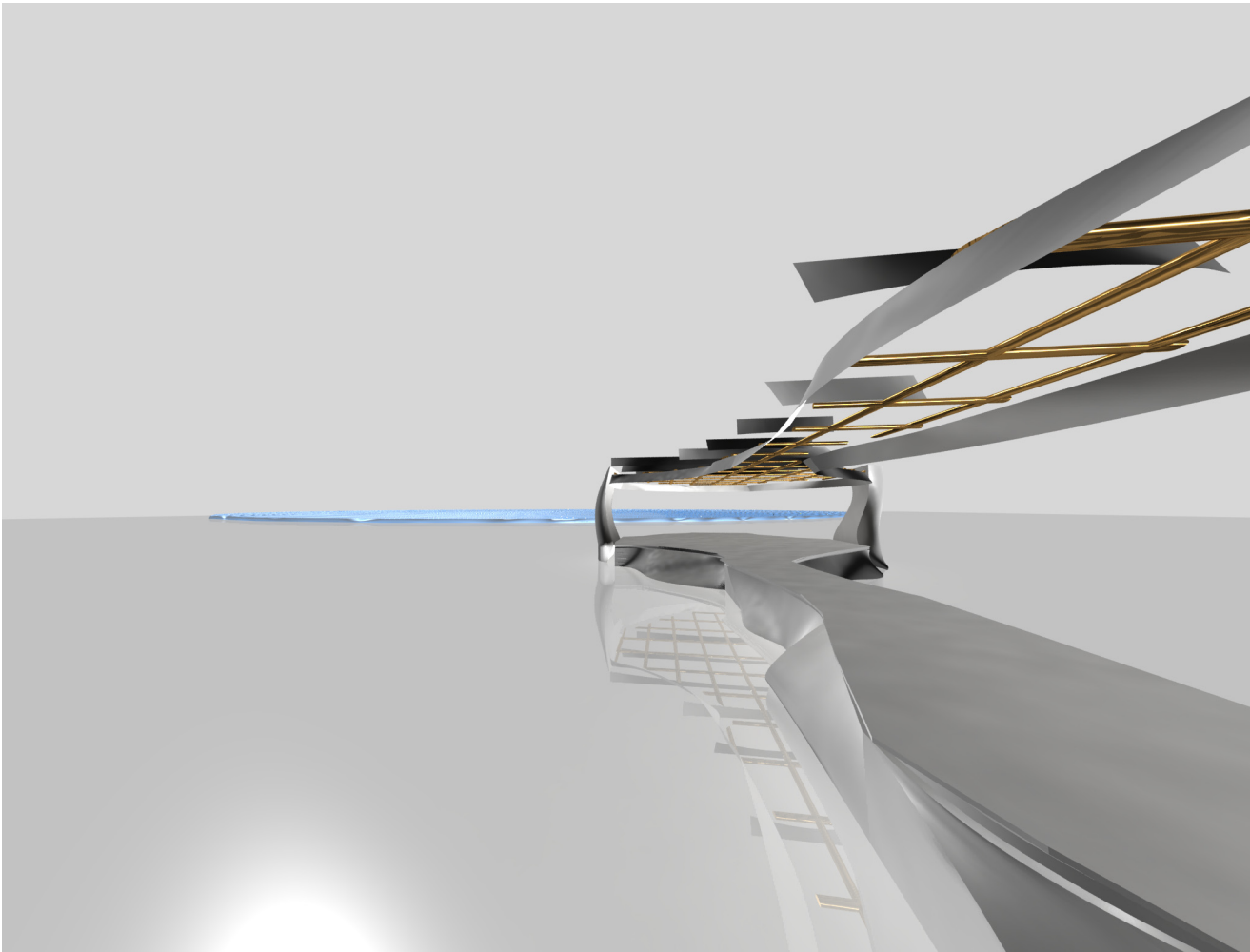
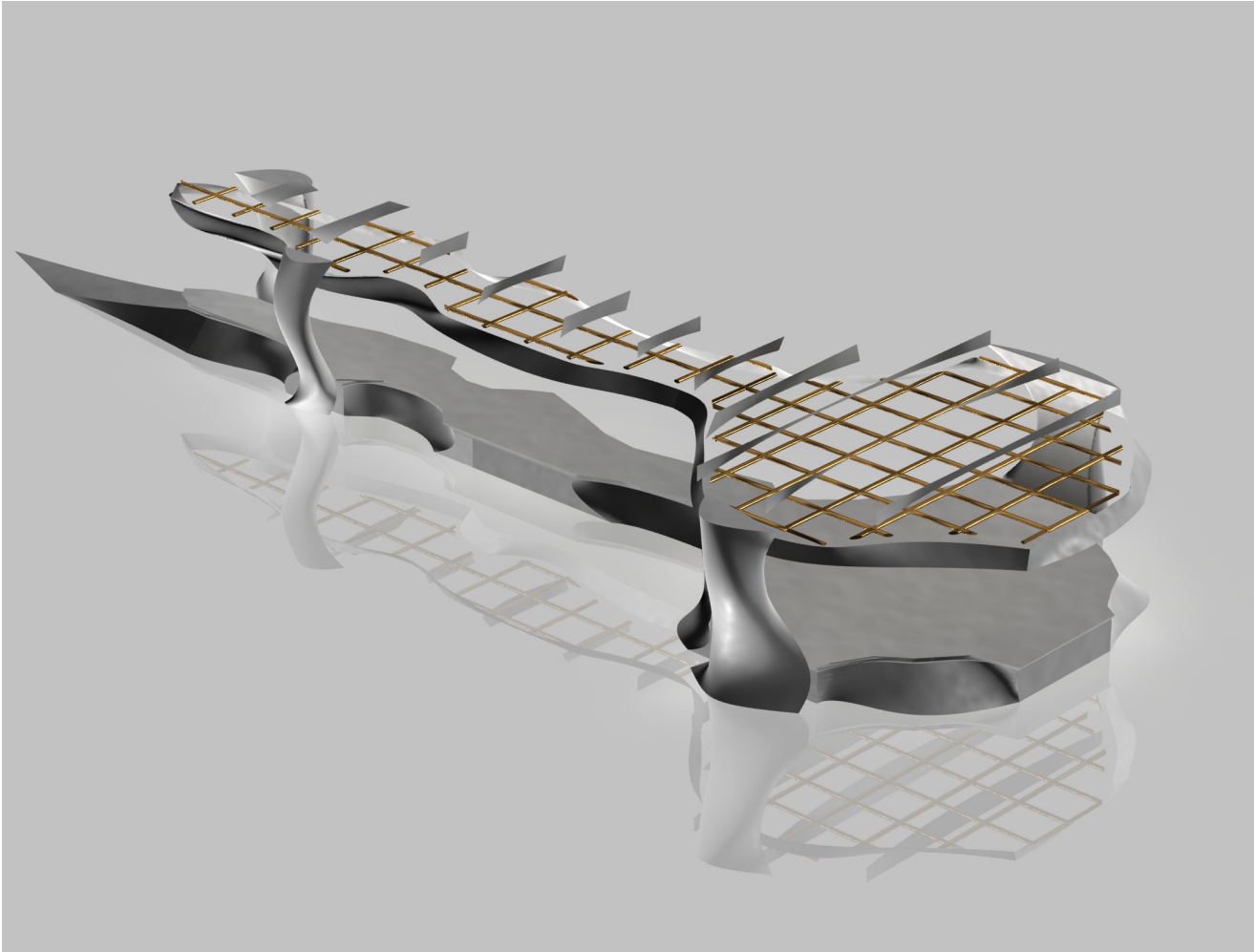
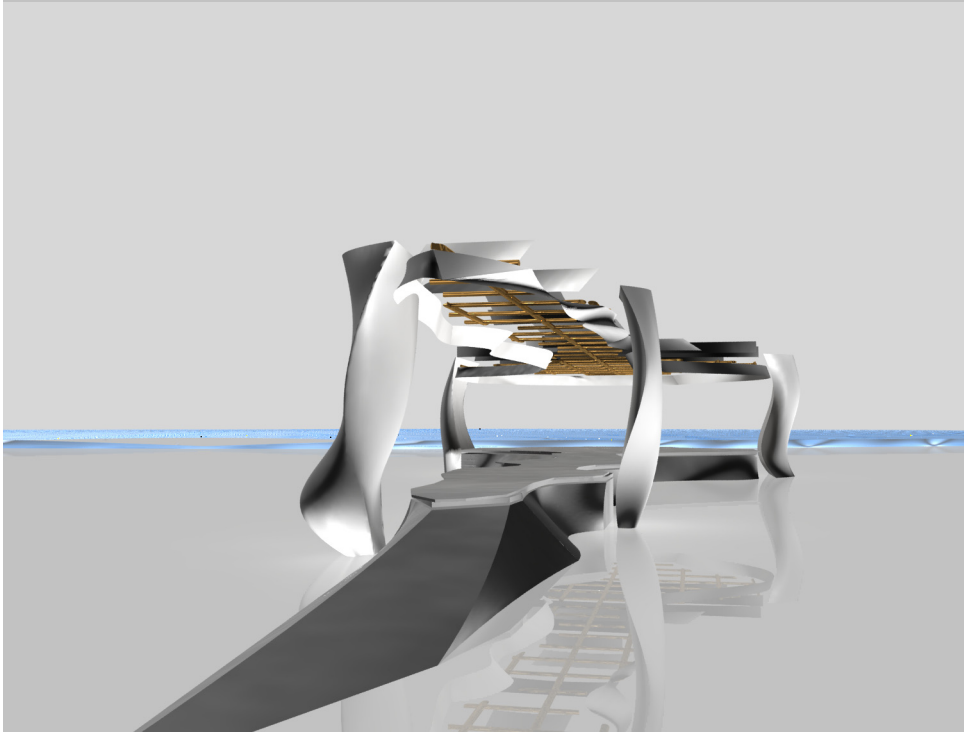
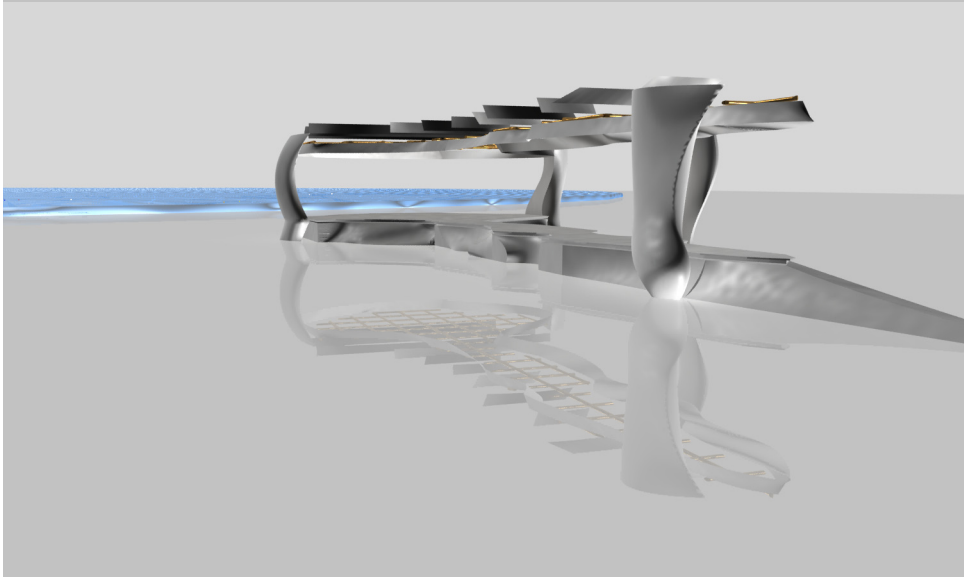
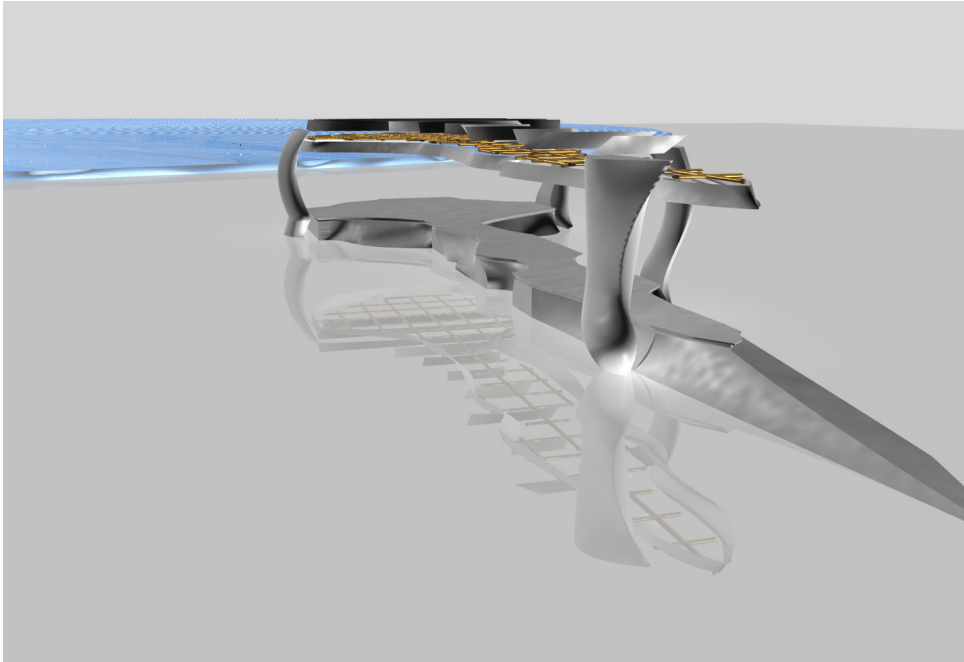


Hardscape Grid

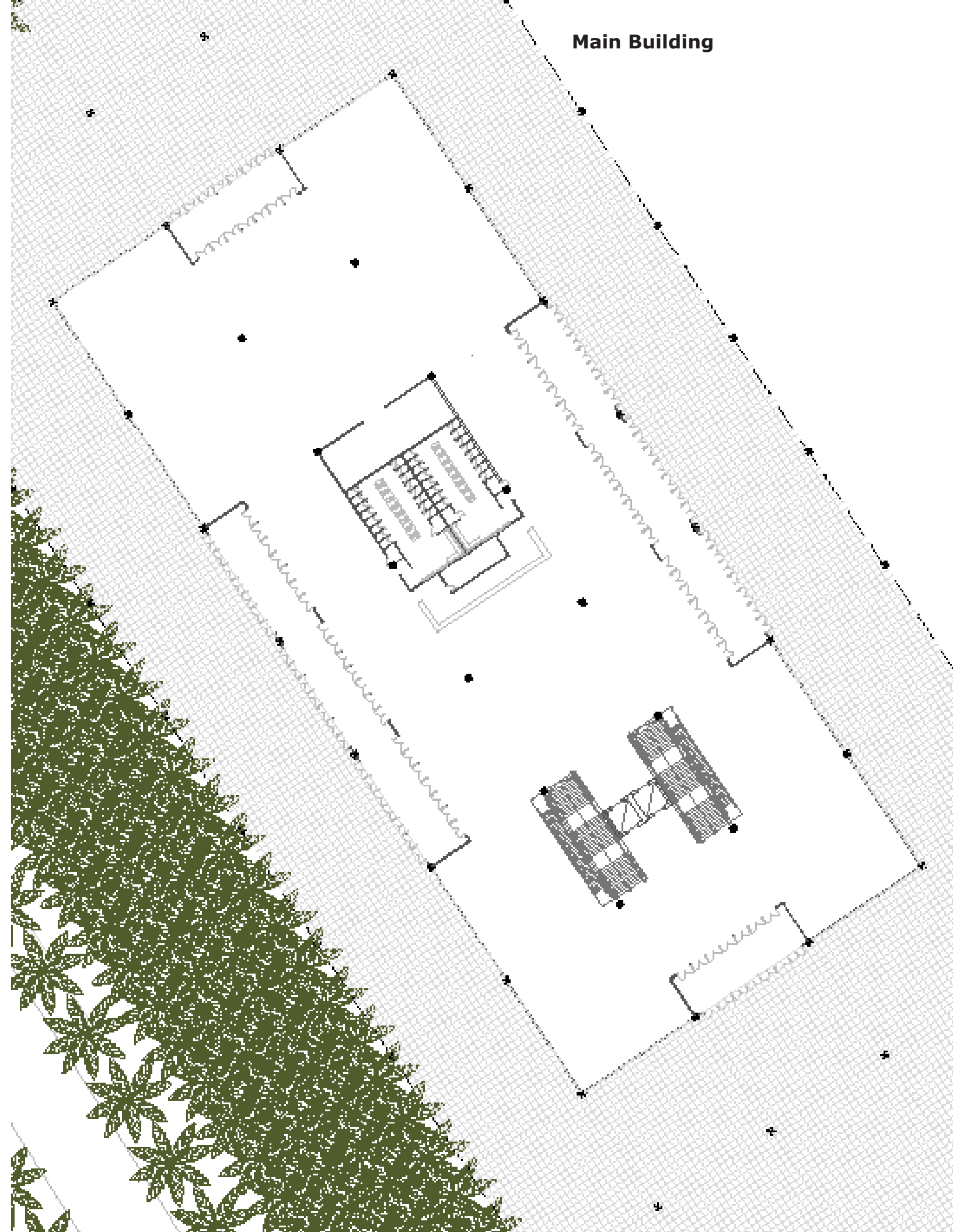


Date Palm Tree Opening

Ancillary Structure along the waterfront.



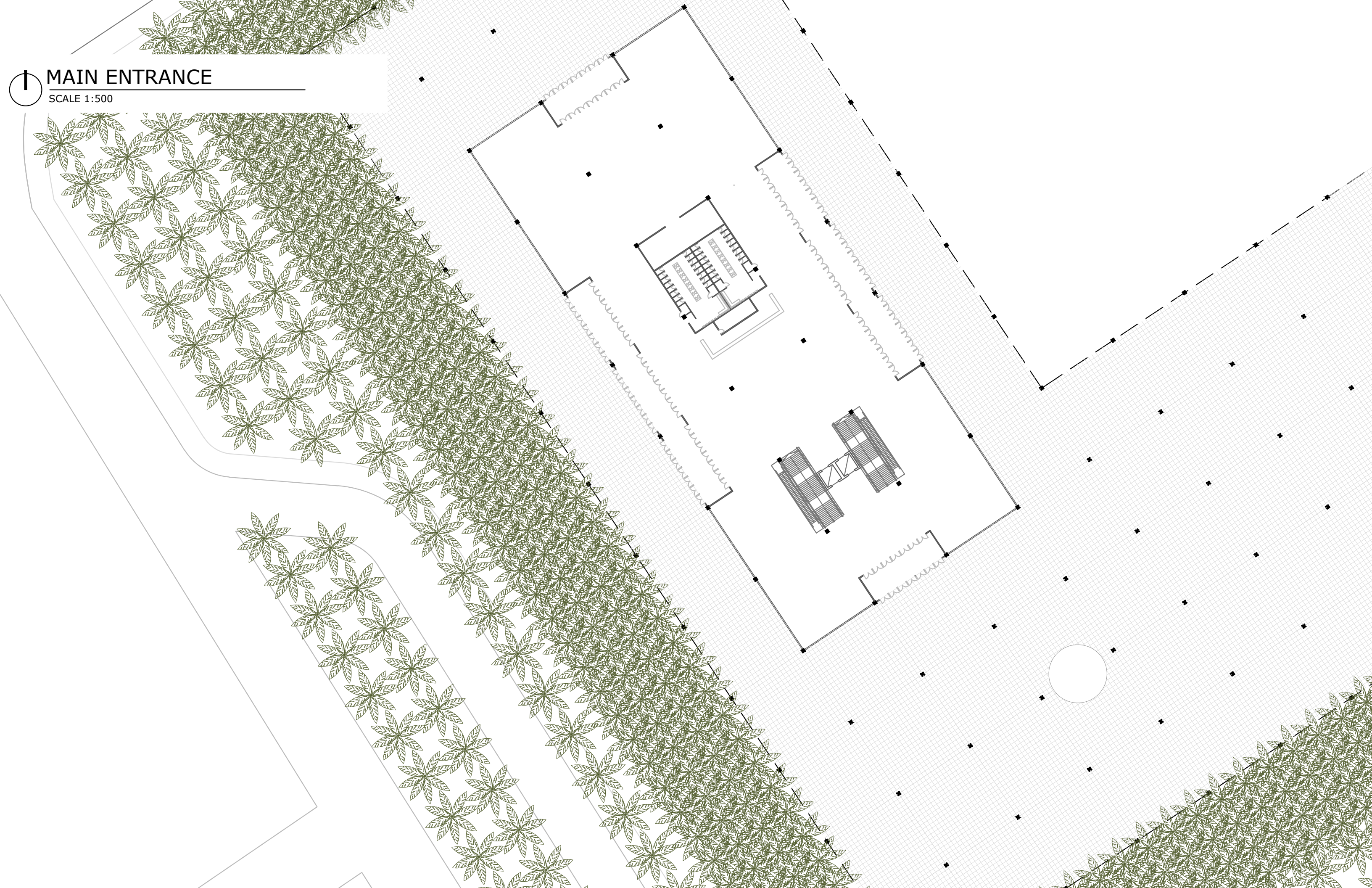
Main Building

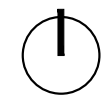
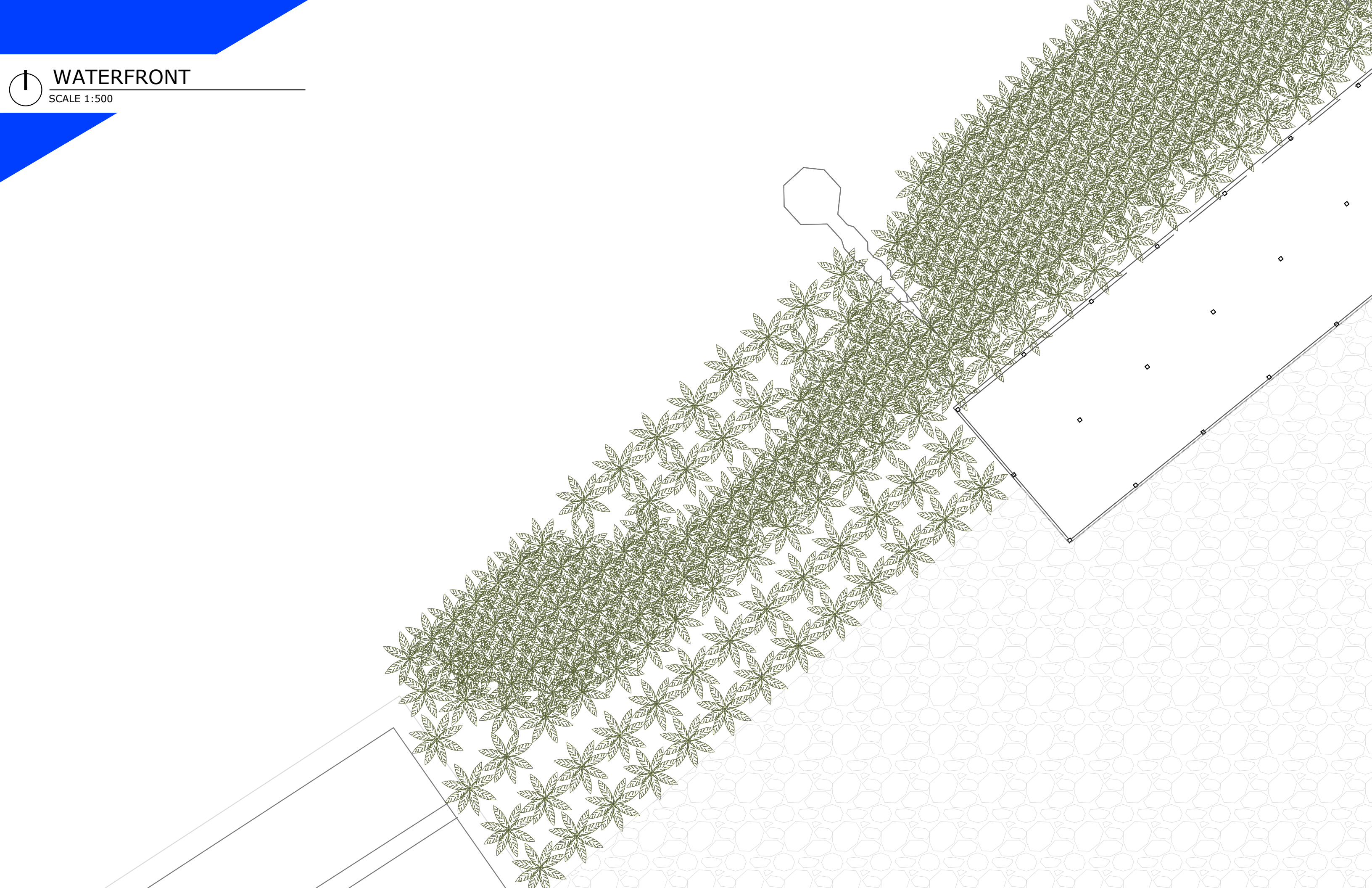




MAIN ENTRANCE

SCALE 1:500





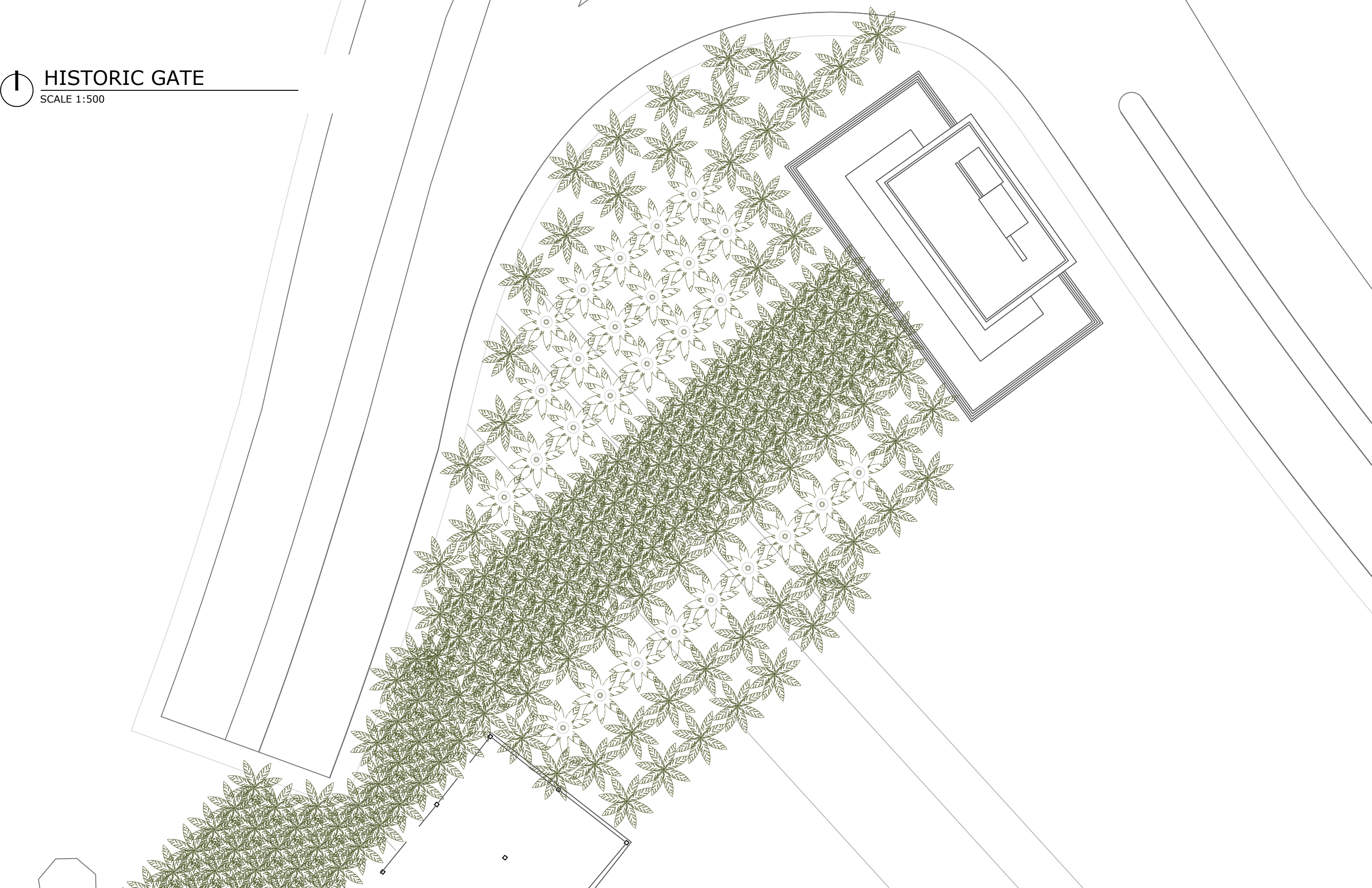
WATERFRONT

SCALE 1:500



HISTORIC GATE

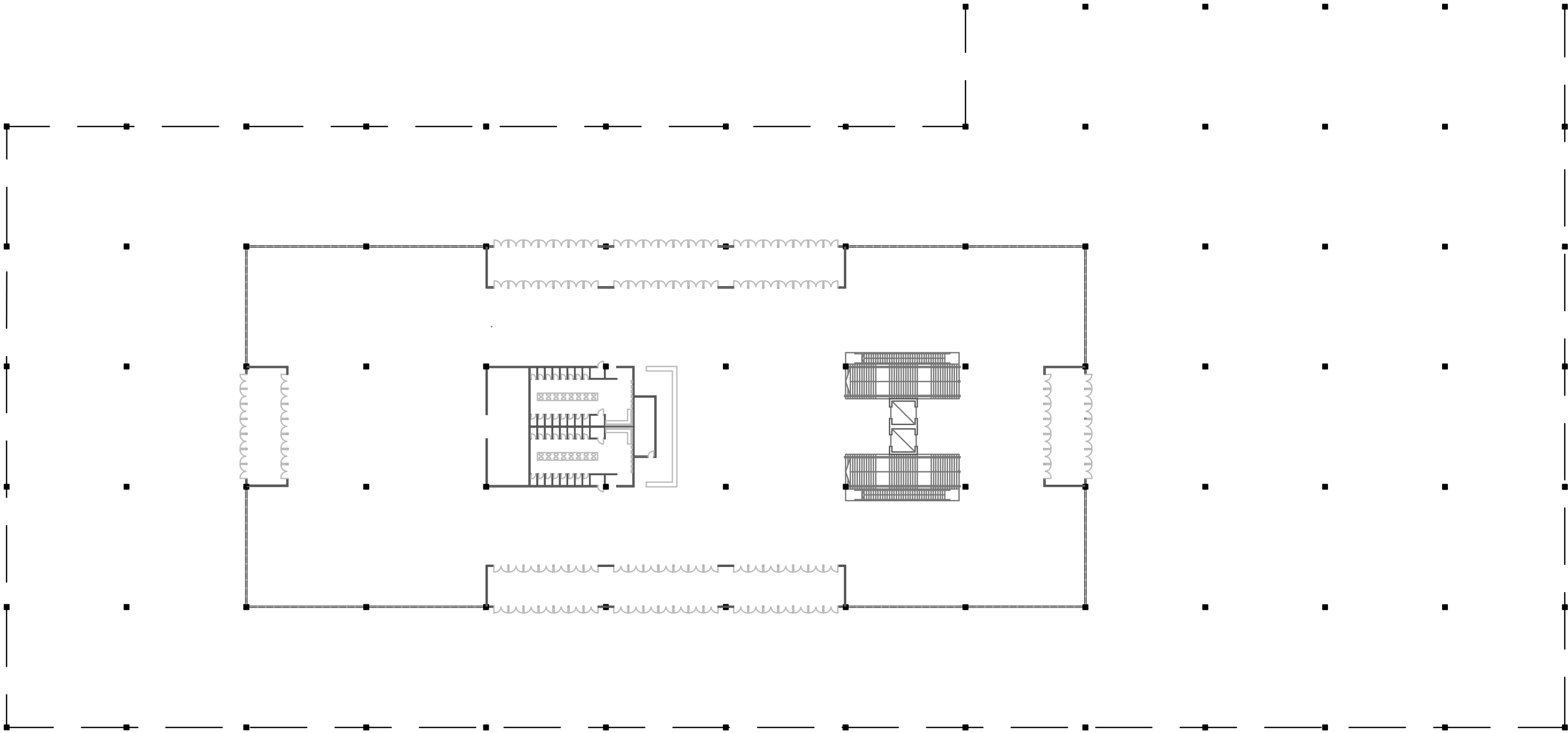
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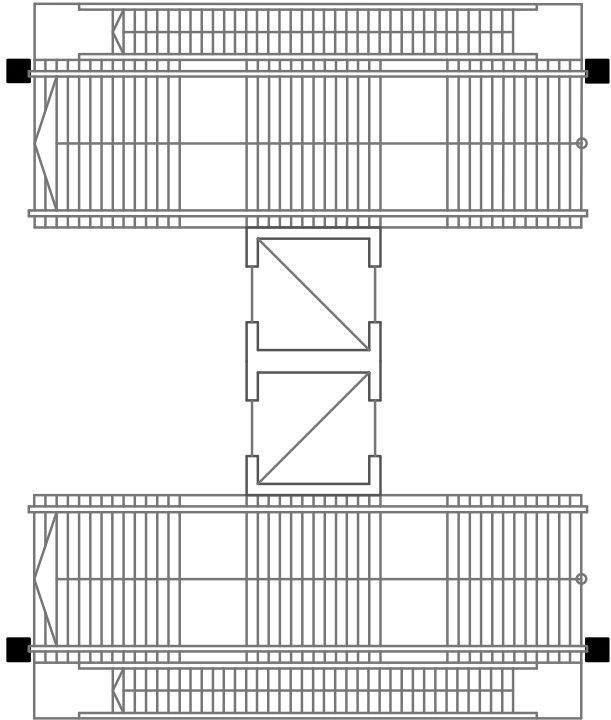
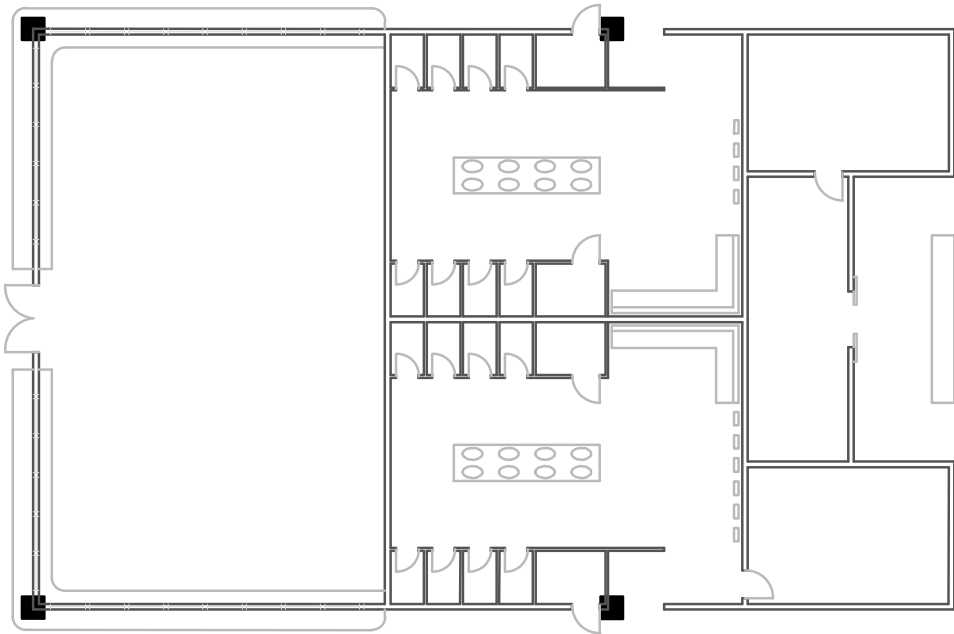


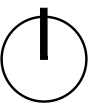


MAIN BUILDING

SCALE 1:500

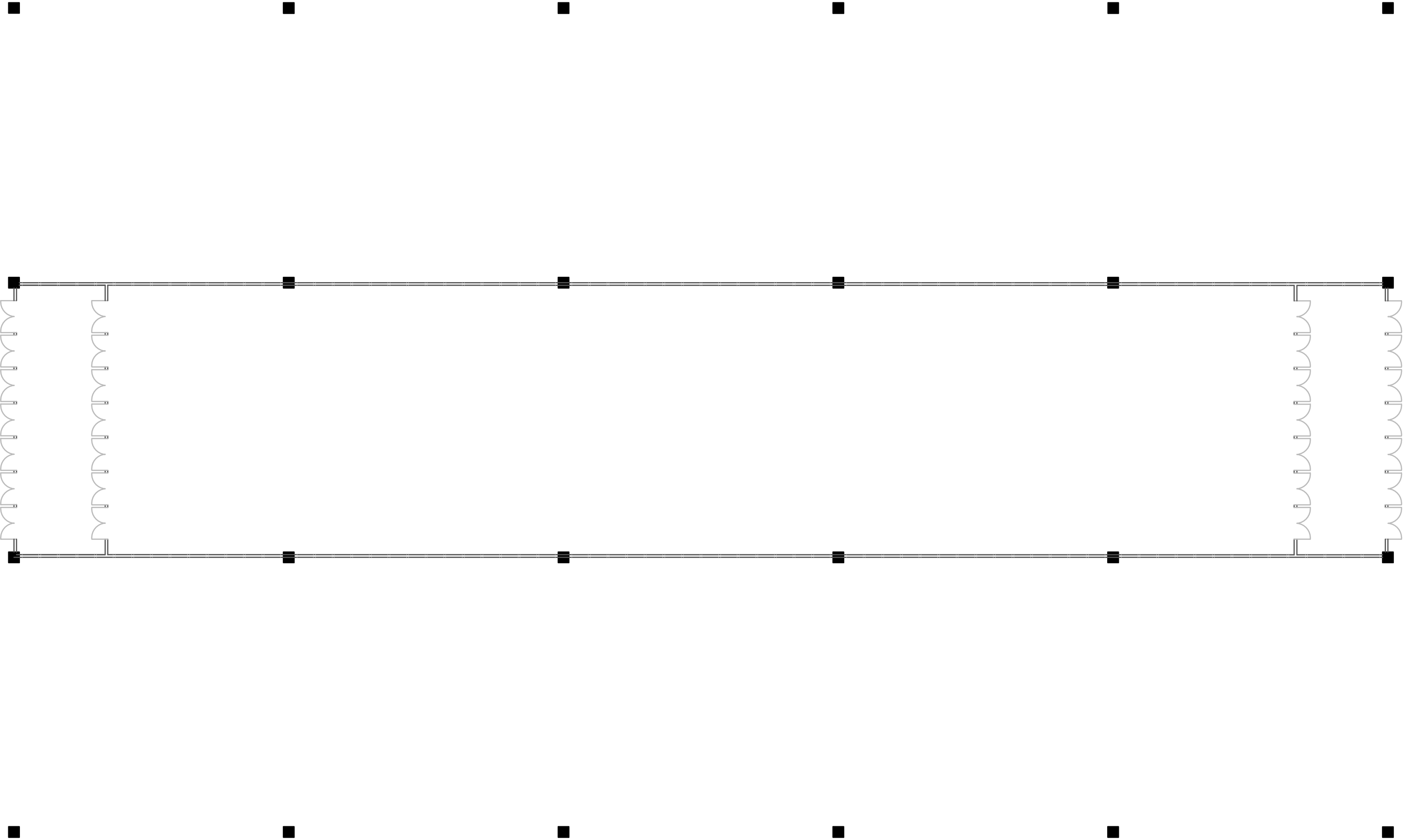






INDOOR SPACE

SCALE 1:200



Physical Model

