

Aden Stock Exchange / Financial Center

ADEN

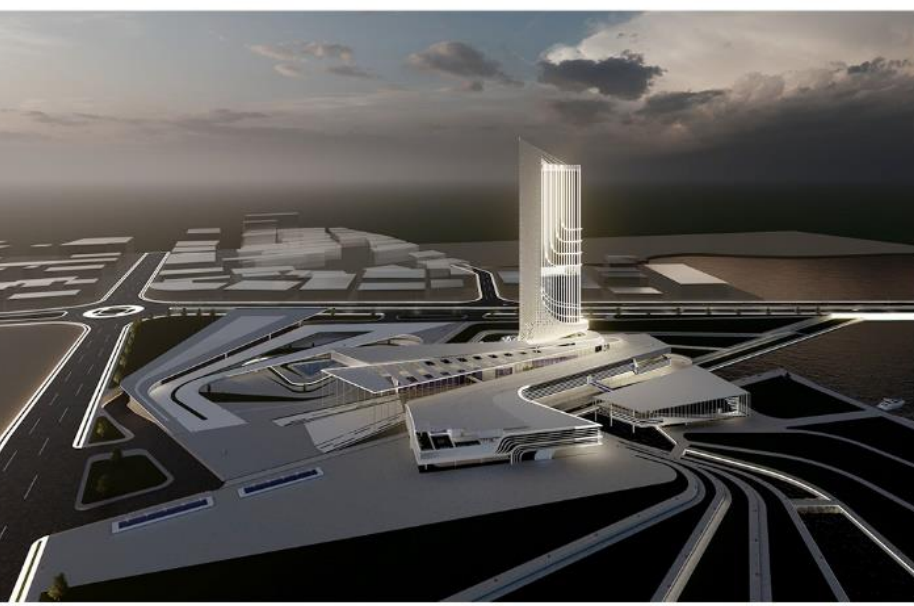
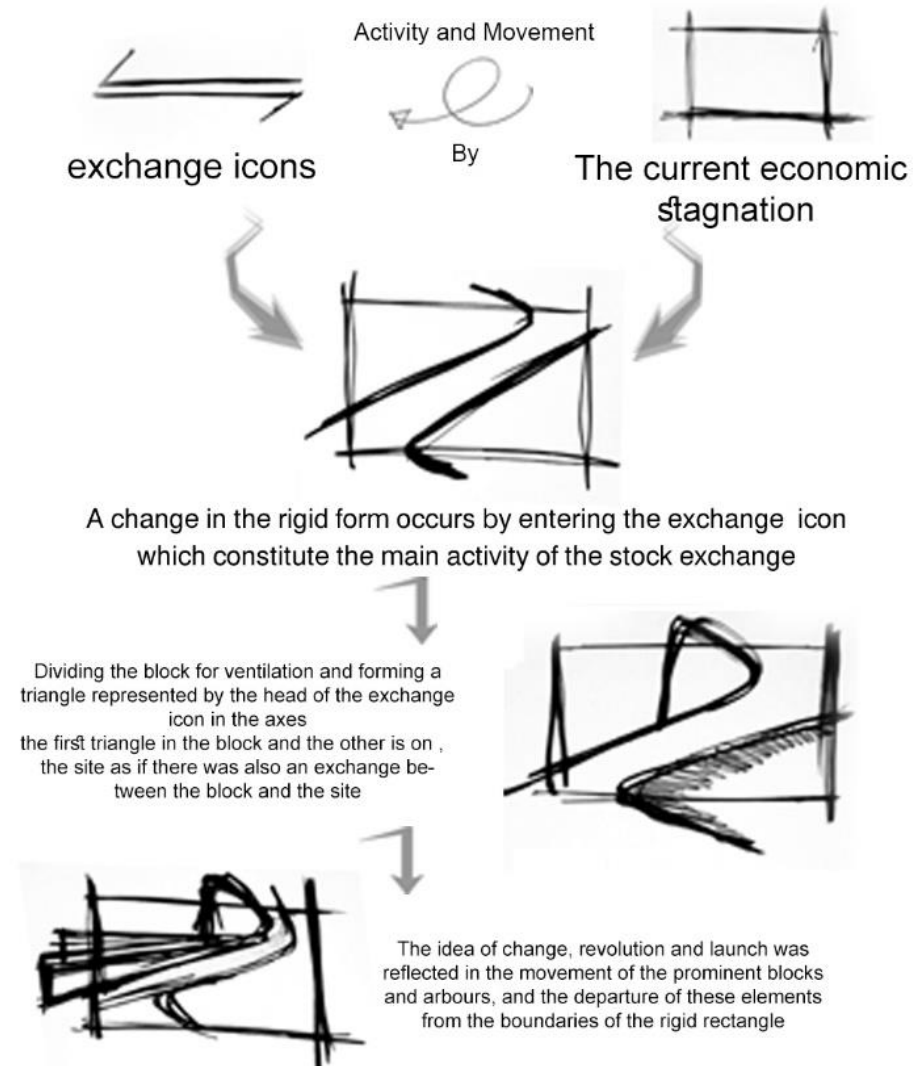
ADEN STOCK EXCHANGE

1. The Concept

Movement, revitalization, and revolution in the current economic stalemate

The Form Reference

The Concept embodiment



2. Site and Climate Analysis

The project is located in the Republic of Yemen and Aden Governorate, in Mansoura street , and the site area is 250,000 square meters



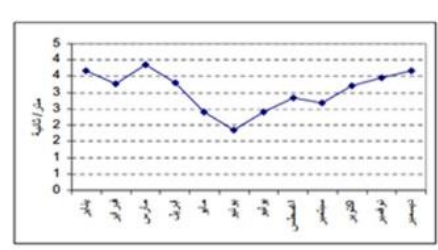
The site is 11.3 km away from Al Mualla port



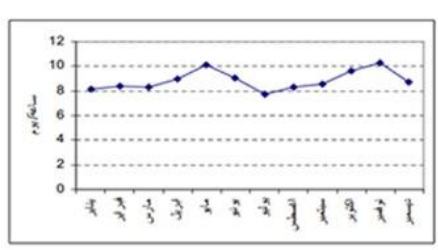
The site is 7.5 km away from City center



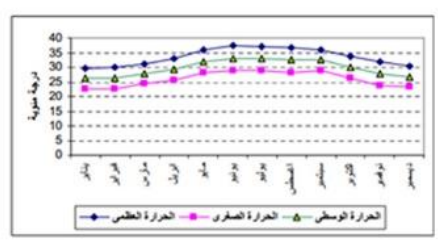
The site is 9 km away from Aden Air-port



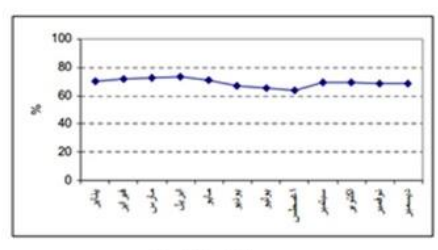
Wind Movement:
The monthly average wind speed in the city of Aden is between 1.8 m / s in the month of June and about 4 m / s during the month of March, where the prevailing winds are the eastern and northeastern winds, while the monsoon winds are the southwestern winds.



Solar Brightness
The average daily sunshine hours in the city vary slightly during the year, between 8 hours/day during the months (December-March-July-September) and 10 hours/day during the rest of the months of the year.



Temperature
The average monthly maximum temperature ranges between 29 and 38 degrees Celsius, while the minimum temperature ranges between 22 and 29 degrees Celsius.



Humidity Rate
It is considered relatively high, as the calculated monthly rates of atmospheric humidity values recorded in the meteorological station at Aden International Airport indicate a slight variation during the year ranging between 60-75%.

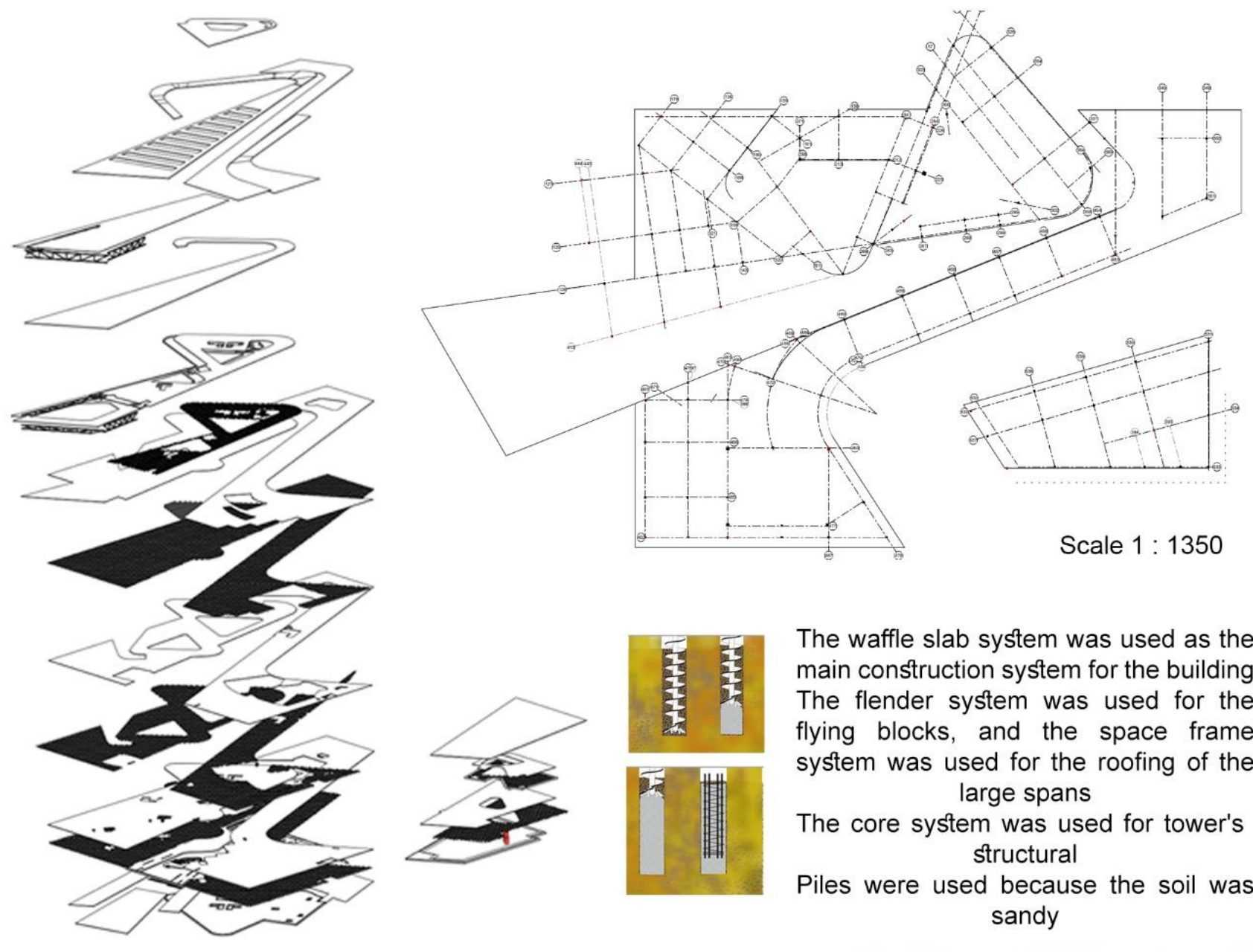
The site was chosen to achieve the following criterias:

Easy accessibility and proximity to the airport, city center and port.

Provides security and tranquility in the site.

The good view for the project and the strategic location to make the project an architectural landmark

The appropriate space and the possibility of future expansion. Environmental aspects such as wind and lack sources amount of lust such as factories near the site.



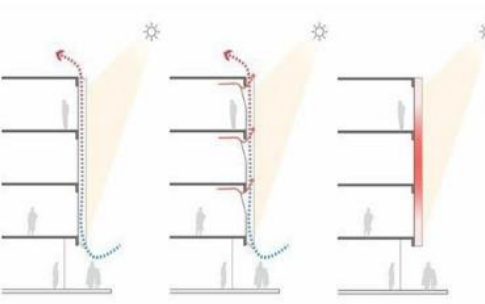
Scale 1 : 1350

The waffle slab system was used as the main construction system for the building
The flender system was used for the flying blocks, and the space frame system was used for the roofing of the large spans
The core system was used for tower's structural
Piles were used because the soil was sandy

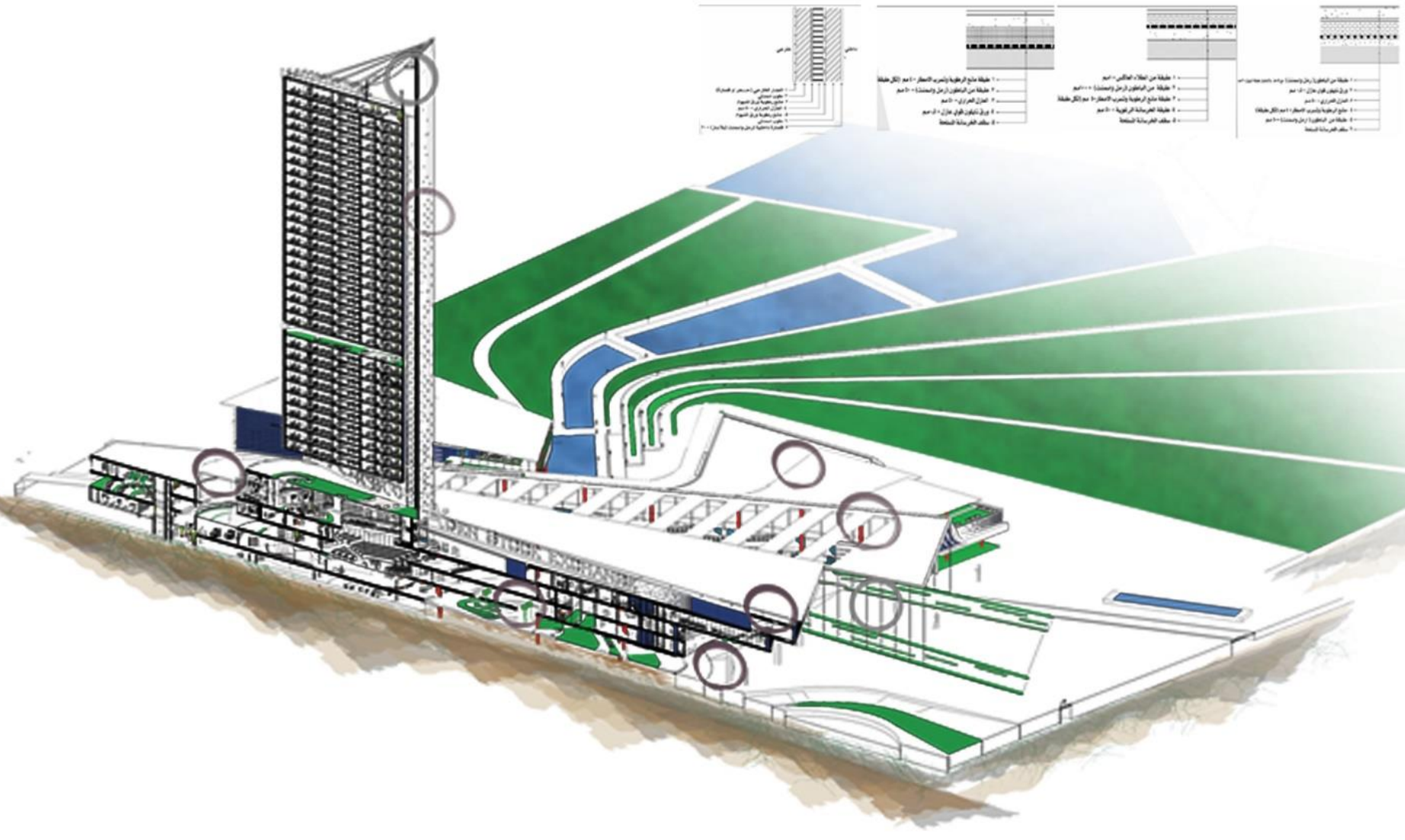
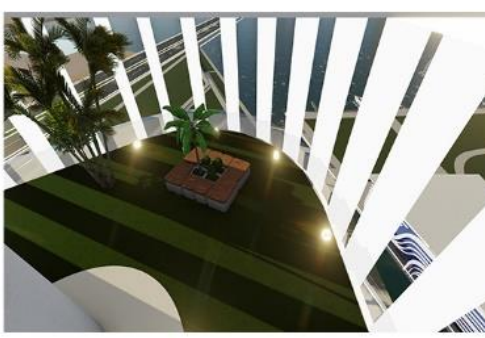


4. Structure design

3. The climatic treatments used in the building



- Using a central inner courtyard to ventilate the spaces.
- Emptying the floors of the building in the tower to create vacuum and cooling of the building.
- Raising the building on columns to avoid and mitigate moisture damage.
- Reducing as much as possible the afforestation inside the building so as not to be affected by moisture.
- Making prominent surfaces and blocks of different heights to obtain shading for the facades, and this is what causes a difference in pressure, which in turn leads to movement in the air.
- Adding hooks that pull hot air out of the building and thus help with ventilation and cooling.
- Using vertical and horizontal breakers as well as Fasade skin to shade the interfaces.
- Using white and light-coloured exterior finishes to reflect the sun's rays.
- Making double roofs to reduce the heat entering the building and to shade the roofs of the internal courtyards by using transparent concrete to allow light to enter the spaces and raise these roofs with columns to allow ventilation from their sides.



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An economic investment project for the first stock exchange building in Yemen. The project contributes to the economic growth of the country as it provides a safe investment environment for the financial savings of citizens and immigrants as well attracts them to invest. The project also contributes to the growth of these savings through many means such as the opening of new projects, which in turn contributes for reducing Unemployment rate by providing job opportunities, and the project directly contributes for providing 3500 job opportunities. It contributes for providing financing to promising project owners, creating markets for the selling of local products and contributing to the establishment of various exhibitions. The project also removes the obstacles that face merchants in transactions, and it also contains many spaces that the region needs them. There were attempts in previous years to establish a stock exchange project; however, many reasons led to its obstruction. All these reasons were the cause of choosing the project as a graduation project. The project site is chosen in the city of Aden, the economic capital of Yemen, on a land area of 250,000 square meters. The project site is in the middle of the city center, the airport and the city port, and this created another challenge for the project, which is the difficult climate of the region (hot and humid) and the appropriate climatic solutions were put for the facility that reduce its operational cost.

. The project can be accessed by land, by air via the helipad, and by sea via the yacht marina. The project consists of two separate blocks: The first building of 40 floors; It contains the following main functions:

At level 0, contains the entrance to the administrative tower, the entrance to businessmen, and services.

Level 1, contains a healthy and recreational gym.

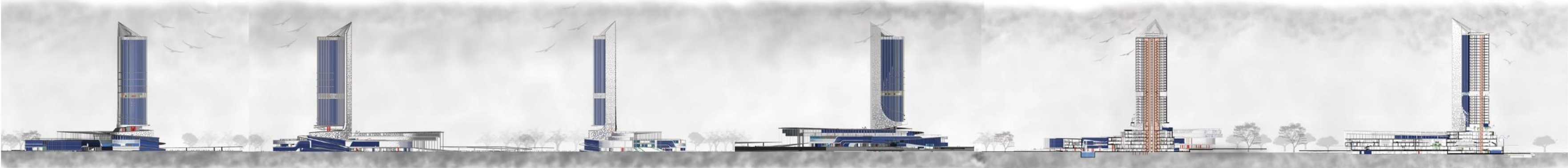
Level 2, contains the main entrances to the project, in the middle of it there is a courtyard that creates a beautiful environmental space for the employees. This level contains the main trading hall, the offices of the Brokers syndicate, the subscriptions Department, the Central Accounting Department, exhibitions,



1. Bird Eye Perspectives



2. Site Plan - Scale 1 : 3500



3. Project Sections and Elevations - Scale 1:3500



4. Project perspectives

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exhibition and demand galleries, and an auction hall with its services and management, and a Separation and conflict resolution department, economic consultancy department, multi-purpose hall whose furniture is mechanically changed within 10 minutes, and services such as restaurant, prayer hall, and clinic. Level 3, contains the second level of the multi-purpose hall, exhibitions, exhibition and demand galleries, offices of the participating banks in the stock exchange, the central bank office, the balcony of the public trading hall, the second level of the auction hall, and offices of businessmen. In addition to, the floor contains services such as restaurants, Cafe, and green areas. Level 4, contains the central administration of the stock exchange, and a radio and television news agency. Level 5, contains the second level of a radio and television news agency, the Communications Department, and the Central Information Department. The tower contains administrative offices for companies. The floors of the tower are interspersed with two floors that contain a green rest area for employees and a restaurant. The second 3-storey building, contains an institute for economic studies and research that the region needs it. Thus, the movement of students was separated from the movement of employees through the blocks.



1. Project perspective

