

Positive Points In Design Process: 1 –Surrounding Buildings’ Windows 2 - Avoiding Complex Volumes

Main Architectural Concept: The Materials are considered despite visual constraints although the surrounding buildings are often in white and cream colors in the original design. Dark cream color is used due to the linear plan of the building and the high importance of using daylight from the windows surrounding, the building has increased the use of natural light by orienting them to the south, while preventing the monotony of the building by using light colors in the main frame of the windows. The main concept of the project is based on the topographic maps, in which several cases are of high importance and are considered.

Challenges:

1- Natural slope of the ground, which is about 3 meters apart on the two sides of the ground. 2-the trees in and around the site. 3. Location of some mini-spaces on the ground floor in accordance with the instructions and accessibilities on the ground floor. 4- Use of natural energy such as sunlight.

Solutions:

Solving the site’s natural slope - To this end, the yard and porches of the upper floors will be ideally placed, with the idea of building a central courtyard and using the south light to the central part. By adjusting the slope of the building to the natural slope of the ground, we provide better access to centers that require indirect access.

Existing Trees - Given the large number of trees on the project site, as well as the value of some of them and the preservation of some trees, by moving the valuable trees to the northern margin of the site around the project it allows for the better maintenance of them, we have provided the shade for further protection in the overall size of the building with the retracts that have been made.

Mini-Spaces - As mentioned, we avoid modifying the natural slope of the building by excavation operations because they are very costly, so instead a large number of treatment and maintenance spaces on the ground floor are connected separately. By limiting the height of the building and preventing it from rising above the adjacent buildings, we have reduced the running costs of the project.

Natural Energy - By using solar panels on the roof that are usable in floor structure, it reduces the energy consumption of the building as well as other electrical tools do not need any fossil fuels. It works to make the building more sustainable, but with the use of rainwater collectors and its flow to the toilets, we will make the most of the rain.

The main concept of the structure: The structure of the building is formed on the basis of reduced construction costs. According to the architecture idea we have avoided the much volume of excavation operations as much as possible. In the structural section two items were examined 1-For Columns and foundations, reinforced concrete was used due to transfer loads but to prevent intrinsic heat buildup of the concrete as well as greenhouse gases in this structure beams with roofs are made of steel The wood has been used to stabilize the roof and aperture to prevent inertia applied during the earthquake as well as the wind and to distribute dead and live loads better on the roof from details such as what we saw on the waffle roof.