

THE PURPOSE OF THE TRACE PROJECT is to highlight the visibility of the cultural and historical heritage of Süleymaniye neighborhood , which has been declared a UNESCO historical heritage, through architectural structures and spaces. These spaces and intangible values are provided by placing them on a green spine in the existing space, creating green textures where the urban heat island effect is reduced, ecological services are activated and biodiversity is increased. It is aimed to experience the space through the historical traces present in the space.

Country /City ..... TURKEY/ISTANBUL

University / School ..... Istanbul Technical University

Academic year ..... 2022-2023 FALL SEMESTER

Title of the project ..... URBAN JUNGLE-TRACE

Authors ..... ZİŞAN BAŞAK EKİCİ

## TECHNICAL DOSSIER

### Title of the project

TRACE

### Authors

ZİŞAN BAŞAK EKİCİ

### Title of the course

Landscape Design IV, URBAN JUNGLE

### Academic year

2022-2023 Fall Semester

### Teaching Staff

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### Department / Section / Program of belonging

LANDSCAPE ARCHITECTURE

### University / School

ISTANBUL TECHNICAL UNIVERSITY



### Written statement, short description of the project in English, no more than 250 words

The cultural and historical heritage of Süleymaniye Neighborhood is to highlight through the architectural structures and spaces that have lost their visibility. These spaces and intangible values are provided by creating green textures where the urban heat island effect is reduced, ecological services are activated and biodiversity is increased by placing them on a green spine in the existing space. Integrity has been achieved by establishing green corridors by establishing connections between green textures.

Most of the places whose visibility is desired to be increased are trying to maintain their old functions by some associations and foundations. In addition to providing opportunities such as research and source work, it organizes programs and seminars that provide the opportunity to receive training from different disciplines. A route has been created and places where similar activities can be carried out in areas open to this route have been designed. Virtual publicity was supported by developing the "CHASE" mobile application in order to easily access the dates and venues of these programs. Strategies were determined to increase ecosystem services and they responded spatially. In line with the analyzes made throughout the neighborhood, different permeable floor designs and afforestation studies were carried out in the spaces. The Climate Positive target of 289 years has been reduced to 57 years.

For further information

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**12th International Biennial Landscape Barcelona**

**Barcelona November 2023**

**SCHOOL PRIZE**

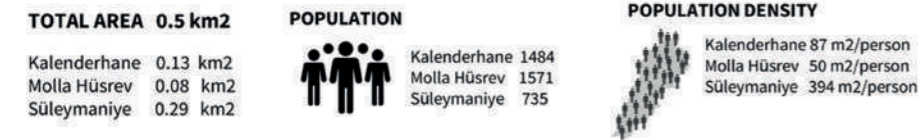
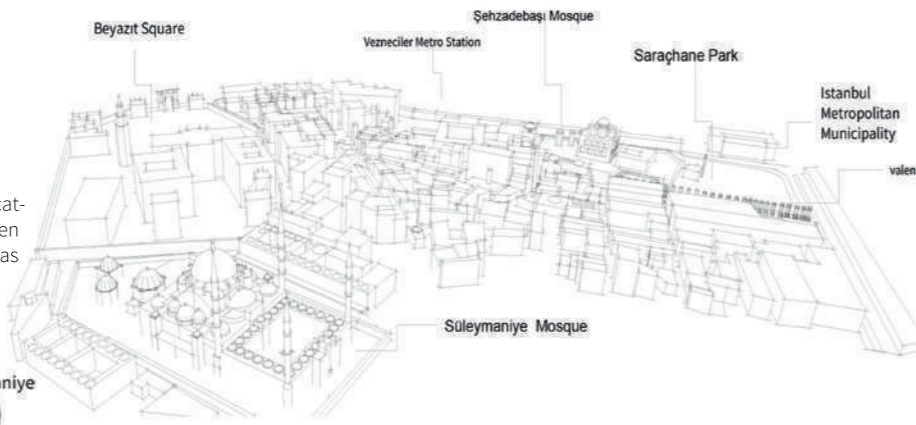
# TRACE | SÜLEYMANIYE

breath in the history of Süleymaniye

## SITE ANALYSIS

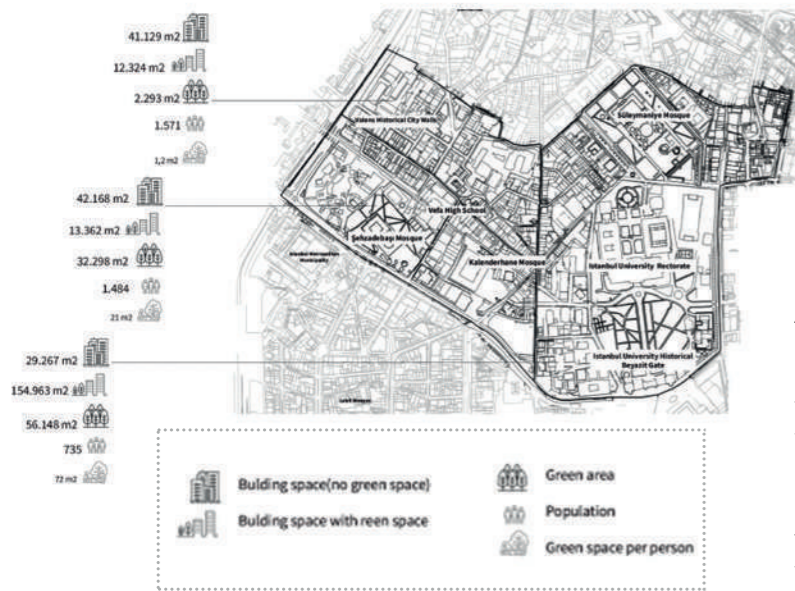
LOCATION OF PROJECT SITE  
Süleymaniye, Kalenderhane, Molla Hüseyin / ISTANBUL

Süleymaniye Mosque and its Environment Conservation Area is located on the slope of the third hill of Istanbul, Turkey, facing the Golden Horn, in the north of the Historic Peninsula. Süleymaniye district was included in the list of world cultural heritage by UNESCO in 1985.

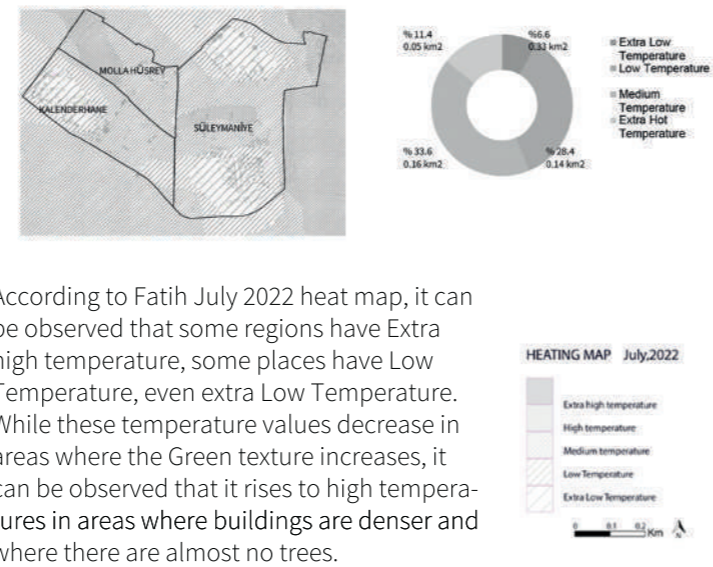


The region, which is one of the important cultural and trade centers of Fatih, is an important cultural and tourism venue with its many historical artifacts. And it acts as a transit point for the surrounding neighborhoods. Süleymaniye Mosque is frequented by many visitors, and since various faculties of Istanbul University are located here, it is a region where both cultural and education and trade are intense.

## Relationship Between Population and Green Space

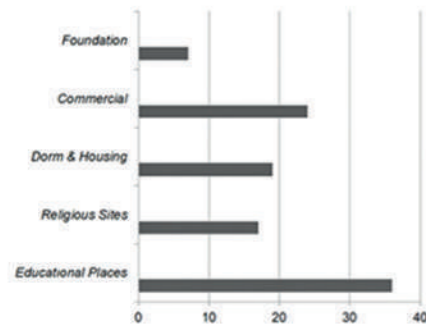


## Green space-Structural Environment Relationship



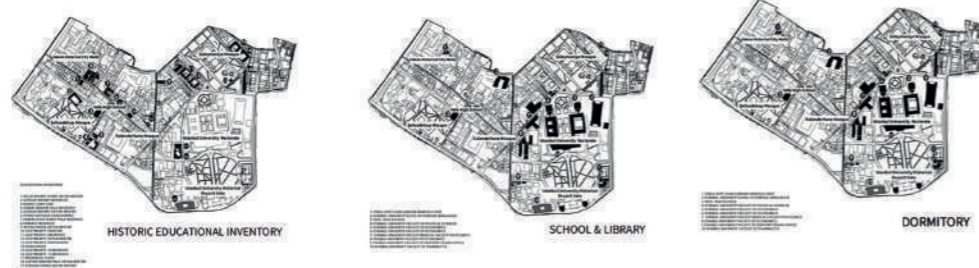
According to Fatih July 2022 heat map, it can be observed that some regions have Extra high temperature, some places have Low Temperature, even extra Low Temperature. While these temperature values decrease in areas where the Green texture increases, it can be observed that it rises to high temperatures in areas where buildings are denser and where there are almost no trees.

## BUILDING USAGE ANALYSIS

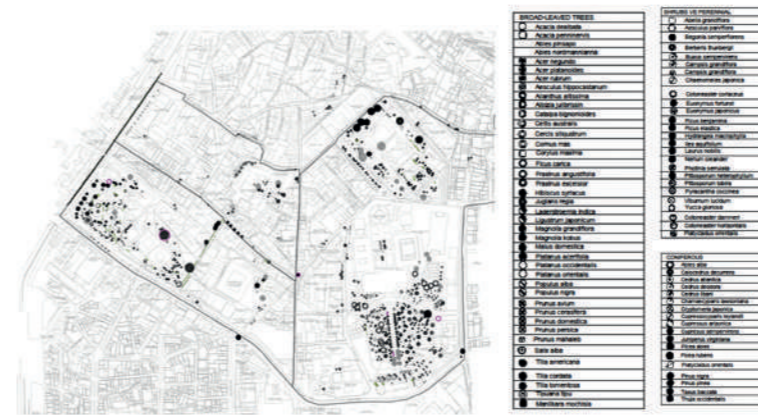


## DENSITY OF EDUCATIONAL PLACES

Structures in the region are categorized according to their functions, the density of educational units is determined. Cultural historical inventories are examined, it has been determined that there are many 'Sıbyan Mektebi' and education units in the region.



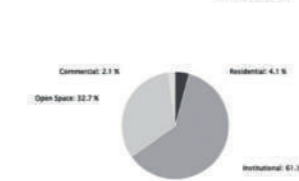
## Green Space Analysis



## Wind Resistance of Existing Trees

Tree Name	Wind Resistance	Notes
...	...	...

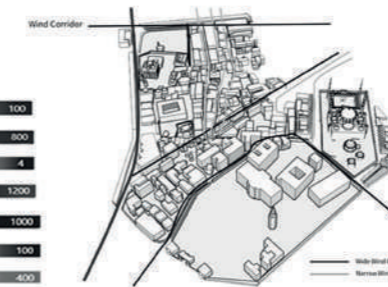
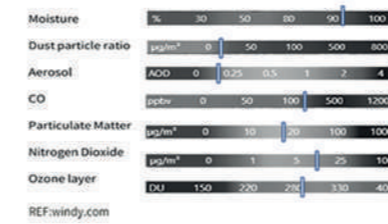
## Percent Tree Canopy Cover by Land Use Süleymaniye



## TREES CARBON EMISSION RATE



## Air Quality



## Streets with materials



## No Plant Streets

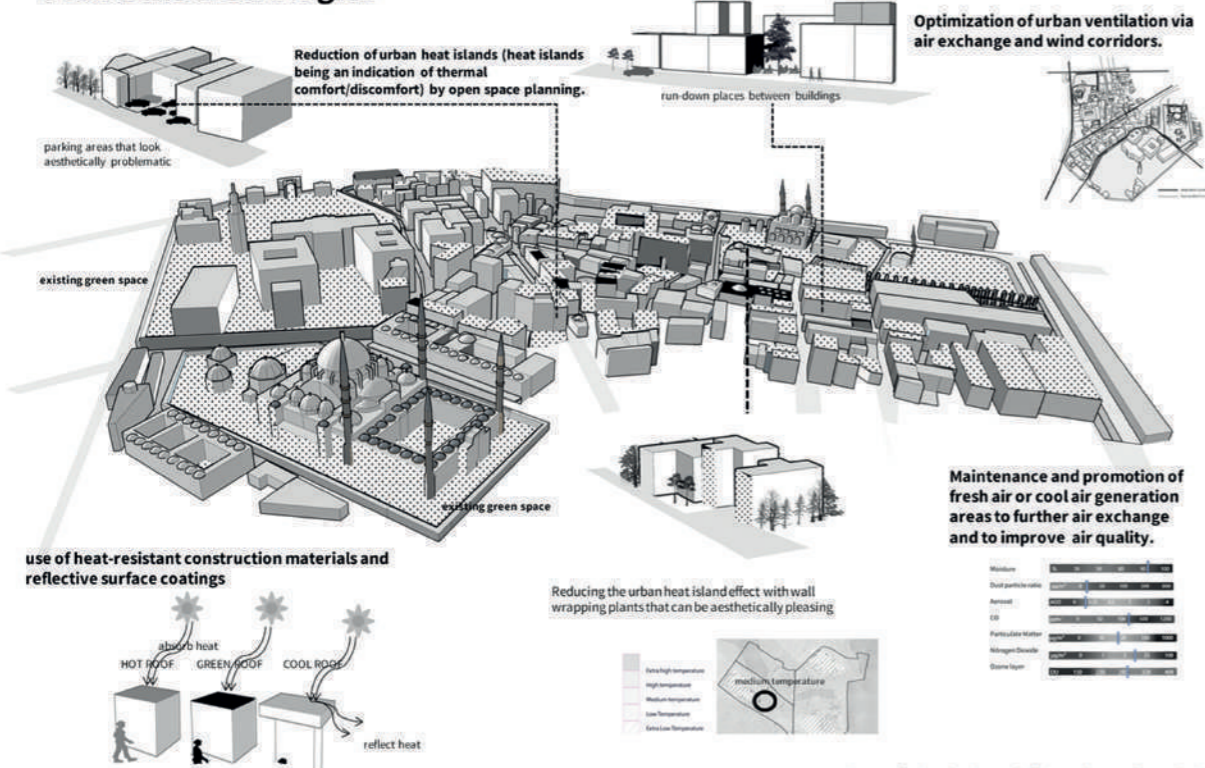


Extra high temperature Places  
This area is located at the southwest end of the Istanbul University Botanical Garden.

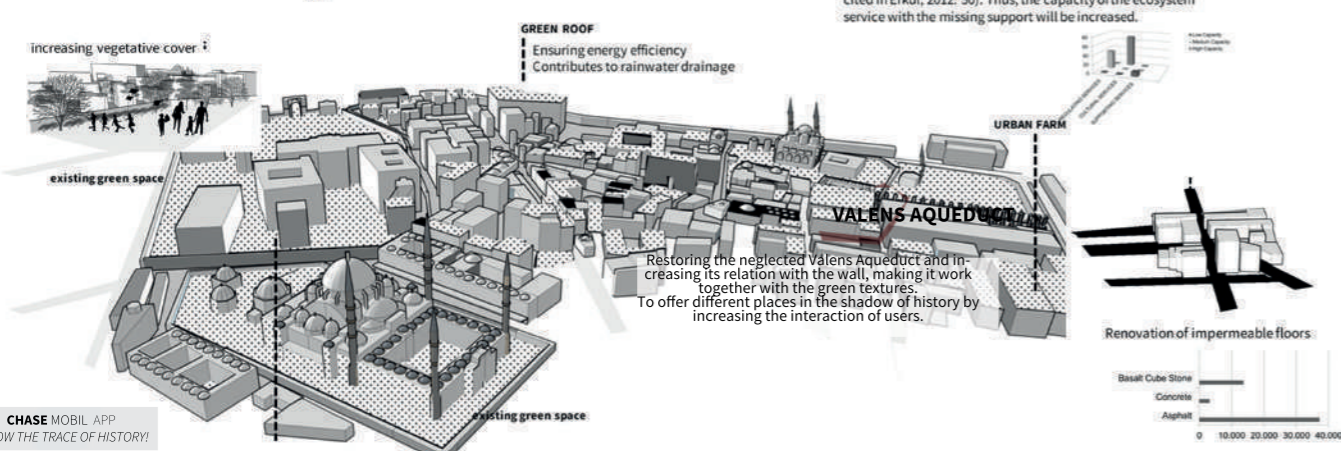


The extra hot areas are examined, it is observed that there are impermeable surfaces and little or no vegetation. Irregular car parks occupy most of the pedestrian roads.

## Problems & Strategies



## Problems & Strategies



CHASE MOBIL APP  
FOLLOW THE TRACE OF HISTORY!



Thanks to this mobile application, it is aimed highlight the lost structures and values to be actively by users. Information about the history of the venues can be accessed via Mobile App by scanning the QR Code. Users have the chance to participate in these events, as well as create their own suitable in designated courtyards and green content.

- Disaster Awareness Training
- Open air cinema
- Museum Tour
- Booksellers Festival
- Antique Market
- Archery Festival
- Wrestle Fest
- Halva Festival
- Reading in the Avlu

## STRATEGIES

- Turning passive green spaces into active green spaces
- Channeling rain water to green areas without passing into runoff water.
- Reduce urban heat island effects
- Afforestation of the streets, bringing the abandoned areas into green texture.
- Creating route to aware of cultural heritage
- Increasing the visibility of the historic **VALENS** aqueduct
- Opening of **Sebilhanes** and **fountains**

ECOLOGY

AREA USAGE

IGNORED VALUES

By increasing green areas, connections can be made between existing green areas and environmental sustainability and biodiversity can be increased by creating green corridors.

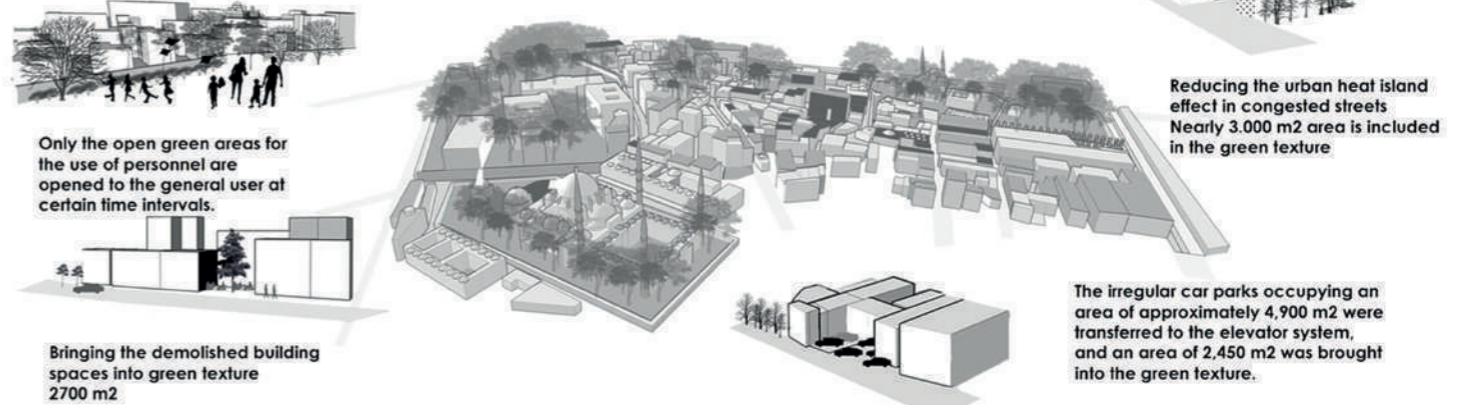
To keep the lost values and structures of the place alive by carrying out social-cultural activities with reference to their previous use in historical places, to trace the history.

## GOALS

- To ensure the continuity of green areas by creating a green backbone
- Increase permeability surfaces
- Using water for plant irrigation by storing water underground in places far from green areas.
- Car park regulation and converted green areas
- Providing places that will make the user experience the historical memory

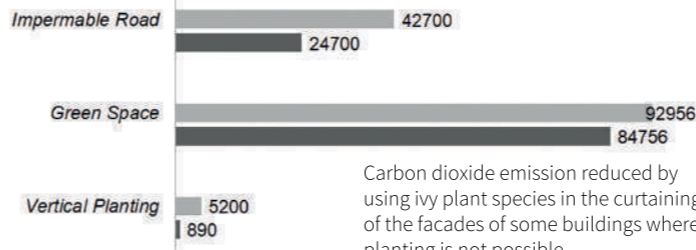
## GOALS

### The Greener Süleymaniye



## TOTAL RATES

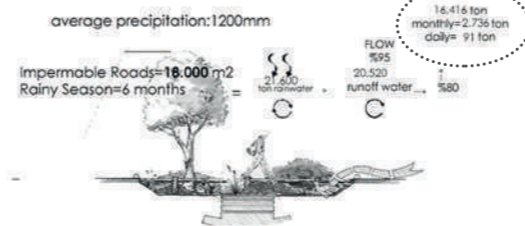
With the design of the flooring, impermeable surfaces have been replaced with permeable surfaces for a sustainable environment by mixing the rain water with the groundwater.



Carbon dioxide emission reduced by using ivy plant species in the curtaining of the facades of some buildings where planting is not possible.

## WATER MANAGEMENT

Channeling rain water to green areas without passing into runoff water.

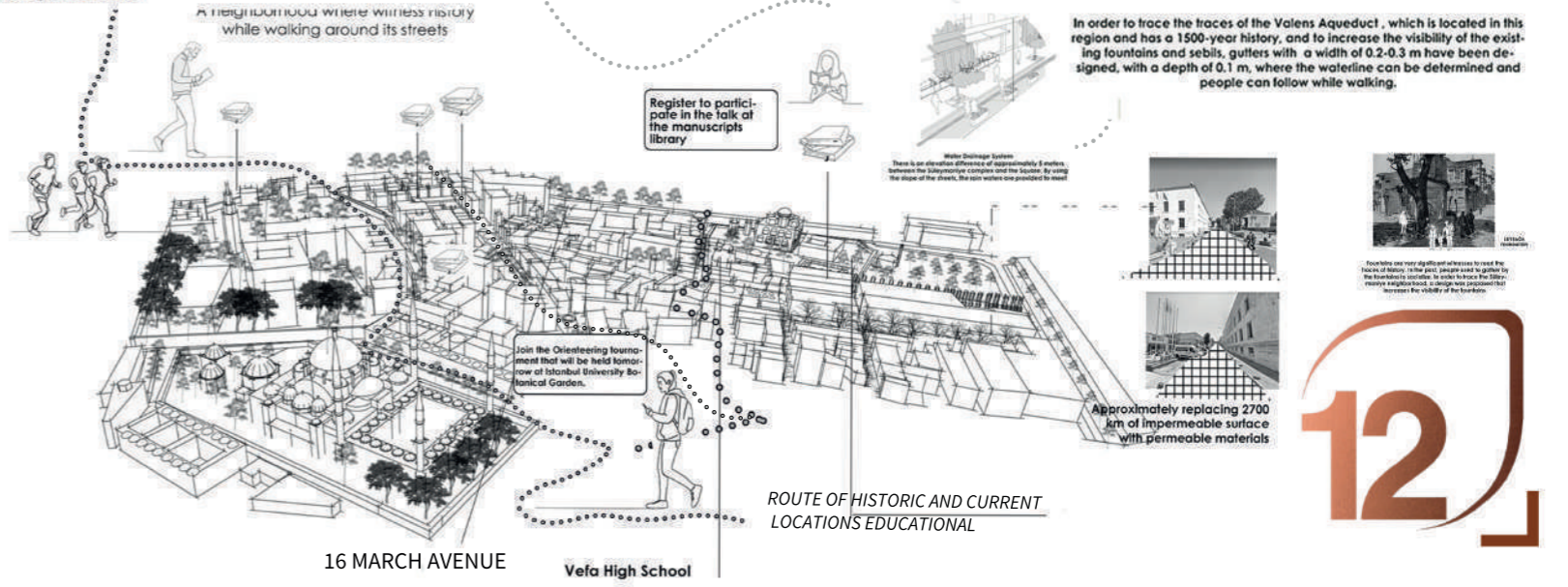


Using water for plant irrigation by storing water underground in places far from green areas.



## CONCEPT

It was the biggest social complex. The Süleymaniye Madrasa was the highest and most distinguished educational institution in Istanbul. The shops and businesses that were established while descending towards the Golden Horn continued to preserve their commercial functions today as they did at that time.



FOLLOW THE TRACK OF SULEYMANIYE EDUCATIONAL CULTURE  
FOLLOW THE TRACK OF THE WATER ROUTE

Connection of 19 Sebilhanes and fountains and creating route with water trace.

In order to trace the traces of the Valens Aqueduct, which is located in this region and has a 1500-year history, and to increase the visibility of the existing fountains and sebilhanes, gutters with a width of 0.2-0.3 m have been designed, with a depth of 0.1 m, where the waterline can be determined and people can follow while walking.

# TRACE | SÜLEYMANIYE

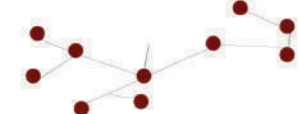
*breath in the history of Süleymaniye*

It was the biggest social complex. The Süleymaniye Madrasa was the highest and most distinguished educational institution in Istanbul. The shops and businesses that were established while descending towards the Golden Horn continued to preserve their commercial functions today as they did at that time.

## Trace of education culture

A route that traces the library and education units to the past and combines them with the green texture and offers different activity opportunities in these green textures.

Green corridors connecting education spaces



### Playground

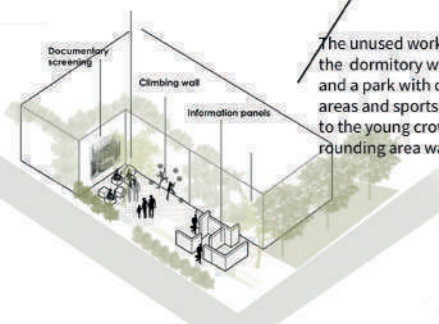
fun while learning!



### Discovery Park

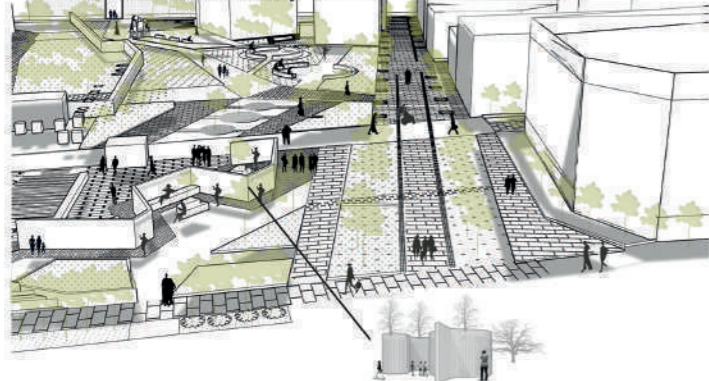
discover yourself!

*Witness the History of Süleymaniye*



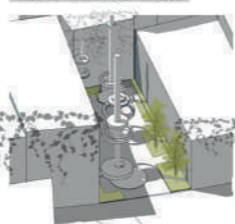
### Tracing Wall Square

Connect with history



It is aimed to continue such activities in open areas by establishing a route with the library and education units. Information panels for the documentary screening were placed in these open spaces and information is given about the history of the Süleymaniye district

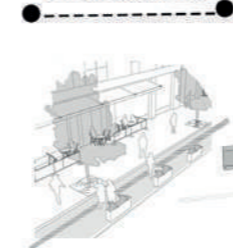
### ART Wall Park



With the demolition of the derelict area between the two residences, a green area was gained to the unplanted street. The phenomenology of the existence was integrated by establishing a light-shadow relationship with the placed structures.

## Trace of water

Fountain track

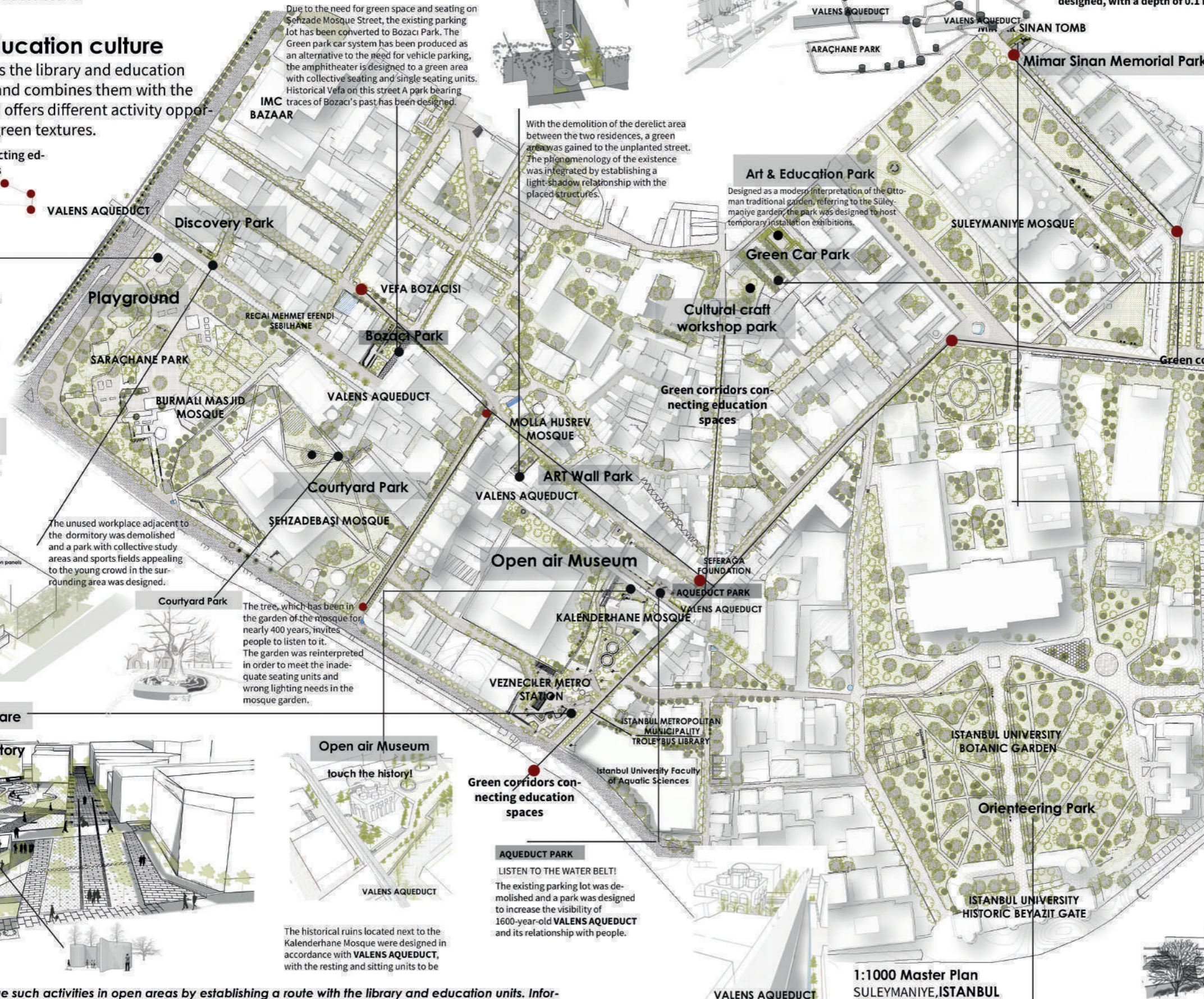


In order to trace the traces of the Valens Aqueduct, which is located in this region and has a 1500-year history, and to increase the visibility of the existing fountains and sebils, gutters with a width of 0.2-0.3 m have been designed, with a depth of 0.1 m,

### Green Car Park



A dense parking area has been transformed into a green car park with a multi-storey car park system. The car garden, which occupies 600 m2, is limited to 370 m2.



### Open air Museum

touch the history!

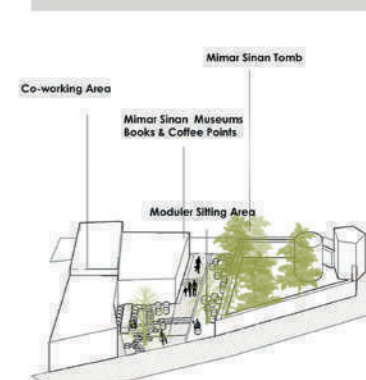


The historical ruins located next to the Kalenderhane Mosque were designed in accordance with VALENS AQUEDUCT, with the resting and sitting units to be

### AQUEDUCT PARK

**LISTEN TO THE WATER BELT!**  
The existing parking lot was demolished and a park was designed to increase the visibility of 1600-year-old VALENS AQUEDUCT and its relationship with people.

### Mimar Sinan Memorial Park



Sinan the Architect designed his own tomb in a very simple way due to his modesty. By removing the dysfunctional shops next to the tomb, a book coffee cafe in harmony with the plain language of the tomb, away from the ostentatious, and a park that keeps the works of Mimar Sinan alive were designed.

### Orienteering Park

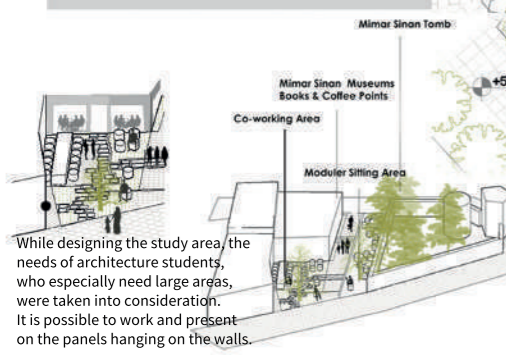
Istanbul University Botanical Garden has been reinterpreted for events to be held at certain times in order to use the existing green space by wider masses.

1:1000 Master Plan  
SÜLEYMANIYE, ISTANBUL

# TRACE SÜLEYMANIYE

breath in the history of Süleymaniye

## Mimar Sinan Memorial Park



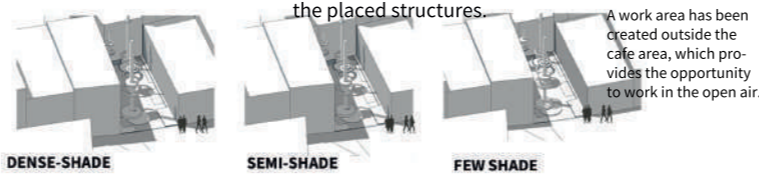
While designing the study area, the needs of architecture students, who especially need large areas, were taken into consideration. It is possible to work and present on the panels hanging on the walls.

Carbon dioxide emission has been reduced by using ivy plant species in the curtaining of the facades of some buildings where planting is not possible.

Sinan the Architect designed his own tomb in a very simple way due to his modesty. By removing the dysfunctional shops next to the tomb, a book coffee cafe in harmony with the plain language of the tomb, away from the ostentatious, and a park that keeps the works of Mimar Sinan alive were designed.

## ART Wall Park

dance of shadows



Ecological solutions for curtaining ugly building facades with plant walls

The side façades were left blank, allowing for time-integration work.

The no plant street was afforested and the green band was continued in this park.

With the demolition of the derelict area between the two residences, a green area was gained to the unplanted street. The phenomenology of the existence was integrated by establishing a light-shadow relationship with the placed structures.

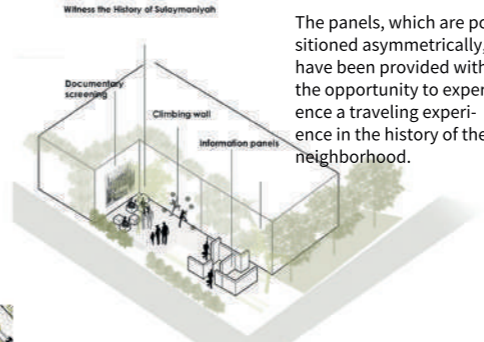
A work area has been created outside the cafe area, which provides the opportunity to work in the open air.

It is a design that expresses the neighborhood that lives in the shadow of the three great mosques representing the Süleymaniye minarets. The metal design draws attention to the importance of trees in our lives by creating artificial shadows integrated with the trees.

## Discovery Park

discover yourself!

The unused workplace adjacent to the dormitory was demolished and a park with collective study areas and sports fields appealing to the young crowd in the surrounding area was designed.

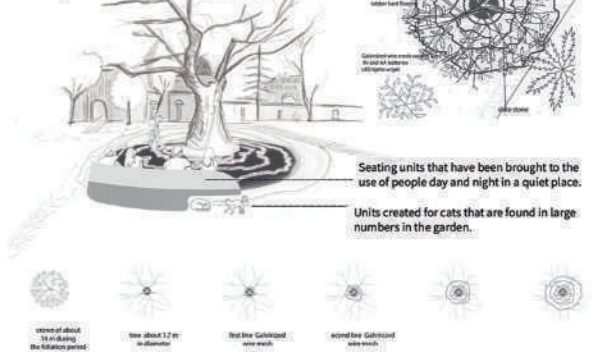


The panels, which are positioned asymmetrically, have been provided with the opportunity to experience a traveling experience in the history of the neighborhood.

## Courtyard Park

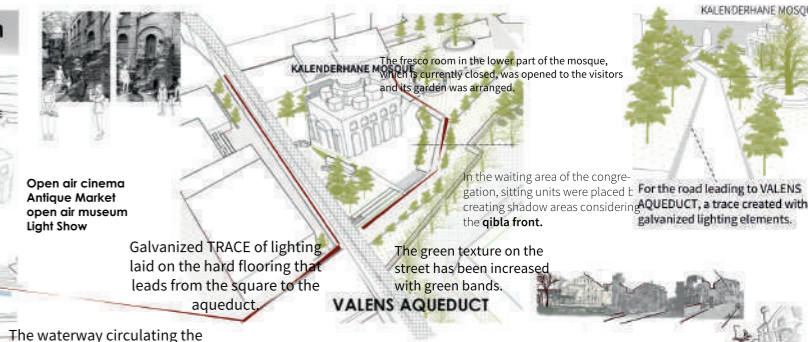
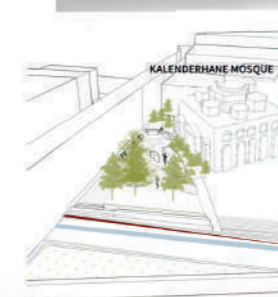
REFLECTION

The tree, which has been in the garden of the mosque for nearly 400 years, invites people to listen to it. Due to insufficient seating units and wrong lighting in the garden of the mosque, the place cannot find the value it deserves.



This installation consists of concentric rings of sun light color neon tubes the paths of which mimic the natural variation found in the logs at their center. It is created a space for dialogue between nature and the machine by filling the gallery with artificial light that is delivered through seemingly organic forms.

## Open air Museum



The waterway circulating the entire neighborhood creates a water route for the users.

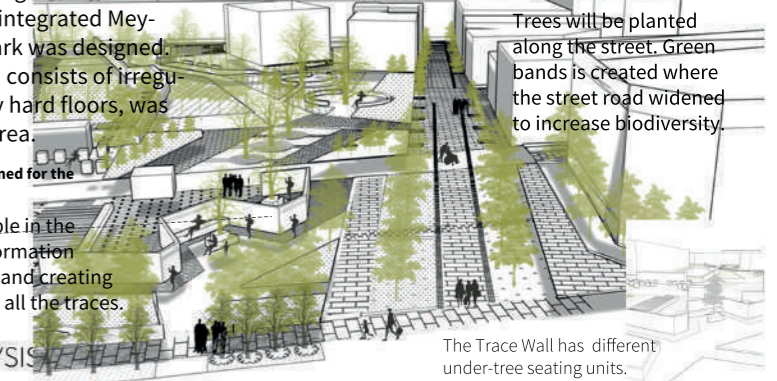
## Tracing Wall Square

Connect with history

The garden walls of the existing student dormitory were withdrawn and an integrated Meydan-Mosque Garden-Wall- Park was designed. The dormitory garden, which consists of irregular green areas dominated by hard floors, was turned into an active green area.

A larger and greener space is designed for the existing sales areas.

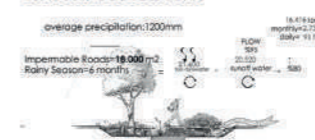
The wall that welcomes people in the square contains detailed information about the history of the area and creating a pleasant stroll by following all the traces.



The Trace Wall has different under-tree seating units.

## PERFORMANCE ANALYSIS

### WATER MANAGEMENT



### EXISTING SITE

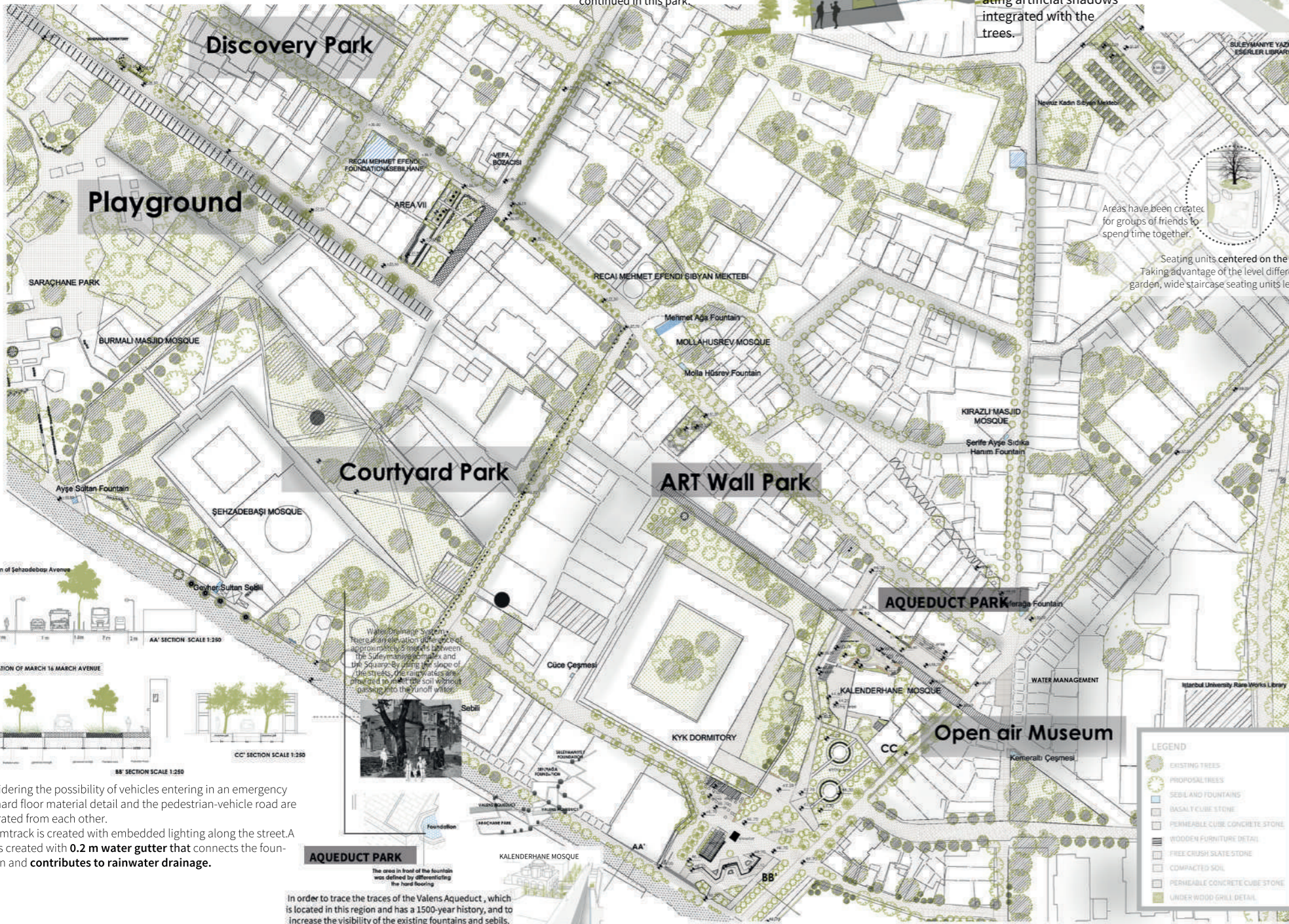
**PLANTS**  
Perennials: 206.107 kg  
Deciduous Trees: 402.506 kg  
Evergreen Trees: 53.987 kg  
**TOTAL IMPACT: 782.600 kg**

**NET IMPACT OVER 50 YEARS: 3.187,650 KG CO2-eq**  
289 years to climate positive

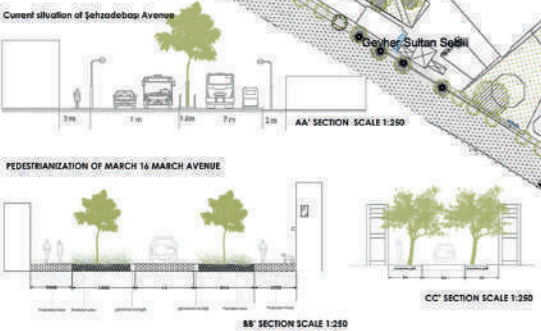
### DESIGN PROPOSAL

**PLANTS**  
Perennials: 1.157.156 kg  
Deciduous Trees: 956.245 kg  
Evergreen Trees: 56.784 kg  
**TOTAL IMPACT: 2.067.96 KG**

**NET IMPACT OVER 50 YEARS: 511,100 KG CO2-eq**  
57 years to climate positive



SÜLEYMANIYE NEIGHBORHOOD SCALE: 1/500



Considering the possibility of vehicles entering in an emergency, the hard floor material detail and the pedestrian-vehicle road are separated from each other. A 0.2 m track is created with embedded lighting along the street. A trail is created with 0.2 m water gutter that connects the foundation and contributes to rainwater drainage.

**AQUEDUCT PARK**  
In order to trace the traces of the Valens Aqueduct, which is located in this region and has a 1500-year history, and to increase the visibility of the existing fountains and sebils, gutters with a width of 0.2-0.3 m have been designed, with a depth of 0.1 m, where the waterline can be determined and people can follow while walking.

