

AMERICAN UNIVERSITY OF BEIRUT

THESIS, DISSERTATION, PROJECT RELEASE FORM

Student Name: DIMACHKIEH MAZEN OUSSAMA
Last First Middle

Master's Thesis Master's Project Doctoral Dissertation

Capstone Project

I authorize the American University of Beirut to: (a) reproduce hard or electronic copies of my thesis, dissertation, or project; (b) include such copies in the archives and digital repositories of the University; and (c) make freely available such copies to third parties for research or educational purposes.

I authorize the American University of Beirut, to: (a) reproduce hard or electronic copies of it; (b) include such copies in the archives and digital repositories of the University; and (c) make freely available such copies to third parties for research or educational purposes after : **One ---- year from the date of submission of my thesis, dissertation, or project.**
Two ---- years from the date of submission of my thesis, dissertation, or project.
Three ---- years from the date of submission of my thesis, dissertation, or project.

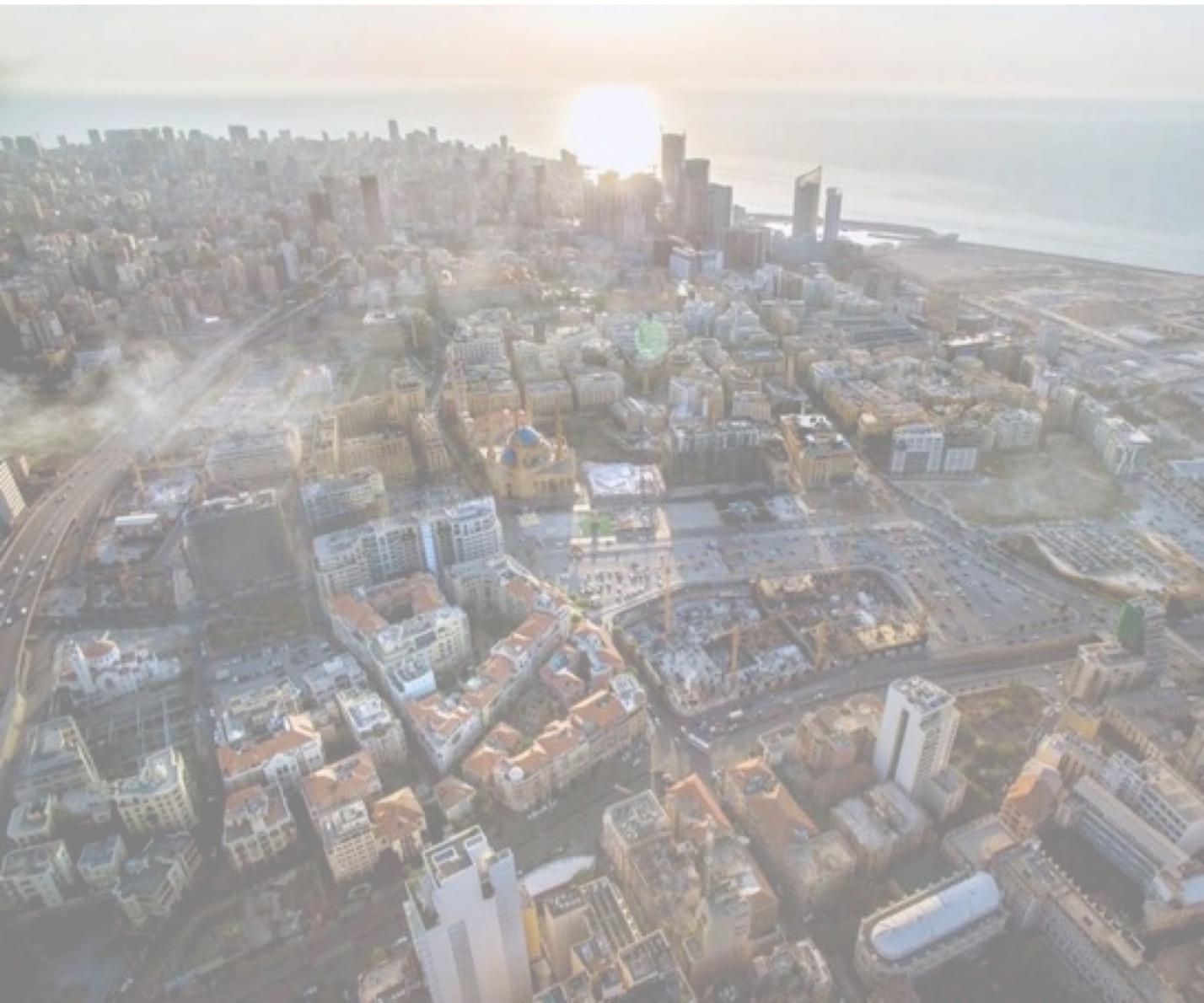

Signature

18/05/17
Date

This form is signed when submitting the thesis, dissertation, or project to the University Libraries

ALL ROADS LEAD TO MARTYR'S SQUARE

FINAL YEAR PROJECT 2017
NAYLA AL-AKL, SANDRA FREM, BEATA DREKSLER
BY: MAZEN DIMACHKIEH



ALL ROADS LEAD TO MARTYR'S SQUARE

TABLE OF CONTENT

INTRODUCTION	9
BACKGROUND AND HISTORY	11
ANALYSIS	17
CURRENT PROPOSALS	23
NEW APPROACH	27
PROJECT STATEMENT	31
CASE STUDY: MICHEL DESVIGNE	33
DESIGN	35
MATRIX AND CONCEPT	
DESIGN TODAY	
DESIGN IN 25 YEARS	
DESIGN IN 50 YEARS	
ZOOM IN	
MASTER PLAN & SECTION	
PERSPECTIVES	
WHAT'S NEXT?	57
ANNEX OF SKETCHES	59

INTRODUCTION

All Roads Lead to Martyr's Square is a project that tackles Beirut's most famous landmark: Martyr's Square. An area deeply embedded in Lebanon's history, dating back thousands of years, the space today has lost its identity, as well as its socio-economic importance that it once had. The aim of the project is to revitalize the area by disintegrating the traditional plaza and transforming it into an urban forest that will adapt and evolve over time.



BACKGROUND AND HISTORY

Beirut is one of the oldest cities in the world, inhabited more than 5000 years ago. It is important to state this because Beirut as we know it today actually started in the area in and around present day Martyr's Square. It's proximity to the shore made it an important economic hub for trading during the Phoenician era, and it developed as time went by to host many civilizations such as the Greeks, Romans, Byzantines, Ottomans and Arabs. Each civilization left a different urban footprint, which is a testament to the changing nature of landscape. Landscape is never static, it is never finished, always evolving and adapting to society's different needs. This temporal aspect is crucial to understand, because it is instrumental in the design process of the project *All Roads Lead To Martyr's Square*.



Roman (64BC-560AD)



Medieval (1300-1500)



Ottoman Rule (1516-1920)

French Mandate (1920-1942)



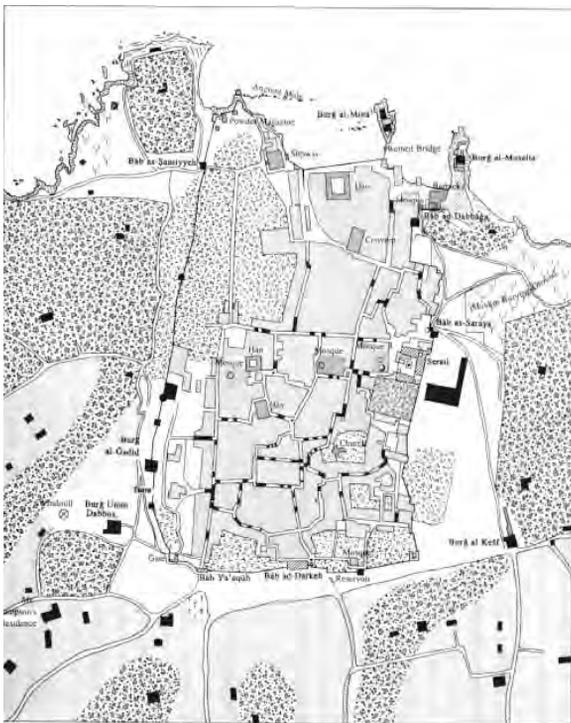
Civil War (1975-1990)



Historical Overlay



It is known today that Beirut is a concrete jungle. Concrete and asphalt are the dominant elements in Beirut today, and they stretch as far as the eye can see. But it wasn't always like this: During the end of the 19th century, Beirut was just a small cluster of buildings, and the rest was natural landscape. Sand dunes to the West, pine forests to the South and marchlands to the East surrounded old Beirut. As time went on, the city grew and devoured the natural terrain.



Late 1800s

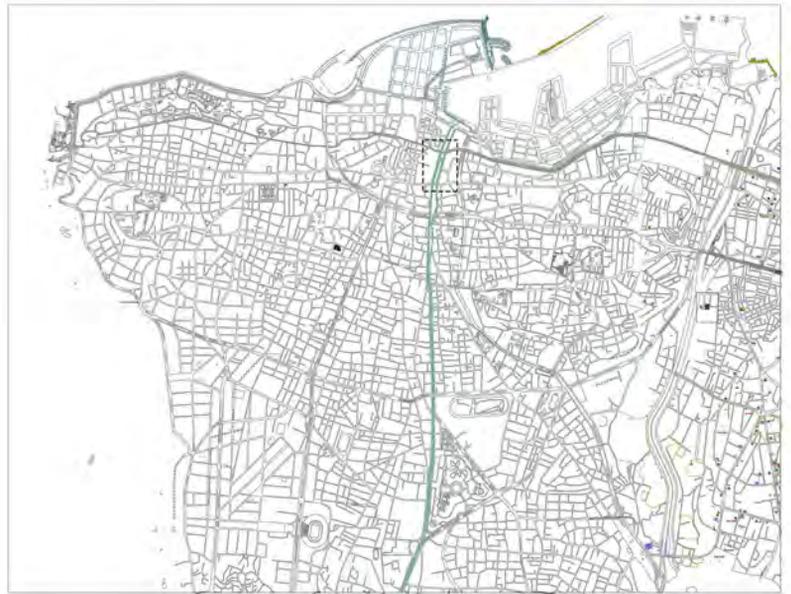


1900

Between the 1920s and 1960s, Beirut was developing, and Martyr's Square was booming. Reaching a peak in the 1960s, it was the go-to destination for all citizens as the first and most important public space in Lebanon, filled with shops and leisure venues such as cinemas. All that came to an abrupt end with the start of the Civil War in 1975 that lasted for 15 years, completely eradicating the site and transforming it into a demarcation line between East and West Beirut. After the end of the war in 1990, Martyr's Square was wiped out, and looking to adopt a new identity to serve once again the people of Beirut as a public space.

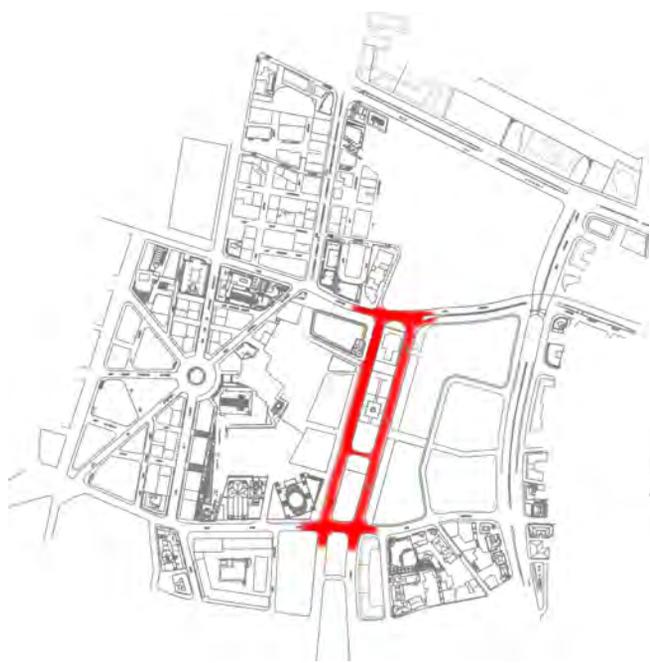


The site today



ANALYSIS

Unfortunately, the site today is nothing more than a roundabout for daily vehicular transit, and on rare occasions as an area for protests. The main reason being it's location, bounded by roads on each side, thus transforming the square into an out-of-context island.



Roads



Vehicular Traffic



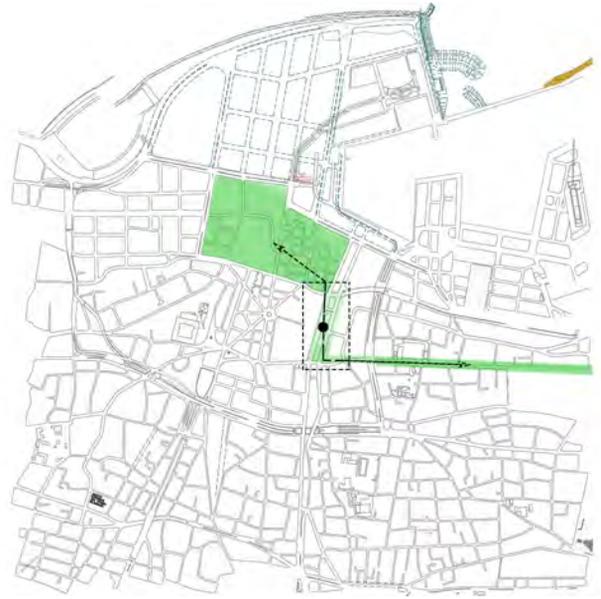
Disconnected



Pedestrian Use



Proximity to Pedestrian Nods



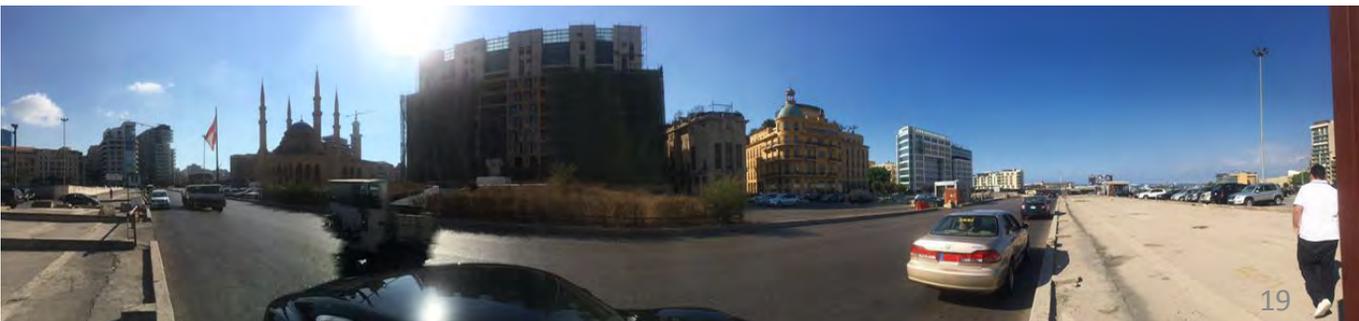
Opportunity of Pedestrian Connection



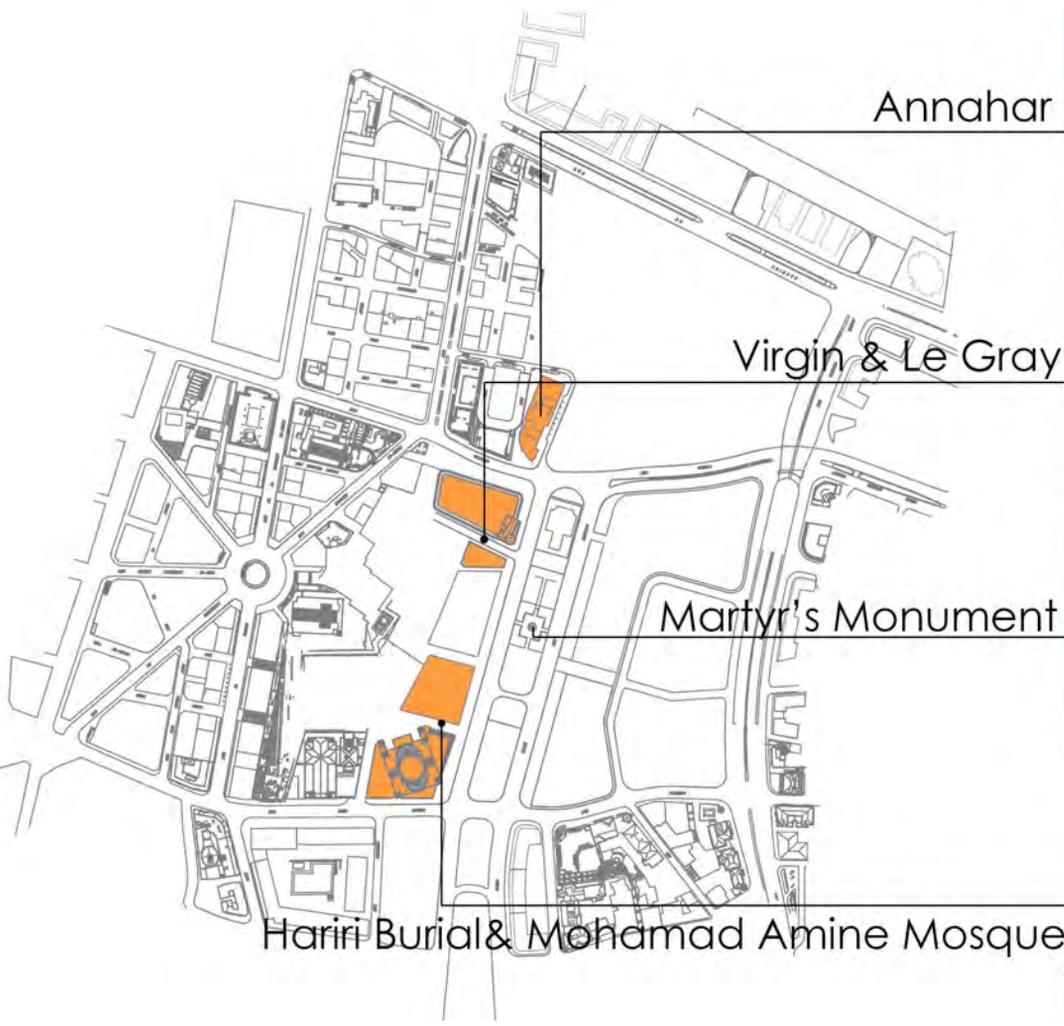
No views



You Stink Protest 2015, shows the capacity of pedestrian congregation



Even though the infrastructure of the site is underdeveloped, Martyr's Square is still regarded as a national landmark, containing landmarks within. These Buildings are considered landmarks because they are reference points to Martyr's Square, recognized by everyone who lives in Beirut. These include Martyr's Monument, the Hariri Burial, Mohammad Amine Mosque, Virgin Megastores, Le gray Hotel as well as AnNahar building. These buildings are points of attraction, and thus a destination point for the people.



Martyr's Square also contains a lot of archeology. Behind the Mohammad al Amine Mosque lies the garden of forgiveness, containing roman ruins of an ancient Beirutis.

Up North lies the remains of the Petit Serail, built in 1881.

Further up North, lies the ancient tell of Beirut: a tell containing remains of many ancient civilizations such as Canaanites, Phoenicians, Romans, Byzantines as well as Ottoman.

Unfortunately, these archeological sites are often overlooked and underappreciated, so bringing them back into the national spotlight is a crucial step in re-designing Martyr's Square.

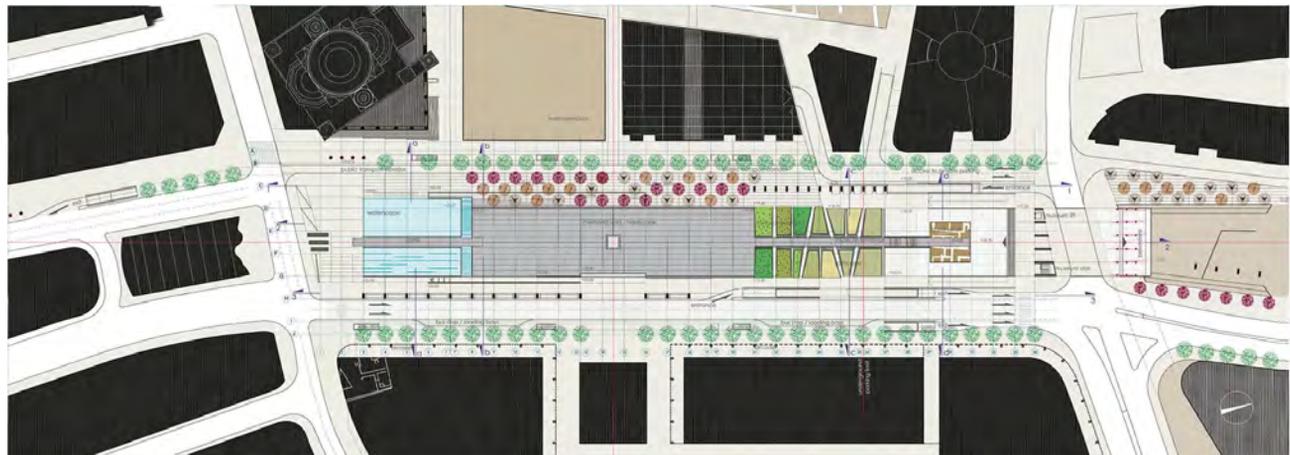


CURRENT PROPOSALS

In June of 2004, SOLIDERE launched an international competition to design Martyr's Square axis. Many proposals have been submitted, all of whom are tailored to Solidere's need of a plaza. Here are some of the proposals, along with the winner :Antounis Noukakis & Partners.

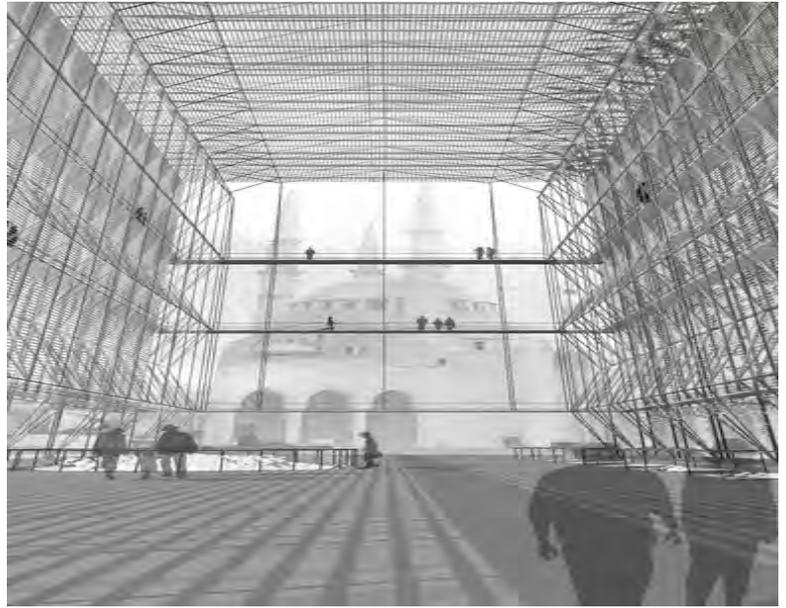


Noukakis & Partners





Gholam



Sarkis



Gholam

Khoury-Levit-Fong

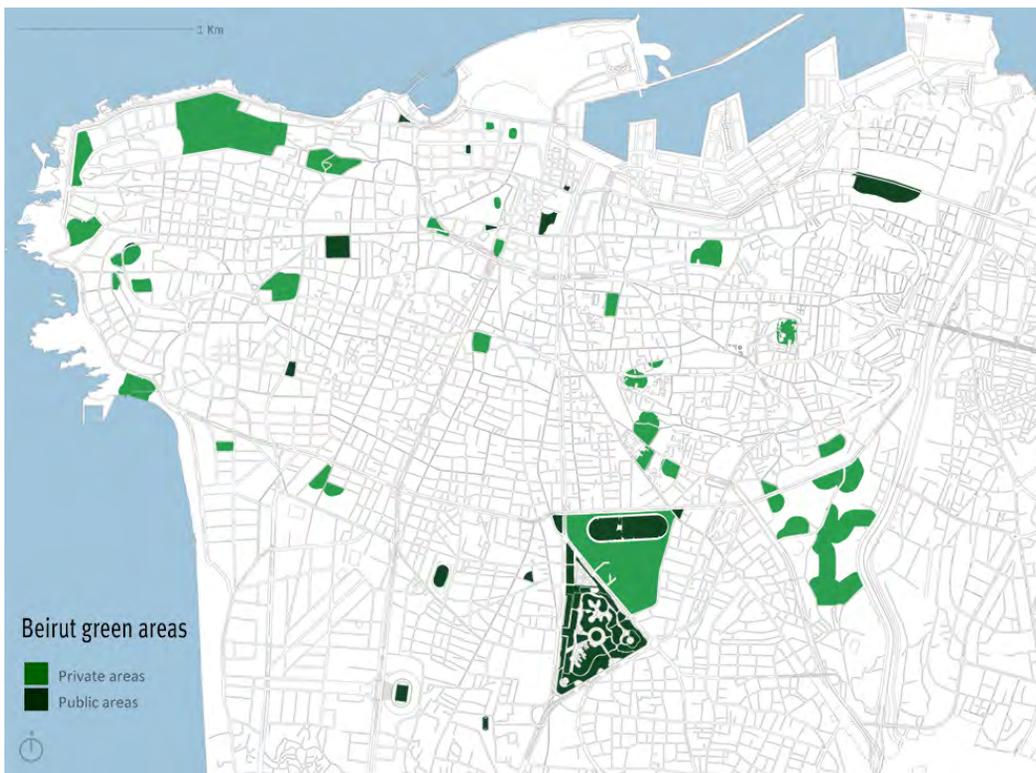


NEW APPROACH

All of the previous proposals envisioned Martyr's Square as a plaza: Mostly hardscape, with strict rows of trees and a bit out of context in the urban fabric of Beirut. Can we come up with a new, different approach? The answer is yes: Urban Forest.



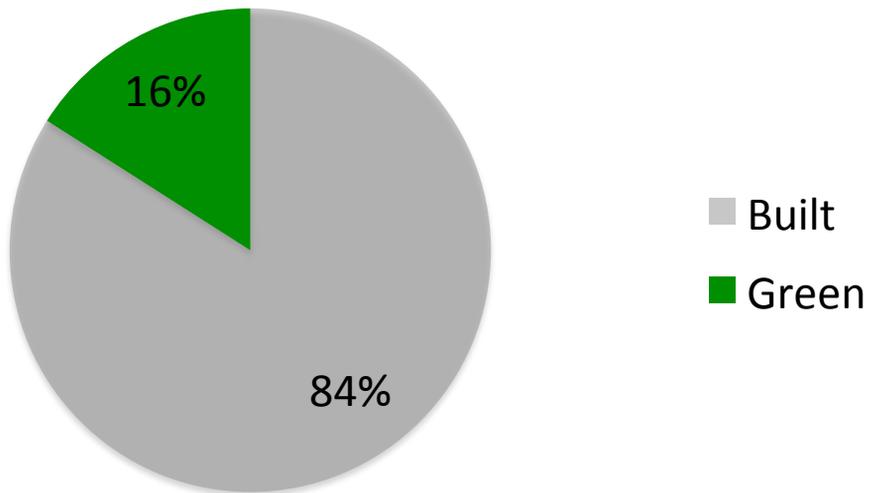
Satellite image highlighting green open spaces



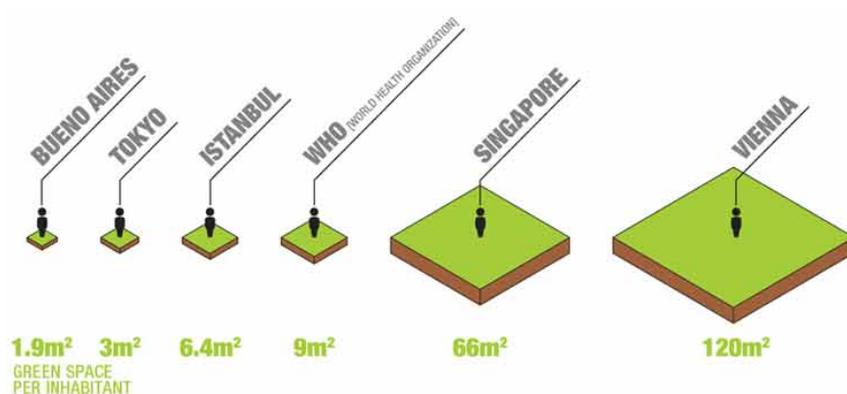
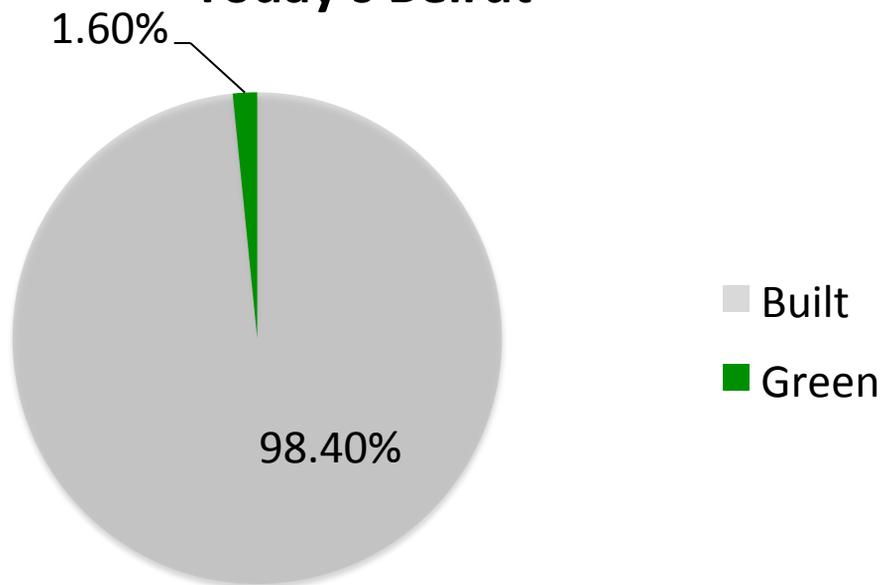
Map of green open spaces in Beirut

According to the world health organization, a healthy city should have 9sqm of green open space per person. In Beirut, however, we have 0.9sqm of green open space per person.

A healthy Beirut



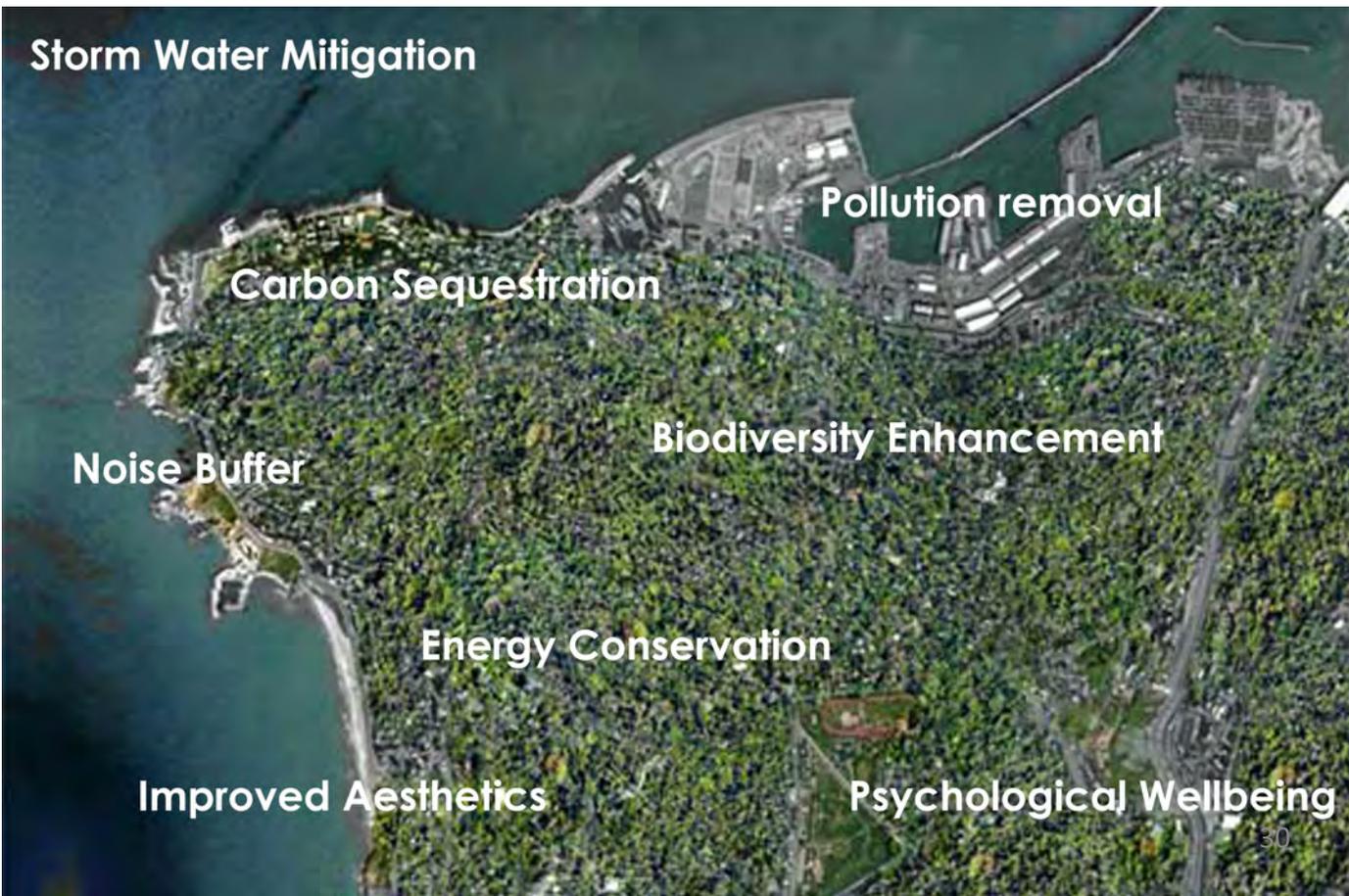
Today's Beirut



Why have this?

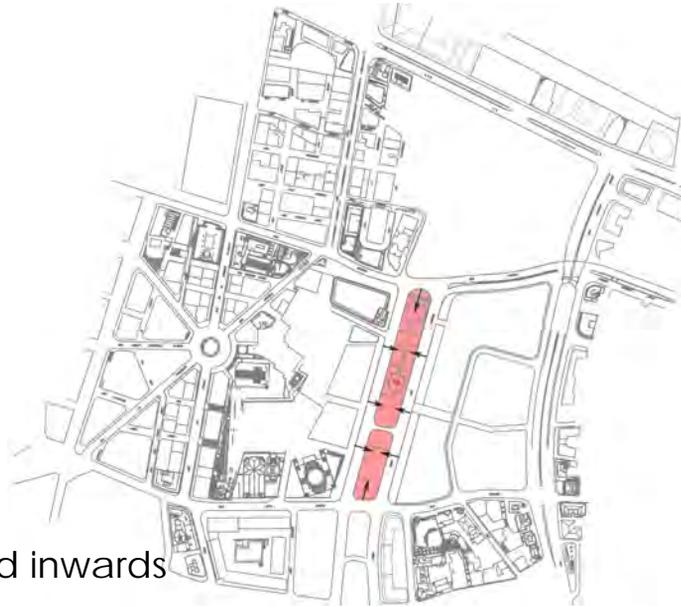


When we can have this?

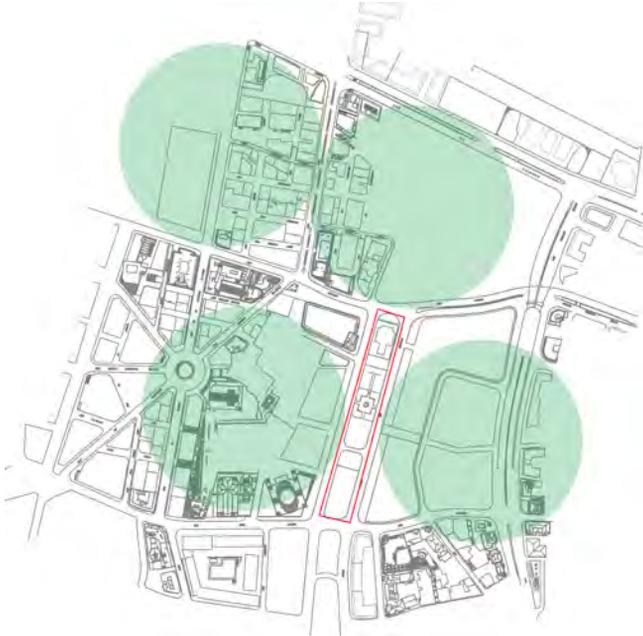


PROJECT STATEMENT

Disintegrate the traditional plaza and transform it into an urban forest that adapts to it's evolving environment through time and space.



Developed inwards



Bounded rectangle



Penetrate it's context

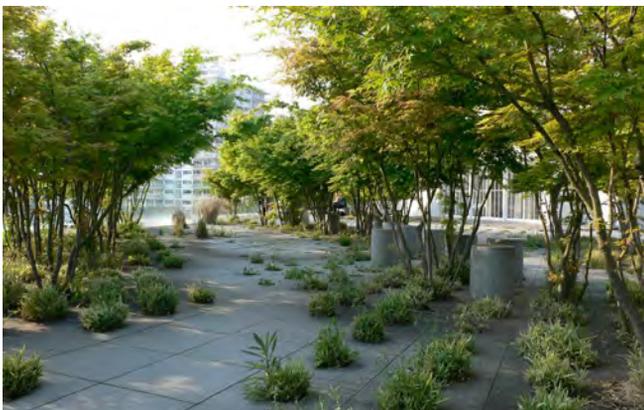
Nexus Between different areas of the city. In order to be linked, it has to disintegrate from a bounded rectangle, to become the continuum of urban space.

CASE STUDY: MICHEL DESVIGNE

An innovative Urban Forest: INTERMEDIATE LANDSCAPE

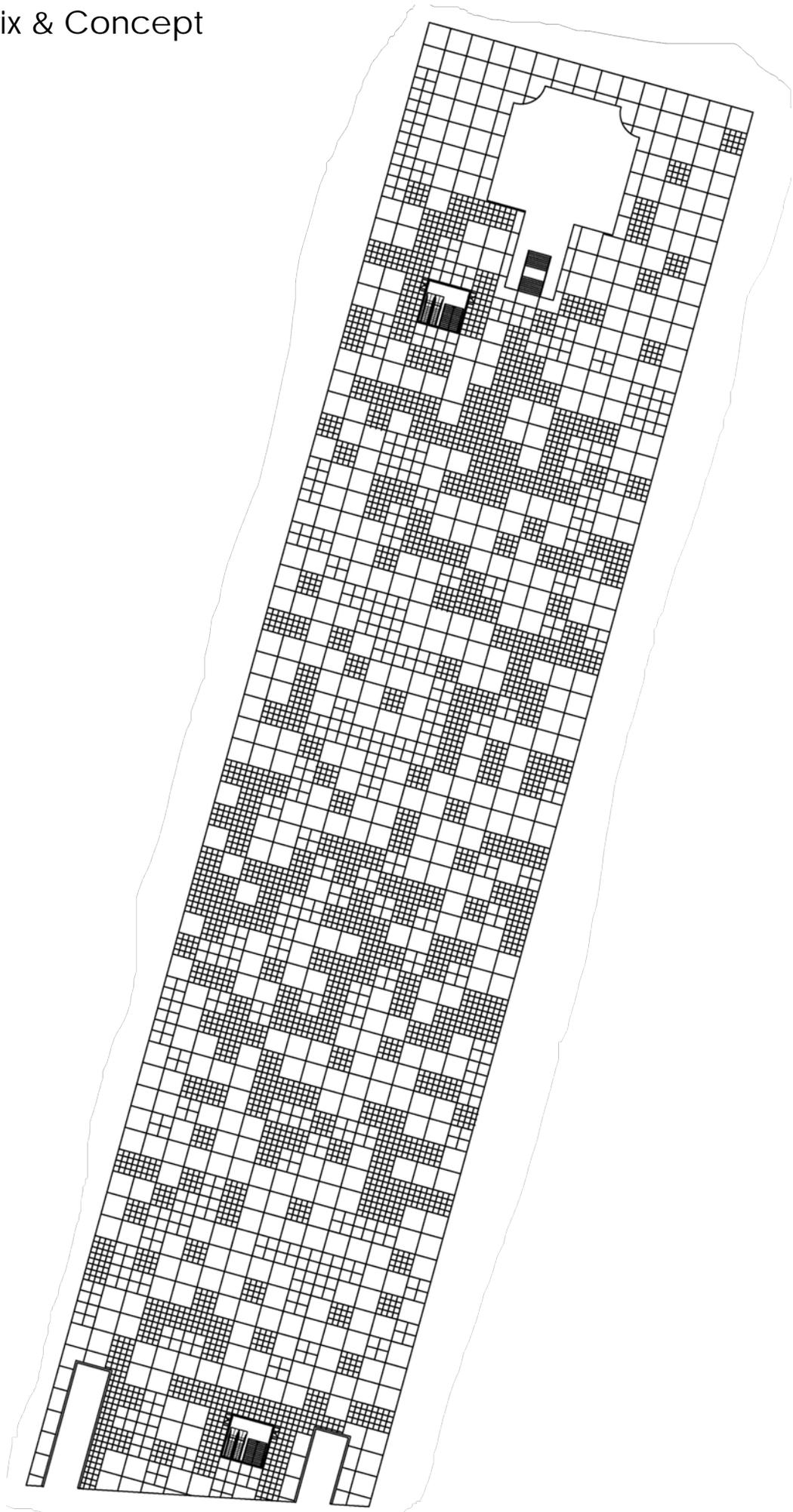


"The drawing presented here for a park in Greenwich interests me highly as a unique landscape drawing. It, in a convincing way, depicts time and evolution. The development of an urban forest is the main theme in the project. The drawing does not simply explain the development of the forest. It mainly states that there are several stages of maturity which have an individual quality in terms of design. This drawing is important as it denies the idea that a landscape project can be represented by one drawing which shows the project in an unknown year in the future, in its supposed final state. Desvigne here, combining plan and section shows different moments in time as being independent optimal design conditions. In doing so, the designer is forced to be more precise about what happens over time: how big are the trees in certain stages; which configurations might come true by thinning the trees? Apart from that, the drawing has a convincing beauty which has always been present in the French drawing tradition. Desvigne himself became known early for drawing with his work on theoretical gardens, "Les jardins elementaires". Starting from here Desvigne became one of the international stars — in itself an interesting new phenomenon in recent landscape architecture." -Noël van Doreen, Speaking about Drawing (2012)



DESIGN

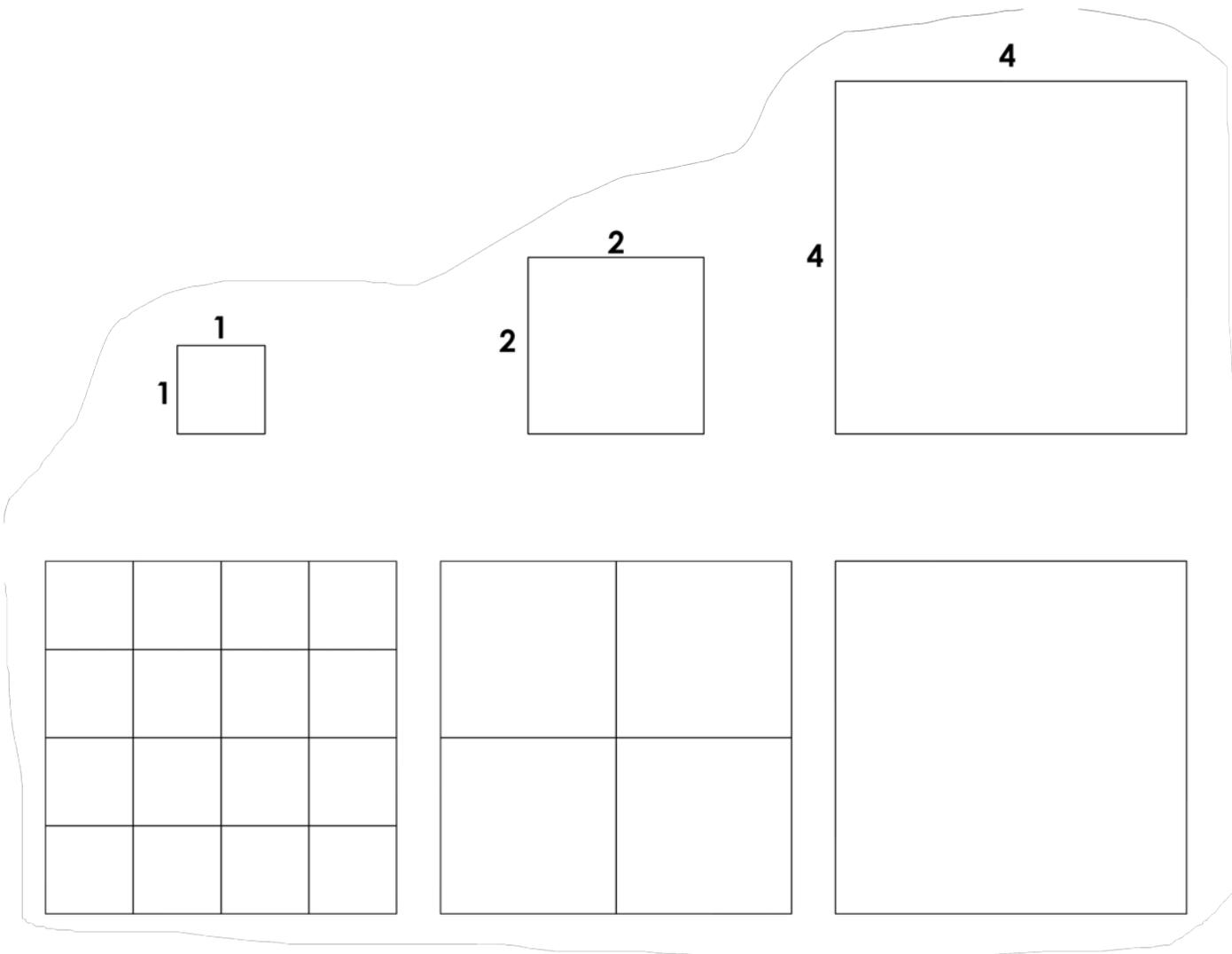
Matrix & Concept



For the main area, the rectangle is turned into a grid. The "pixels" are of varying sizes, all intimate to the human scale. 1x1, 2x2, and 4x4 meters. The pixels will allow many functions such as pathways, bench base, planters, as well as a guide to other elements such as kiosks and glass parking entrances

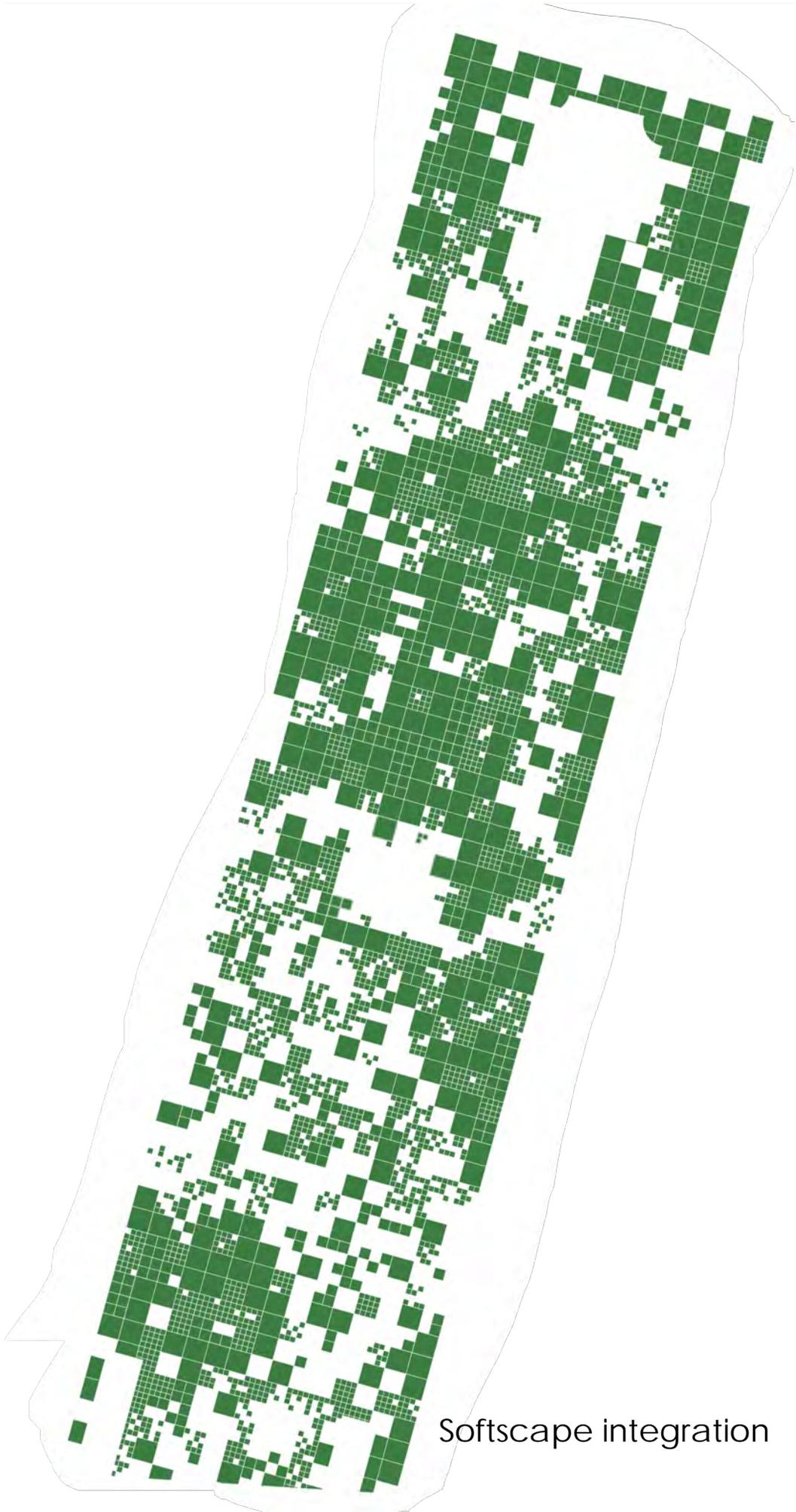
The first step is to consider the rectangle as a collection of grey pixels (grey because of the amount of concrete and asphalt).

The next step would be to start the disintegration process, followed by an integration of vegetation in the leftover spaces, creating a feeling of ecological colonization.

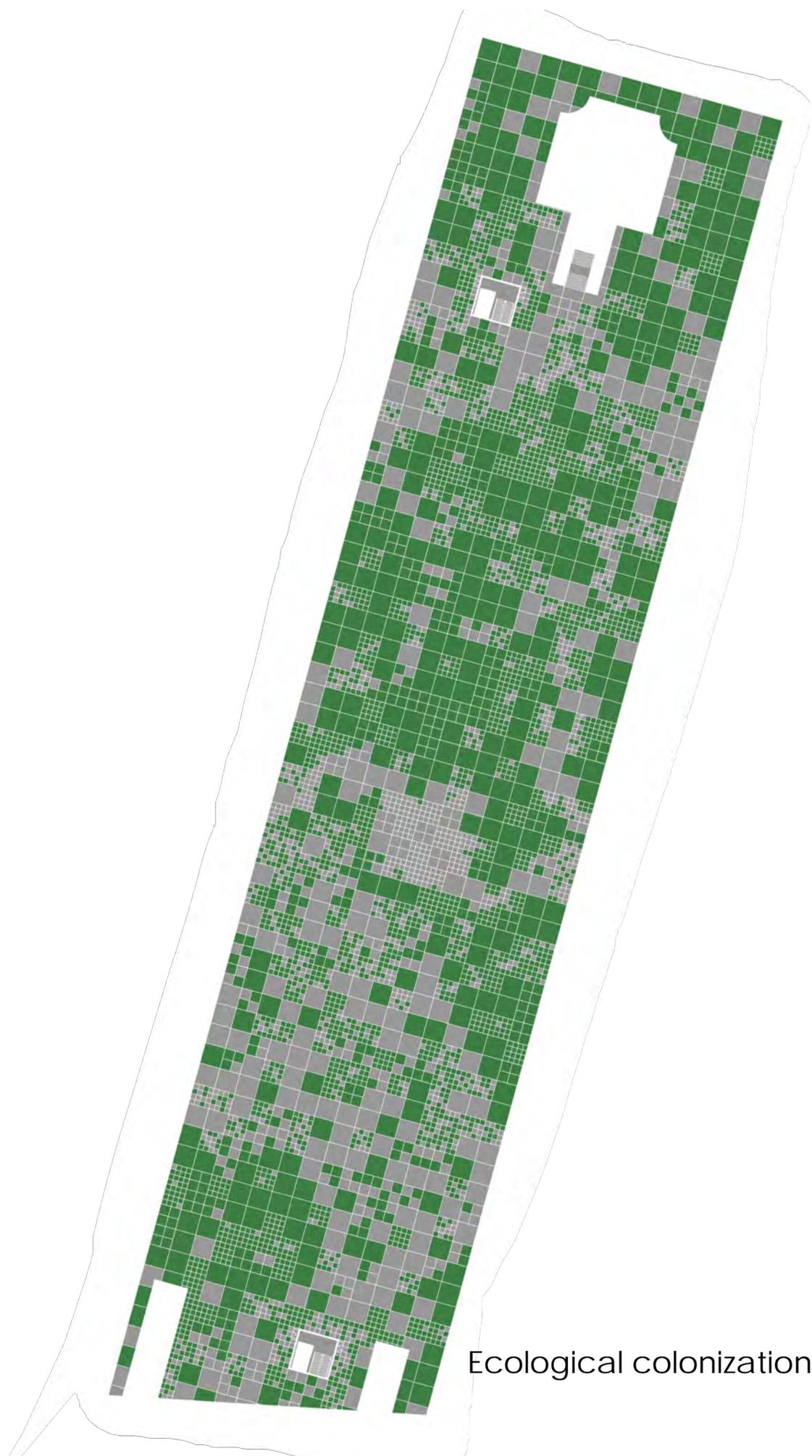




Hardscape disintegration



Softscape integration



Ecological colonization

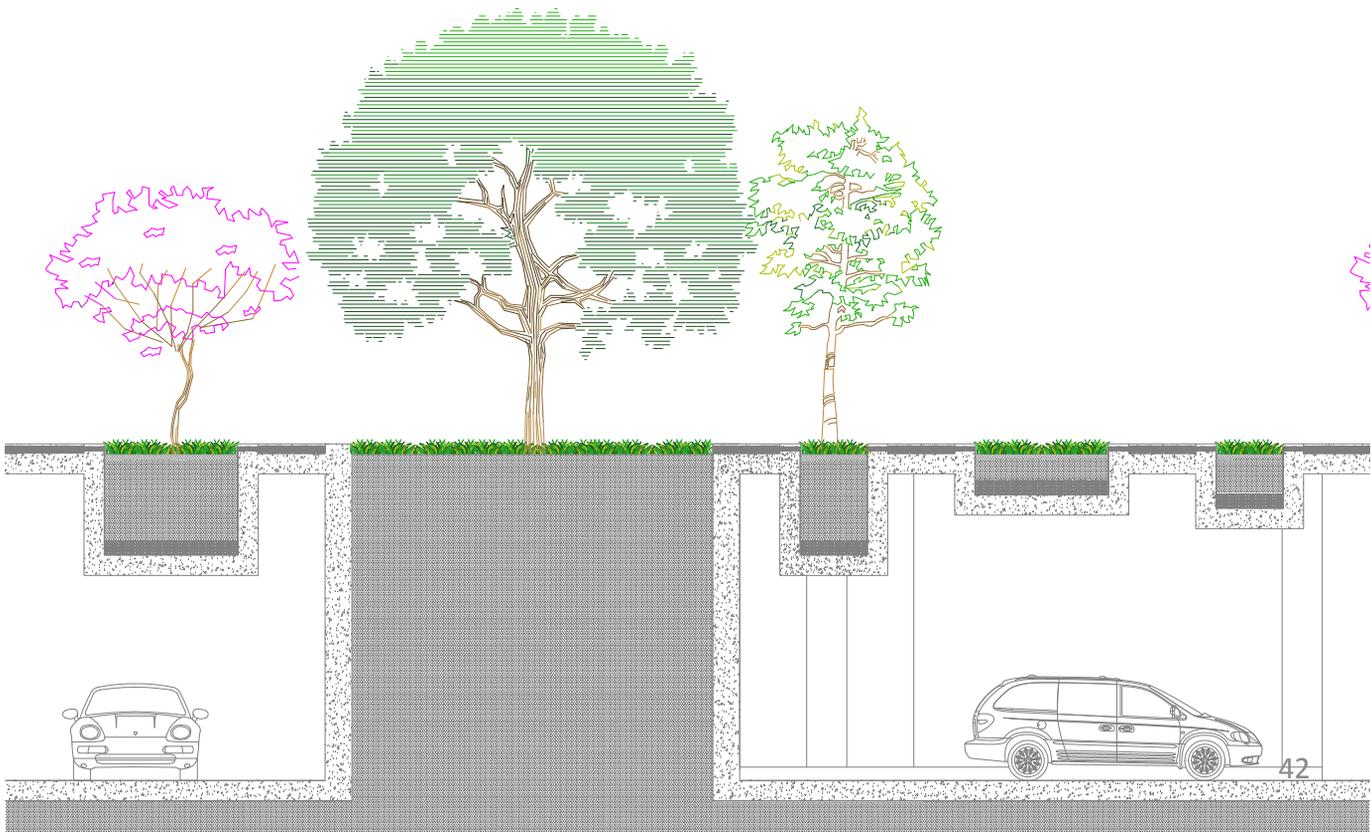
The space will also include an underground parking, making the urban forest a green roof. The green "pixels" are thus planters (shown in detail drawing)



Parking plan



The planters will have different depths to accommodate for different types and sizes of plants: 60cm for groundcover and shrubs, 1.2m for small trees, and no planters for large trees (shown in section below)



Choosing the right plants is crucial for this project, as we need them to thrive in urban settings, under urban stressors. They also have to be salt tolerant, heat tolerant, drought tolerant, can grow in shaded areas and need medium to low water requirements.

In addition, to serve the temporal notion of the project, the plants must vary in size, as well as longevity. Some are deciduous and some evergreen, making for an ever evolving process.

The plants are the following:



Design today

The design will evolve over the years. In its first phase (today), the project focuses on aspects of serenity, enclosure, escape and meditation.

The land East of the square (parking) will no longer be used as a parking. The site has been pedestrianized, providing an underground parking instead. The land will be developed into mixed-use buildings in the future, but for the time being, access will be restricted by planting tall shrubs on the edges of the site to create a buffering screen.

The archeological layers remain intact for the time being.

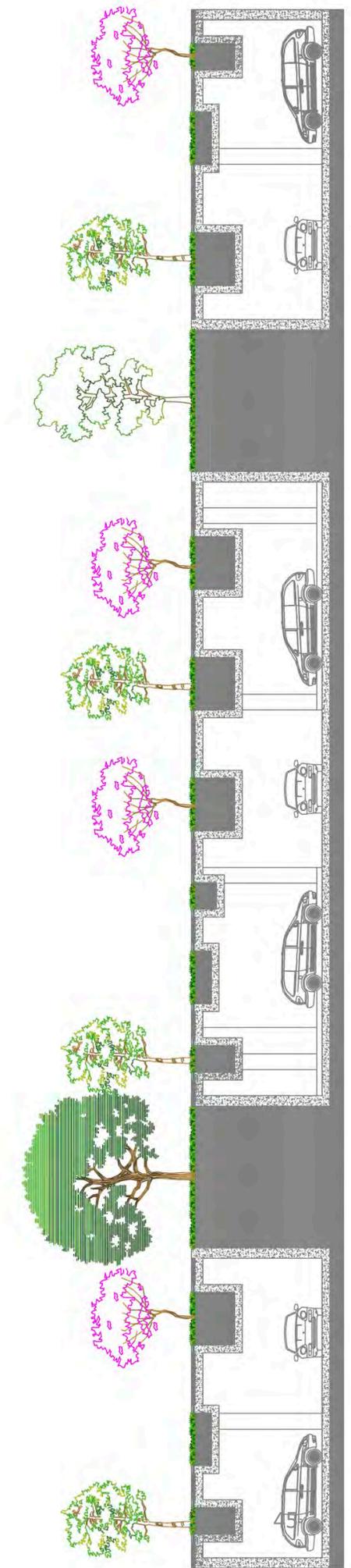
What is left is simply an urban forest, providing green open spaces for the people.



Heights

Oak and Maple : 8m

Jacaranda and Bronze Loquat: 3-5m



Design in 25 years

In 25 years, the trees are now grown, with some overpowering others, thus clearings are born. Some small trees are thinned out, providing additional space for new functions such as exhibitions and kiosks. The land to the East is developed providing residential buildings with commercial ground floor full of shops, boutiques and restaurants/cafes. This will increase users to the site by being a new destination in the city for leisure.

The new buildings will follow a guideline of clear axis that are drawn out of the buildings from the western side, creating clear connecting axis between East and West.

Archeological layer remains intact.

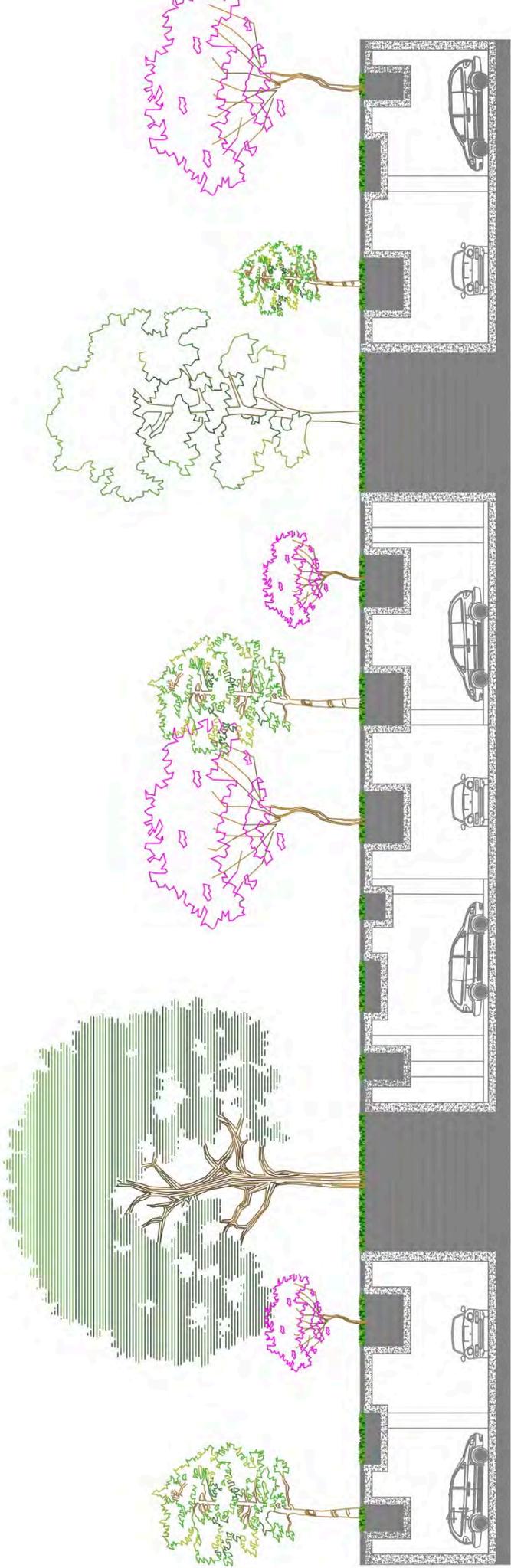


Heights

Oak and Maple : 15m

Jacaranda: 8m

Bronze Loquat: 5m



Design in 50 years

In 50 years, more clearings will be made due to the evolution of tree sizes, providing additional space to accommodate more people and activities.

An underground tunnel will lead users from the petit Serail, under the road, and reach the entrance of the Renzo Piano Museum of Archeology.

Axis will lead users to the Garden of Forgiveness, designed by Gustafson Porter.

The archeological layer now binds the site to it's context even more, making Martyr Square a public space deeply connected to the urban fabric of the city.



Heights

Oak and Maple : 23m

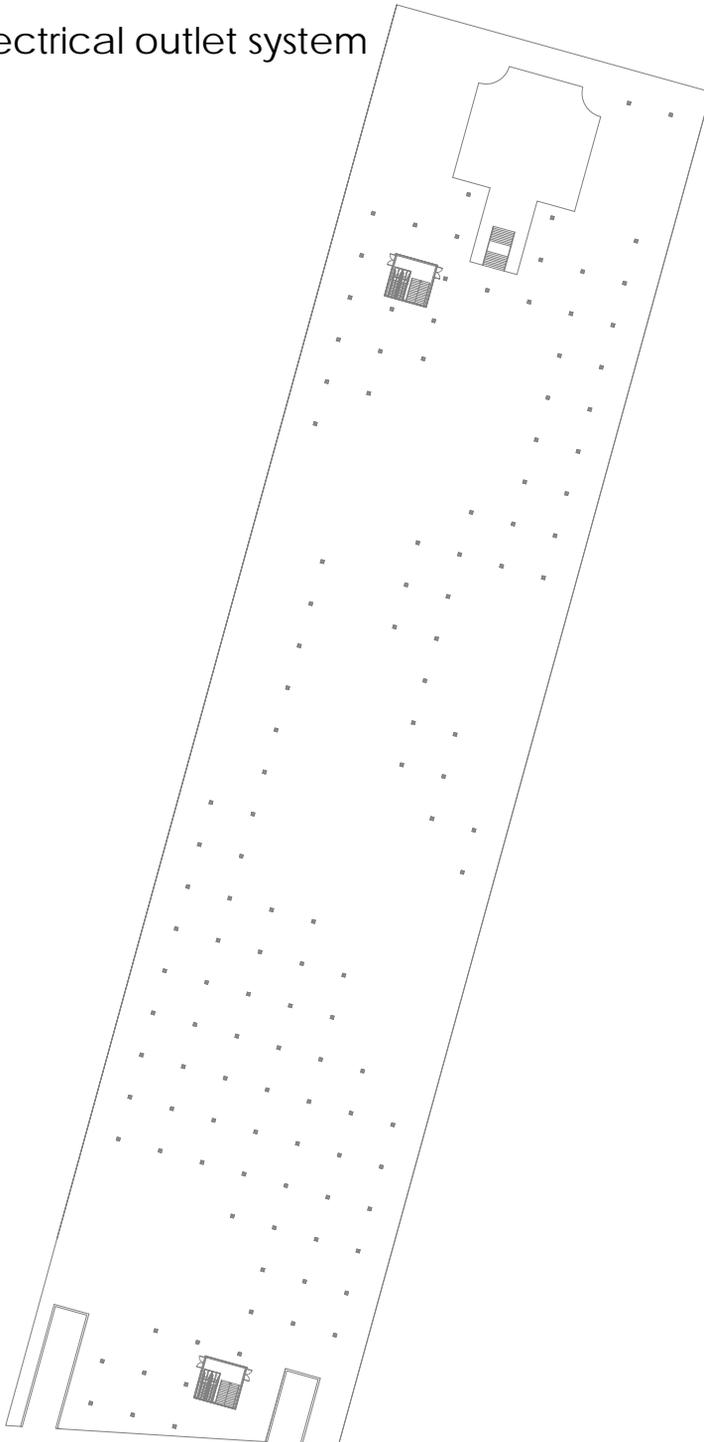
Jacaranda: 15m

Bronze Loquat: 5m

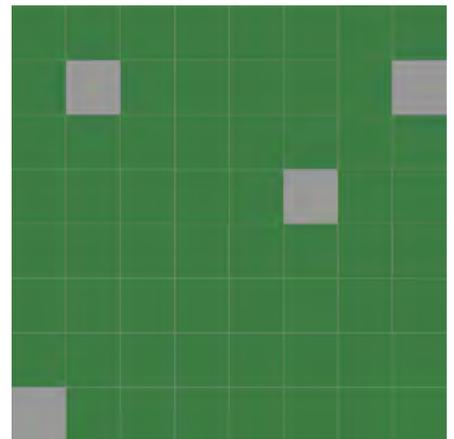


The site is extremely flexible and will adapt to many changes over the years. One way the site is flexible is with the system of electrical outlets that are 8m apart, located on the hardscape layer of rough granite. Having a system will allow users to place, switch and rotate many elements such as kiosks, as well as exhibition stands and walls. Another way the design is flexible is with the ability to plant new plants, however in a controlled manner: Big trees cannot be planted in areas with a lot of hardscape, only in areas with a lot of softscape where the bottom feeds into the ground. Any small tree can be planted in areas with a lot of hardscape.

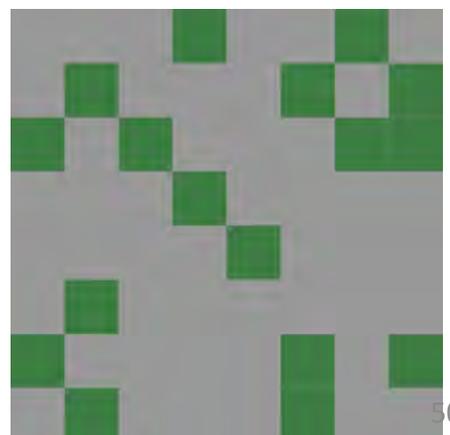
Electrical outlet system



Large trees can be planted here



No large trees, but any small tree can be planted here

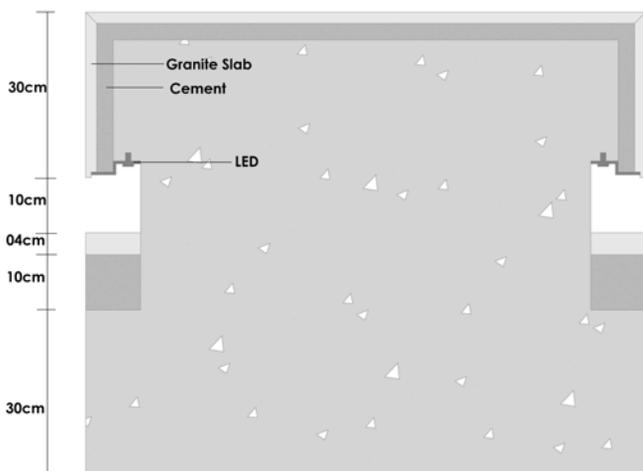


Zoom in

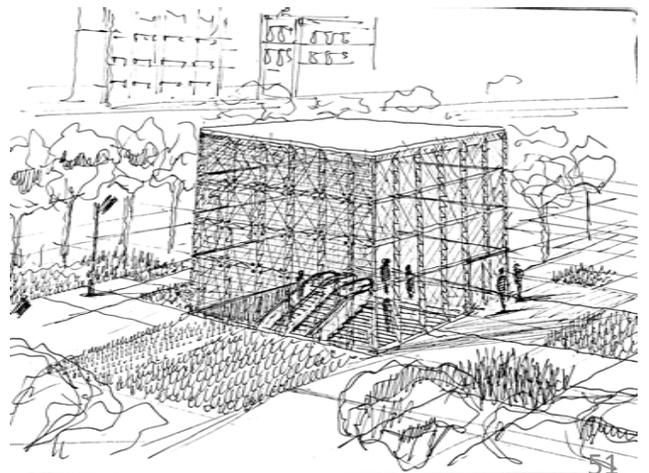
This zoom in plan highlights the parking ramp, the glass entrance, benches, glass cubes to allow natural sunlight into the parking, trees of different sizes and colors as well as the integration of softscape and hardscape in details.



Bench detail



Glass entrance sketch



Master Plan



Section











WHAT'S NEXT?

To wrap up, the project *All Roads lead To Martyr's Square* serves as a benchmark for future urban greening development. The urban forest is the optimal solution for designing public spaces as they are highly adaptable to future needs and demands, they are never static, just like we as a society are never static. The project cements Martyr's Square into its context, and is once again a socio-economic hub in the heart of Beirut.

What can be next?

Awareness is increasing among citizens in Beirut regarding green open spaces, as many campaigns are advocating for public spaces in recent years.

A possible extension of the site could be a plan called *Liaison Douce* by Habib Debs: A green line that starts from Horch Beirut, along Damascus road and leads to Martyr's Square.



ANNEX OF SKETCHES

