



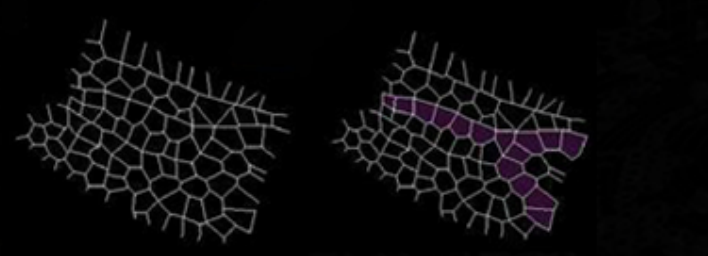
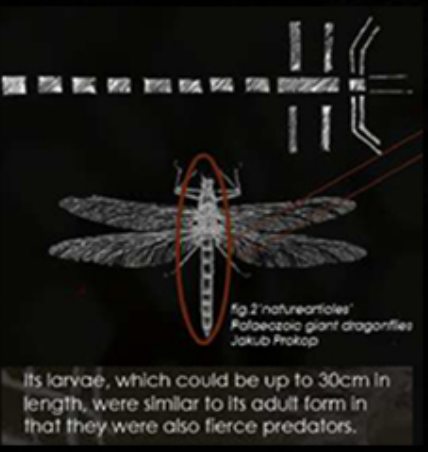
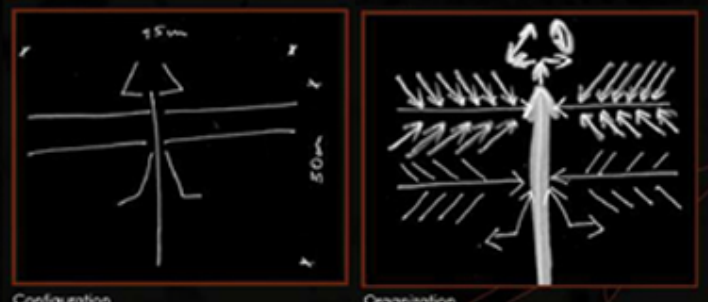
THE HYBRID  
DEVELOPMENT OF GRAND  
TERMINAL OF PRISHTINA

LIRA ABDYLI

1.2. Interchange and Multimodal Transport Terminal with integrated interface: Train (S+U+ Tram) and Bus Station + Underground Parking Structure with Retail Spaces + Exhibition Gallery and Landscape Design.

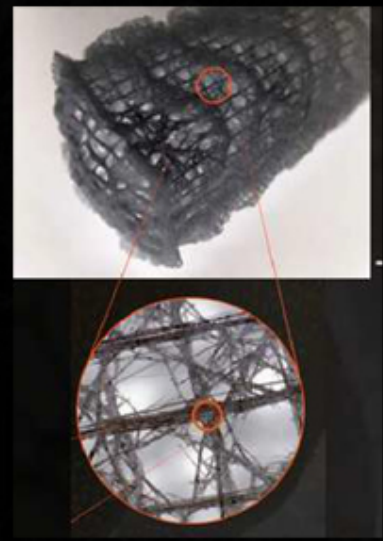


from BIOLOGICAL DESIGN  
to ARCHITECTURE DESIGN



MEGANEURAMONYI

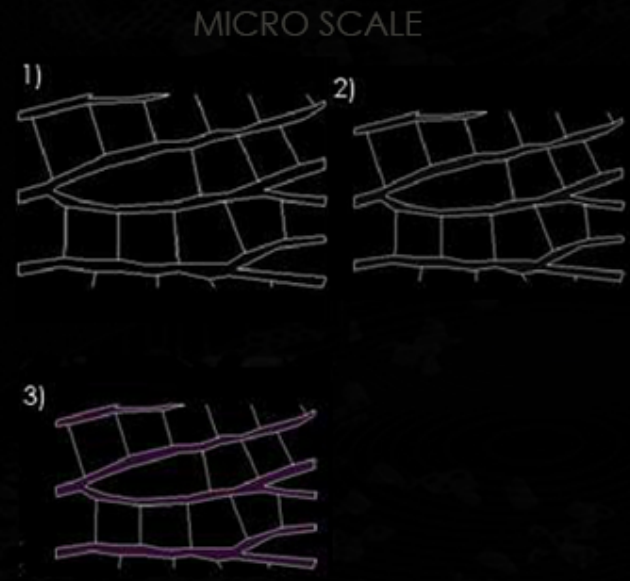
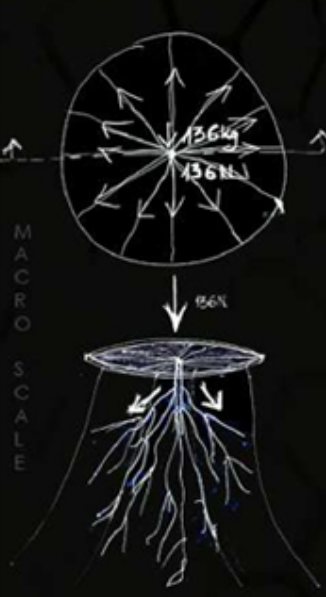
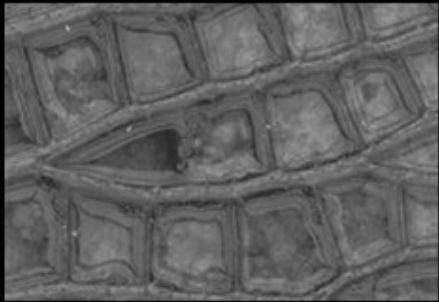
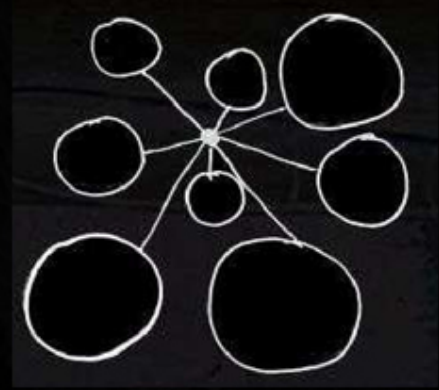
EUPLECTELLA ASPERGILLUM



from BIOLOGICAL DESIGN  
to ARCHITECTURE DESIGN



fig.7 'tree of life'  
What is the Giant  
Water Lily



VICTORIA AMAZONICA

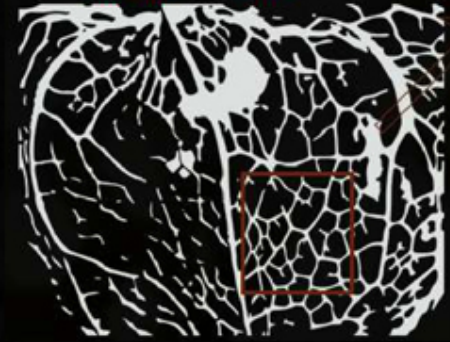
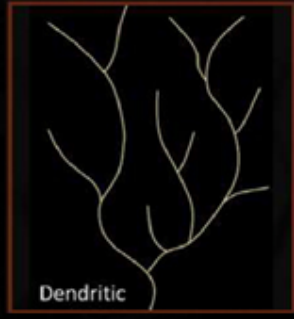


fig.9 'the spruce'  
Chinese Lantern Plant  
by David Beaulieu



PHYSALIS ALKEKENGI

# CONCEPT WATER LILY

*victoria amazonica*



fig.7 'tree of life'  
What is the Giant Water Lily



The leaves can grow up to 46 centimeters in size and can hold up to 136 kilograms,

the leaves are flat before growing rims at the edge of the leaf. The leaves are strong and stiff thanks to the strong bottom of the leaves.

The bottoms are covered with spines to help support the ribs.

The bottom of the leaf is maroon in colour.

The Giant Water Lily does not grow year round in areas where it is not a native species, such as Great Britain; it only grows and reproduces in the summertime when the climate is warm.

However, in its native Brazil and in the Amazon it grows all year long, due to the optimum conditions

Victoria amazonica is in the Plantae kingdom. The flower itself is white and only blooms at night. The colour of the lily changes however when it is pollinated to a pinky purple. When the lily is still white in colour and needs to be pollinated it gives off a butterscotch and pineapple scent that attracts the beetles that pollinate the flower; another way the flower attracts beetles is its power to heat up the core of the flower. If the heat outside is 85°C then inside the flower can be up to 95°C! The flower is approximately the size of a soccer ball and only lives for three days.

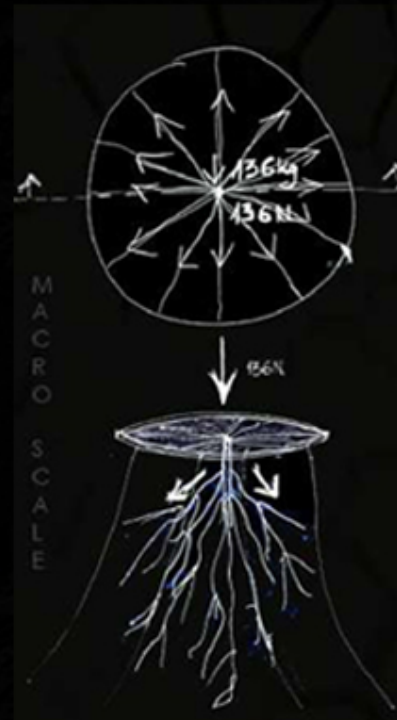
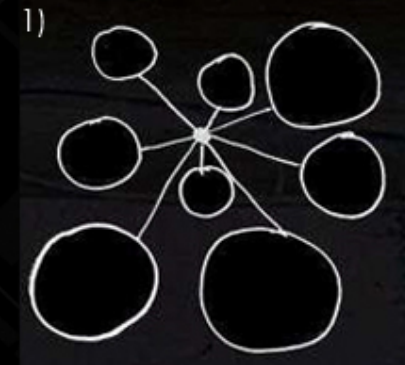


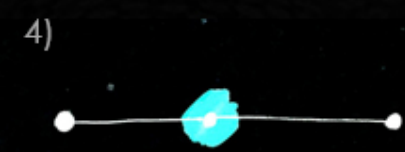
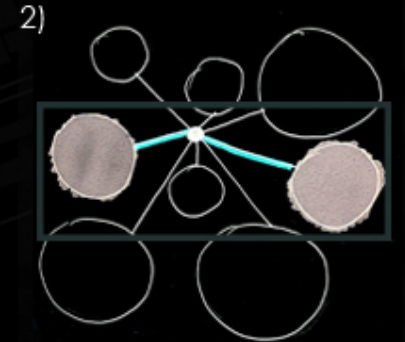
fig.6 'tree of life'  
What is the Giant Water Lily

5)



composition

M  
A  
C  
R  
O  
  
S  
C  
A  
L  
E



TRANSITION POINT

# CONCEPT WATER LILY

*victoria amazonica*



fig.8 'tree of life'  
What is the Giant Water Lily

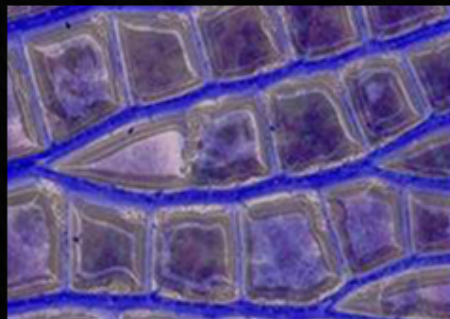


fig.10 'tree of life'  
What is the Giant Water Lily

Victoria amazonica is in the Plantae kingdom. The flower itself is white and only blooms at night. The colour of the lily changes however when it is pollinated to a pinky purple. When the lily is still white in colour and needs to be pollinated it gives off a butterscotch and pineapple scent that attracts the beetles that pollinate the flower; another way the flower attracts beetles is its power to heat up the core of the flower. If the heat outside is 85°C then inside the flower can be up to 95°C! The flower is approximately the size of a soccer ball and only lives for three days.



fig.9 'tree of life'  
What is the Giant Water Lily

The leaves can grow up to 46 centimeters in size and can hold up to 136 kilograms,

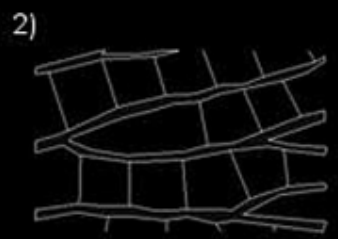
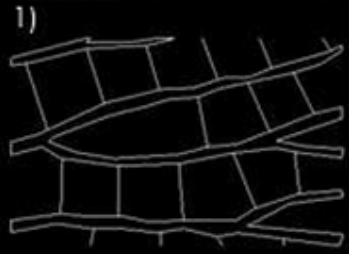
the leaves are flat before growing rims at the edge of the leaf. The leaves are strong and stiff thanks to the strong bottom of the leaves.

The bottoms are covered with spines to help support the ribs.

The bottom of the leaf is maroon in colour.

The Giant Water Lily does not grow year round in areas where it is not a native species, such as Great Britain; it only grows and reproduces in the summertime when the climate is warm.

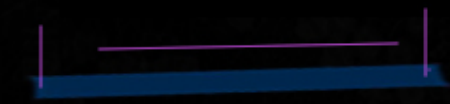
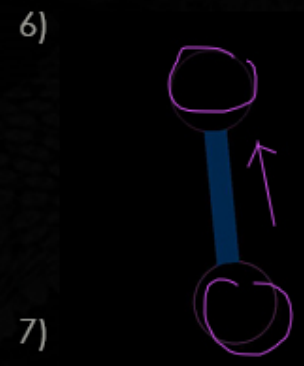
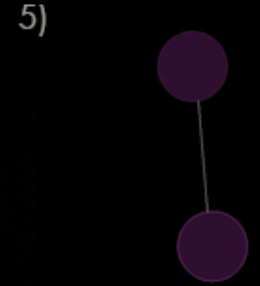
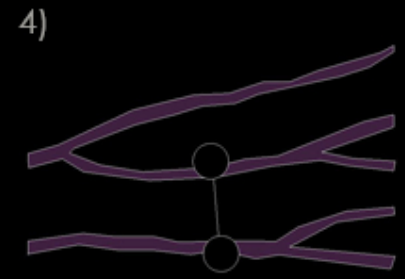
However, in its native Brazil and in the Amazon it grows all year long, due to the optimum conditions



S  
T  
R  
U  
C  
T  
U  
R  
E



M  
I  
C  
R  
O  
S  
C  
A  
L  
E



BRIDGES

# BIONIC ARCHITECTURE through the POETICS of Novel STRUCTURES and TECTONICS

Tectonic theory has a rich tradition in architecture. Tectonics can be briefly defined as the "poetics of construction" (Frampton, 2001)

Discussion of tectonics has guided architects toward expressive construction and even pushed the discipline to redefine itself as one concerned with the creation of space, not symbolic form. Despite its influence in our allied profession, a tectonic theory of landscape architecture remains undeveloped.

SEMPER'S FOUR ELEMENTS OF ARCHITECTURE, 1851

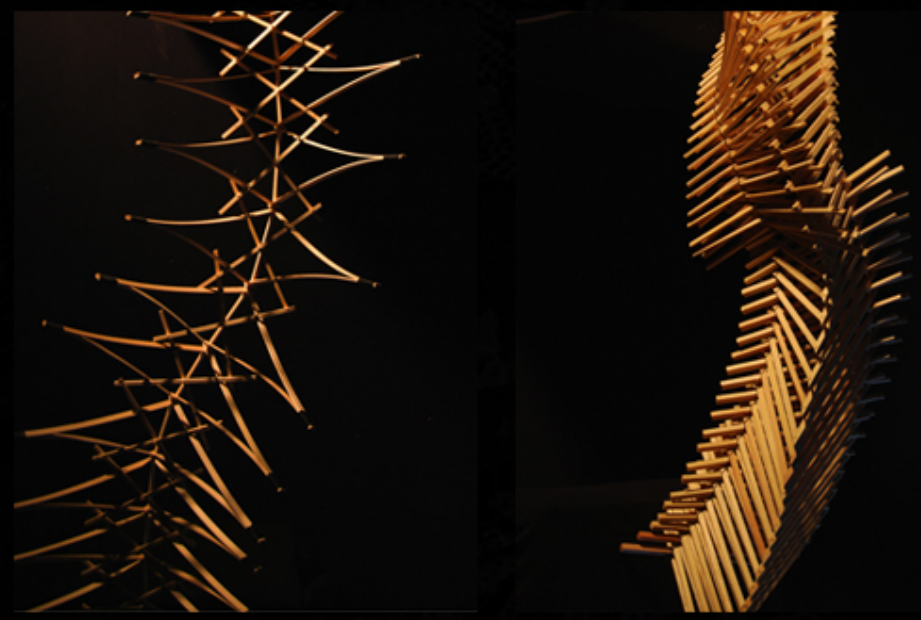
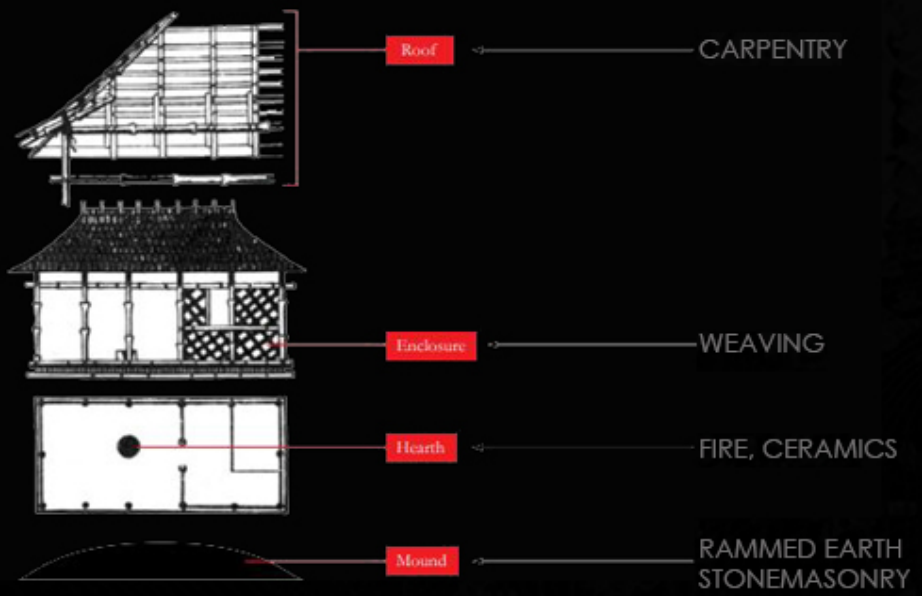


Fig.1 "Tectonic Studio" by ISAK WORRE FOGED Aalborg University, Denmark

Textiles are porous and flexible, uniquely suiting them to integrating, responding to, and even structuring landscape contingency. Textiles visibly intertwine with materials and organisms. They symbolize the integration of humans and their materials with other nature: the "natural cyborg" (Marrati, 2010)

The adoption of tectonic theory based on these ideas would require landscape architects to act not as stewards but as actualized natural agents

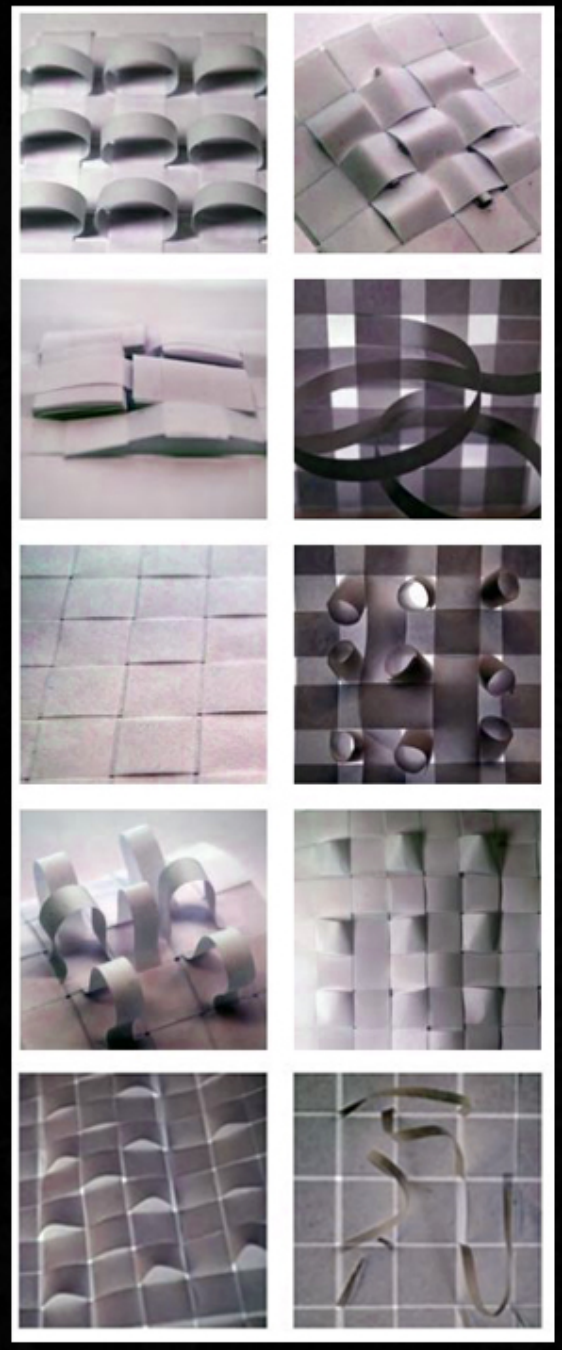


Fig.2 Examples of a series of models exploring weaving with vellum

# BIONIC ARCHITECTURE through the POETICS of Novel STRUCTURES and TECTONICS

Architectural and bionic practice gave rise to the new and unusual architectural forms which are useful from functional and practical point of view and original in their aesthetic qualities. It couldn't but kindle architects' and engineers' interest to these phenomena. Bionic originates from a Greek word that has a meaning "an element of life".

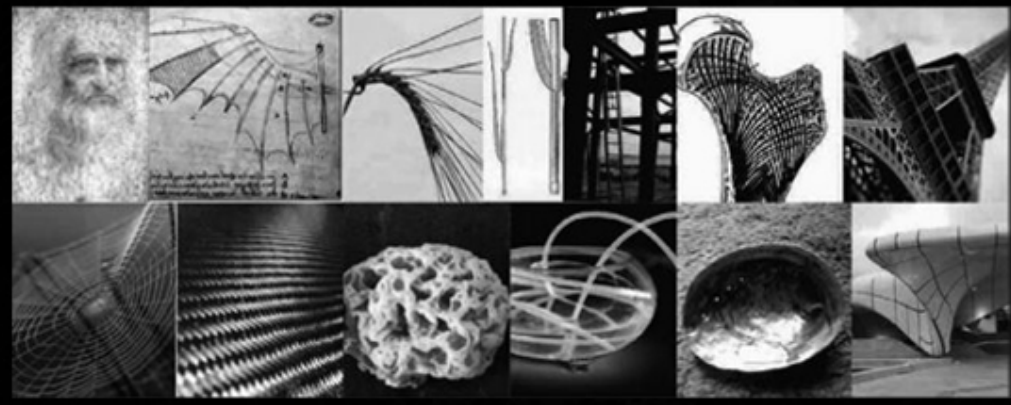
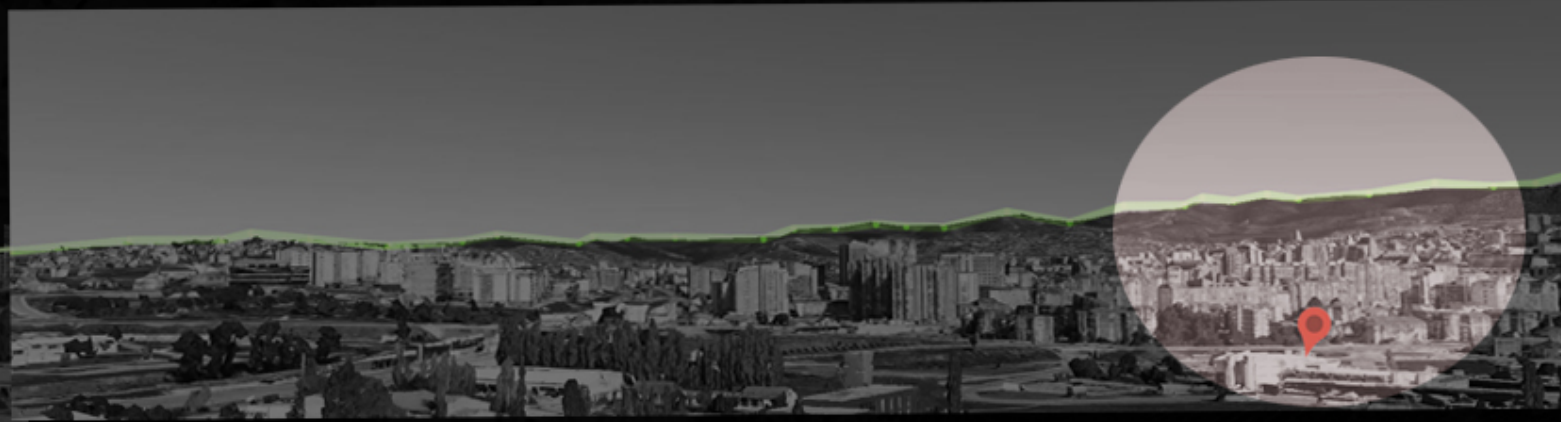
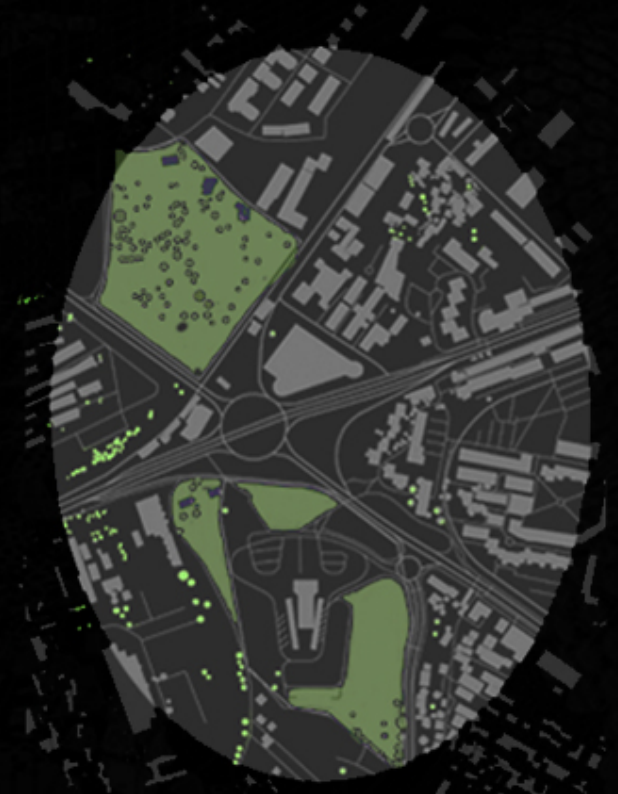


Fig.3 The Bionic's using. The first row: 1. A design for a flying machine, [c. 1488] Institut de France, Paris; 2. The analogy of the structure of culm and modern high-rise buildings; 3. The construction of the Eiffel Tower is based on the scientific work of Swiss professor of anatomy Hermann von Meyer, 1889. The second row: 1. Creating an artificial analogue of the web — Kevlar, based on the structure of DNA spiders; 2. Natural optovolono in the structure of marine sponges Euplectella researchers found Bell Labs, Lucent Corporation; 3. Creating a layered building's structures based on the structure of the deep shell clam „abalone" Shells are composed of soft and hard plates

Research and apply



# GENERATIVE ANALYSIS

## SITE CONTEXT

- SITE
- HIGH RISE HOUSING
- LOW RISE HOUSING
- BUSINESS
- EDUCATION



# GENERATIVE ANALYSIS

## CONTEXT DENSITY

- SITE
- HIGH RISE HOUSING
- LOW RISE HOUSING
- BUSINESS
- EDUCATION



# GENERATIVE ANALYSIS

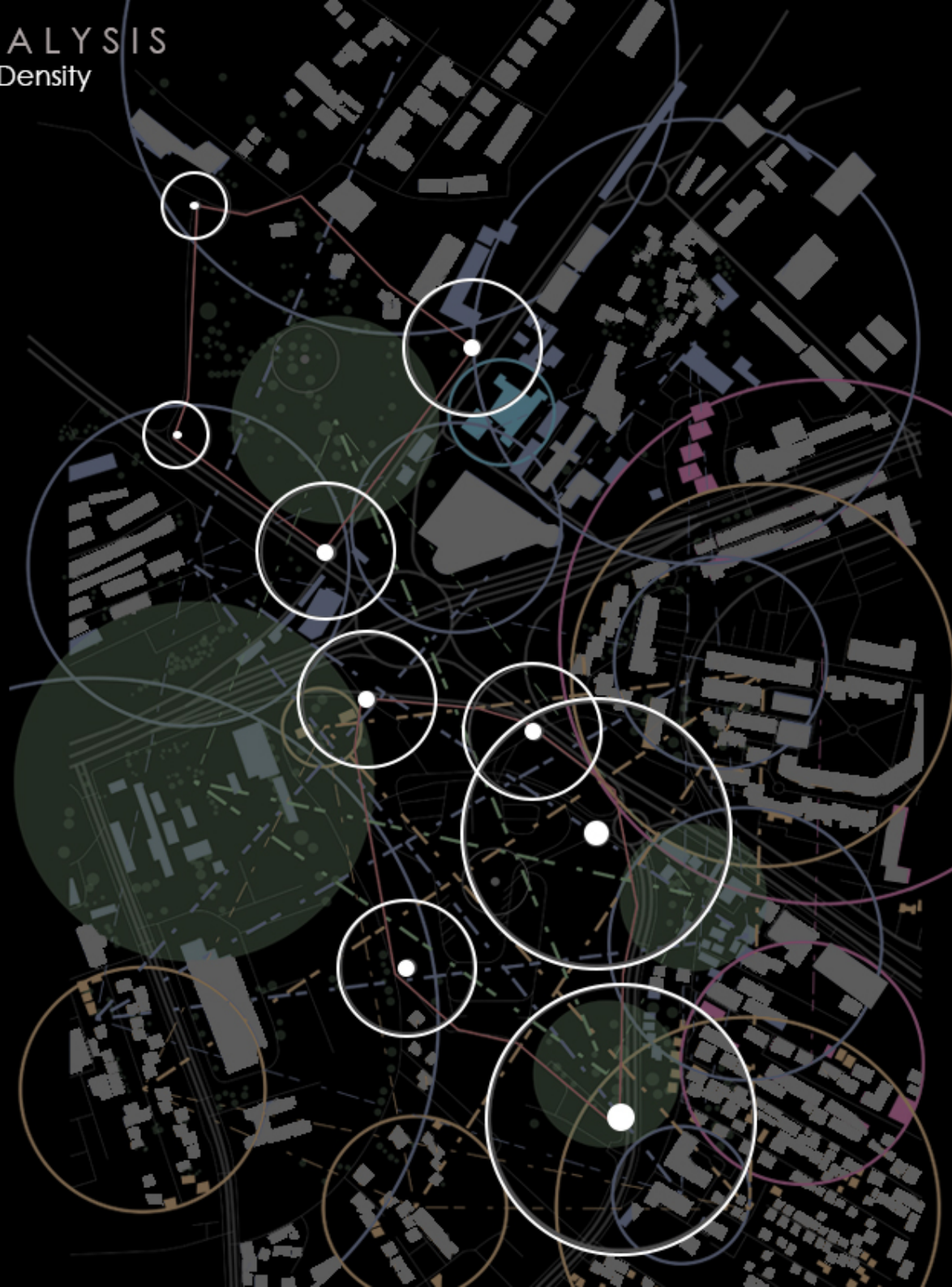
Access Points with Surrounding Site Roads to  
Connect to Density

- SITE
- HIGH RISE HOUSING
- LOW RISE HOUSING
- BUSINESS
- EDUCATION



# GENERATIVE ANALYSIS

Radii Size Relative to Context Density



# GENERATIVE ANALYSIS

Site Lines per Access Points and  
Radii Density



# GENERATIVE ANALYSIS

Mass From Radii and Site Lines



9.  
Nature to Mass on  
Site



10.  
Water Lily Concept  
New Central Mass  
per Radii and  
Nature Lines



11.  
Water Lily Concept  
Diagram



12.  
Mass / Concept  
Masterplan



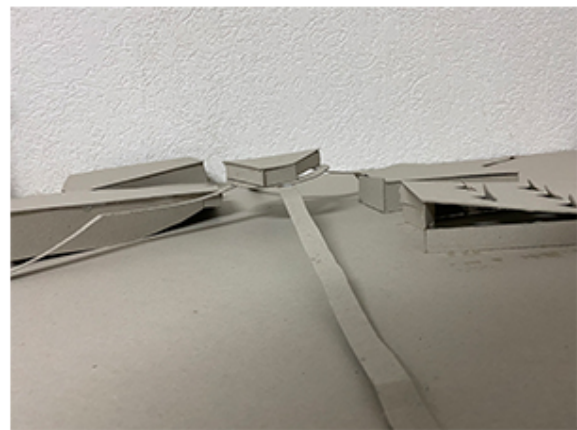
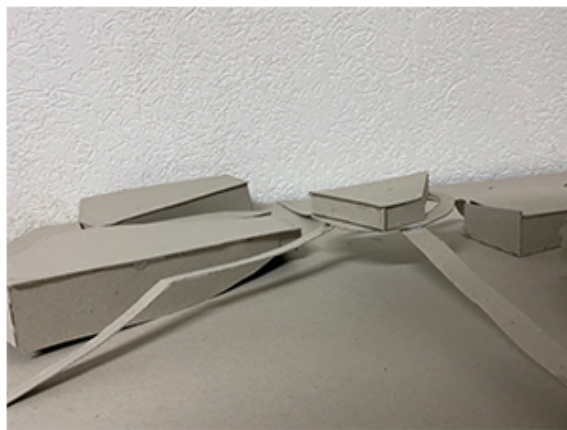


PRISHTINA,  
KOSOVO

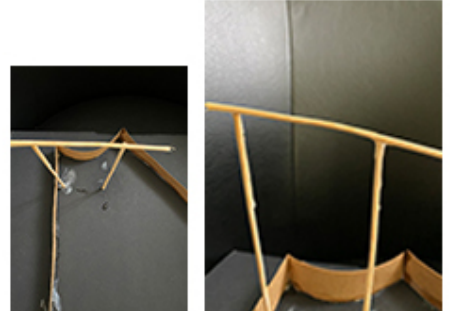
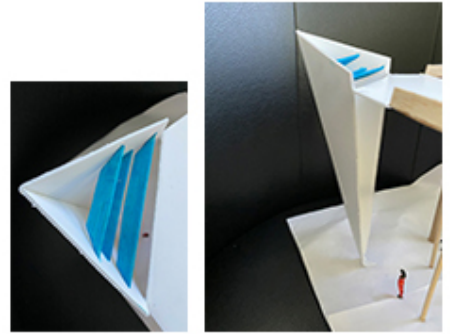
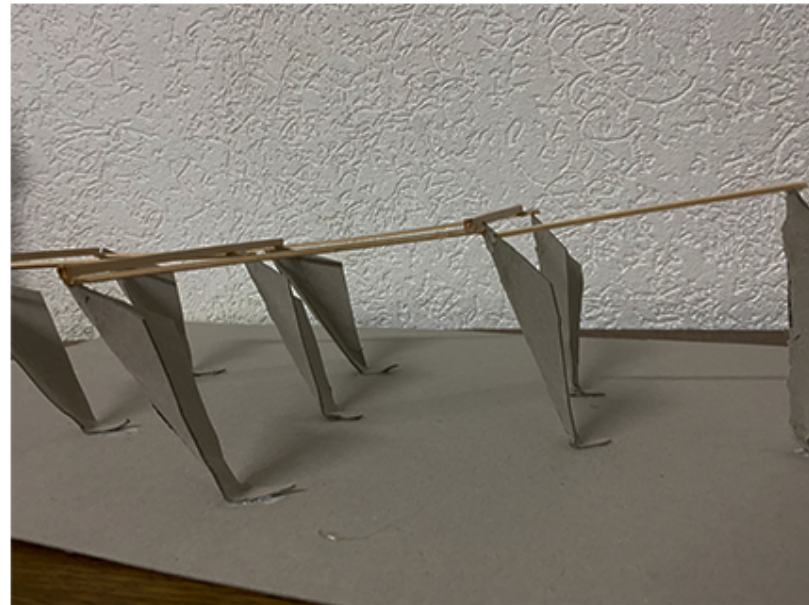
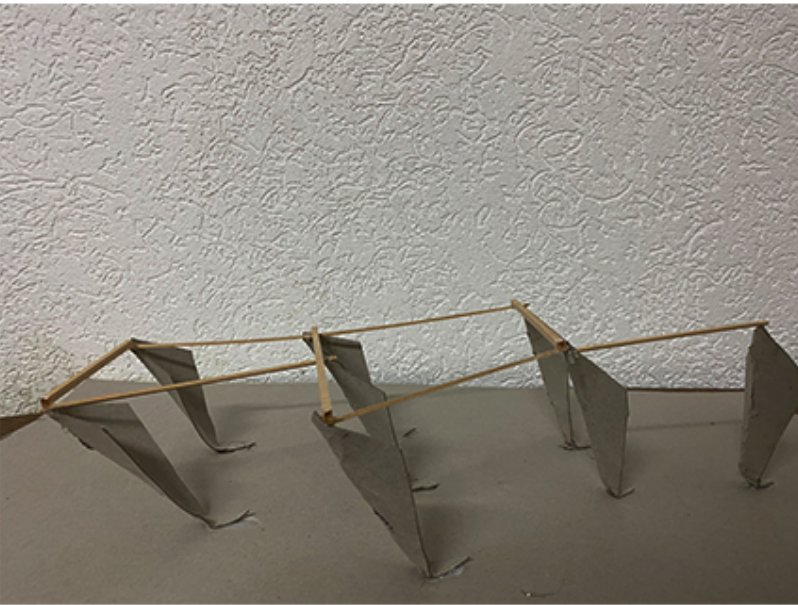
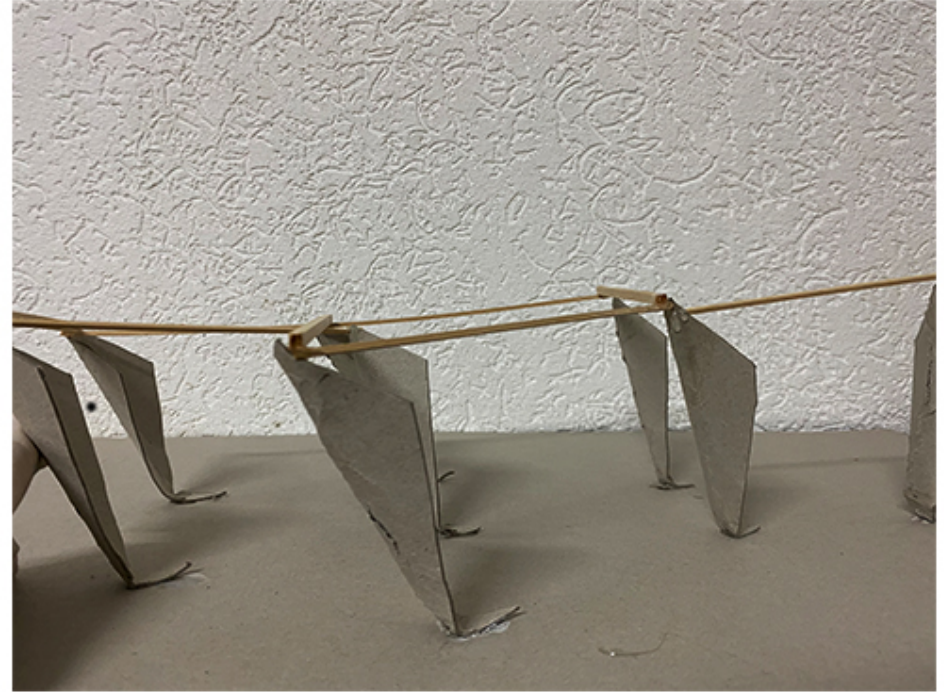
MAIN FUNCTIONS



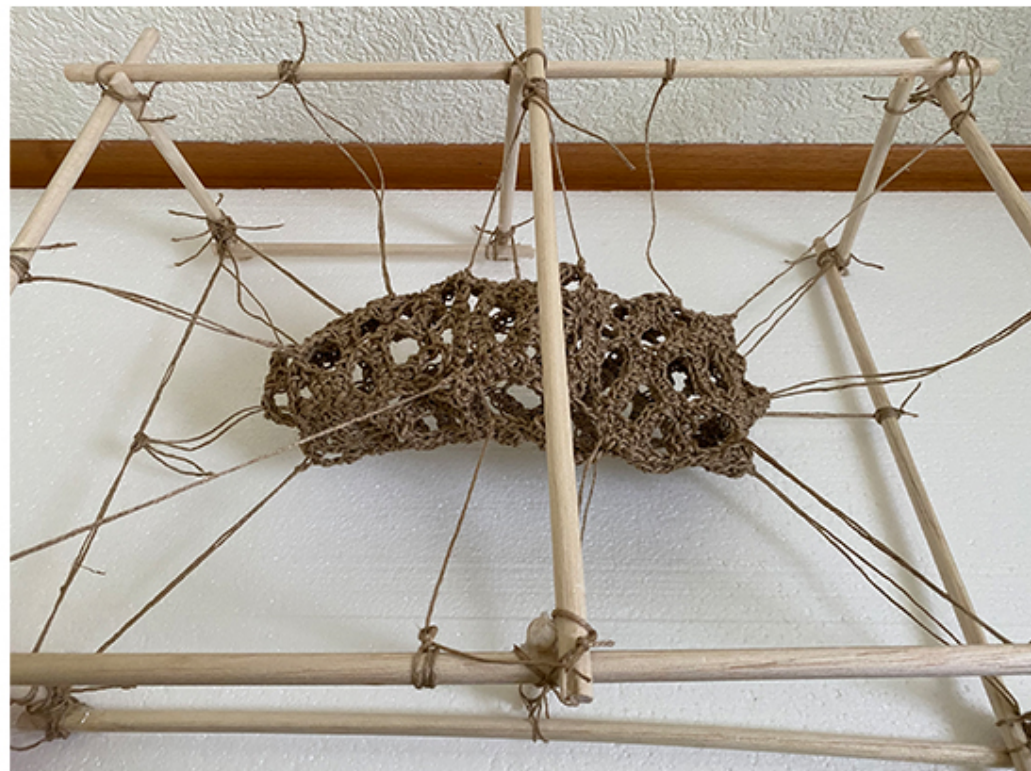
PHYSICAL MODEL OF HYBRID  
COMPLEX



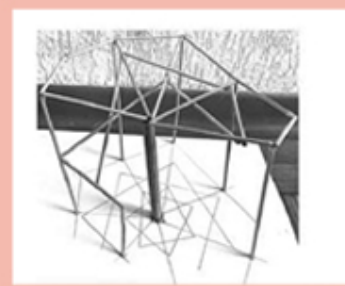
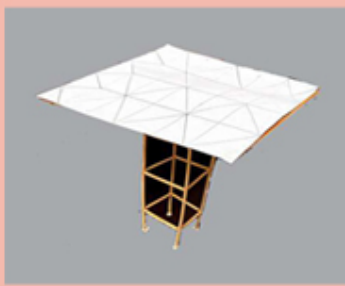
PHYSICAL MODEL  
OF STRUCTURAL SYSTEM



A TYPICAL MODULE  
OF TECTONIC SYSTEM



# MODELS during WORKSHOPS



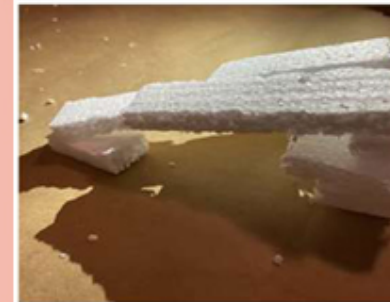
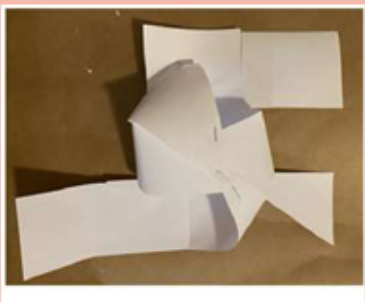
1st Assignment Revealing structural patterns behind the 'Veil'

Workshop 1.0 Structural exploration - grid



Workshop 1.0 Structural exploration - folded

Workshop 1.0 Structural exploration - canopy



Workshop 3.0 Diagramming and Modeling - sketch models

Workshop 3.0 Diagramming and Modeling - diagram conceptual



Workshop 3.0 Diagramming and Modeling - folded

AXES

BUS STATION

RETAIL SPACES

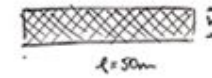
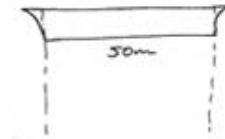
EXHIBITION GALLERY

TRAIN STATION



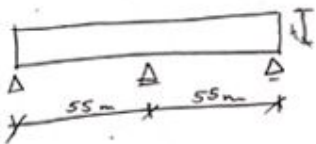
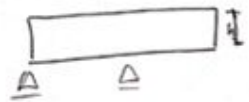
Structural system: structural / static diagram

Preliminary calculations.



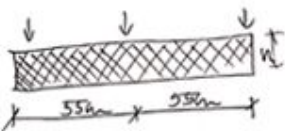
$$h = 50/12 - 50/15$$

$$l/25 - l/20 \Rightarrow 50/25 - 50/20 = 2\text{m} - 2.5\text{m}$$



$$h = 55/10 - l/10 \Rightarrow 5.5\text{m}$$

$$h = 55/13 - l/13 \Rightarrow 4.23\text{m}$$

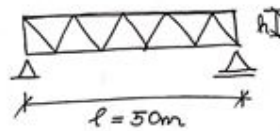


$$l/25 - l/20$$

$$55/25 - 55/20$$

$$2.5\text{m} - 2.75\text{m}$$

NO GALLERY / PARKING

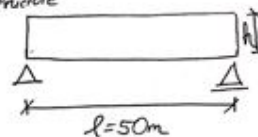


$$h = l/12 - l/15$$

$$l = 7.5 - 60\text{m} \Rightarrow 50\text{m}$$

$$h = 50/12 - 50/15 \Rightarrow 4.16\text{m} - 3.33\text{m} = 4\text{m}$$

Lattice girder shed structure



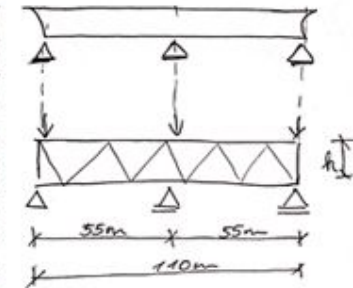
$$h = l/10 - l/13$$

$$l = 8 - 75\text{m} \Rightarrow 50\text{m}$$

$$h = 50/10 - 50/13$$

$$= 5\text{m} - 3.84\text{m}$$

BUS STATION



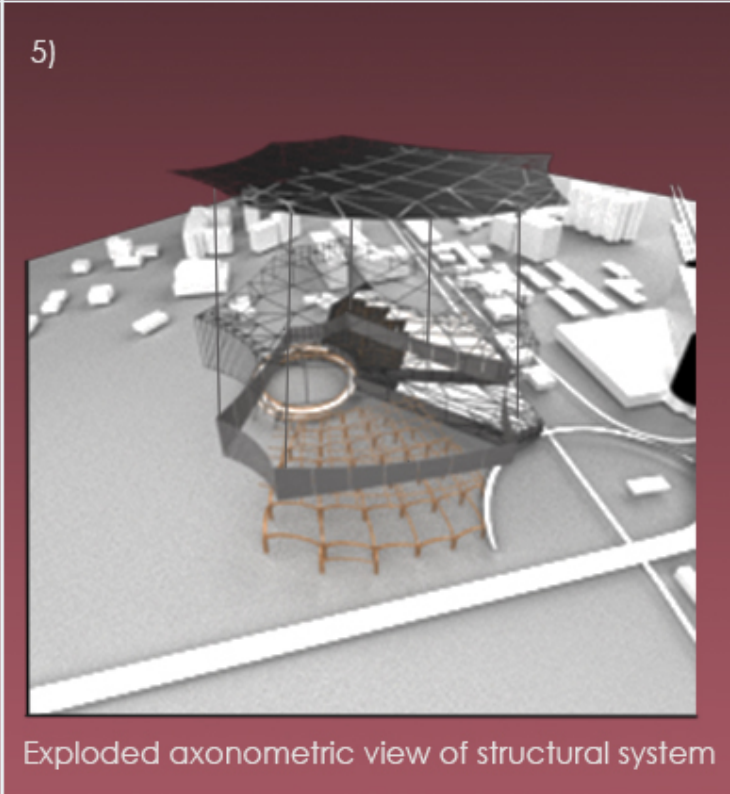
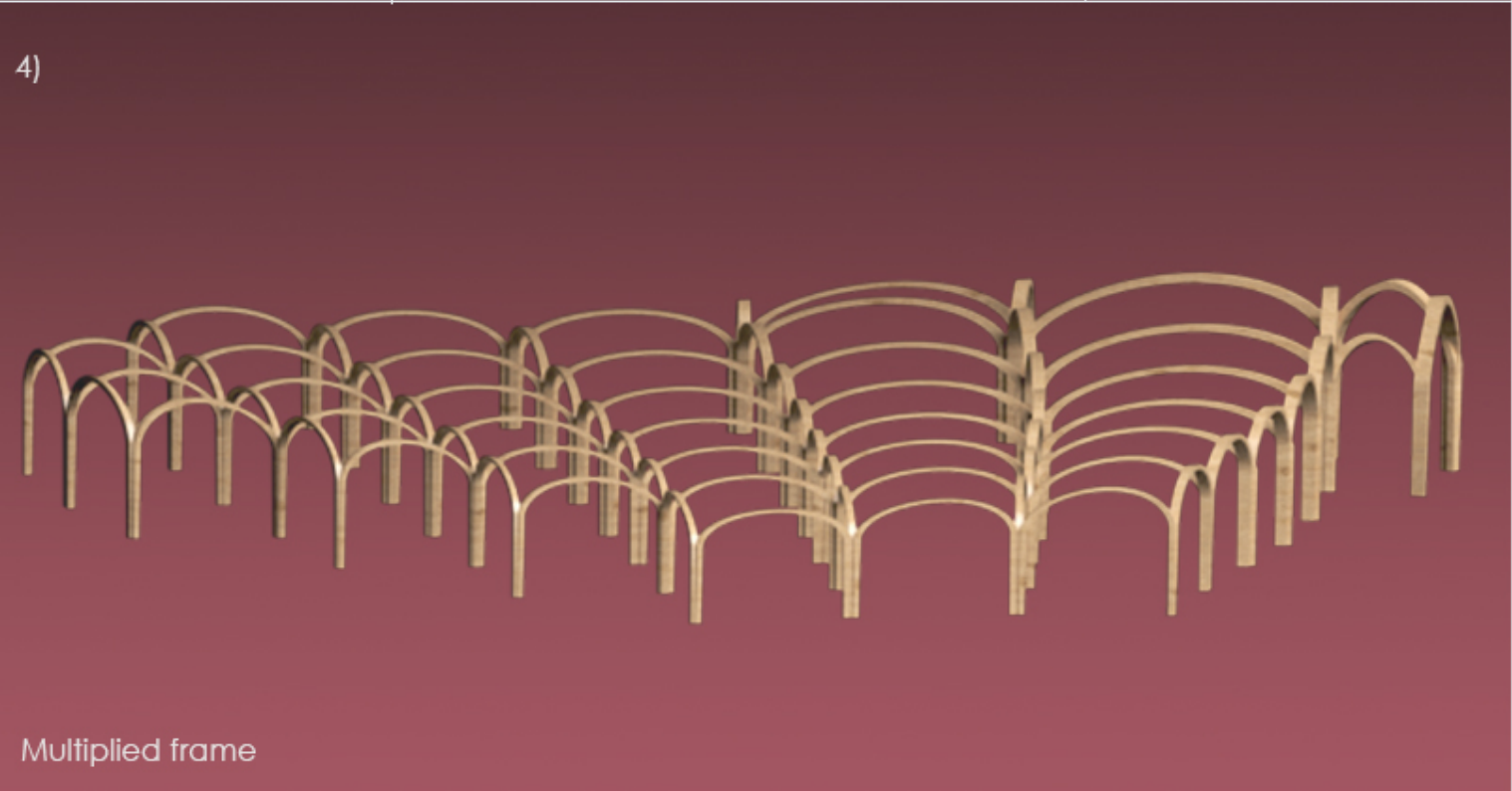
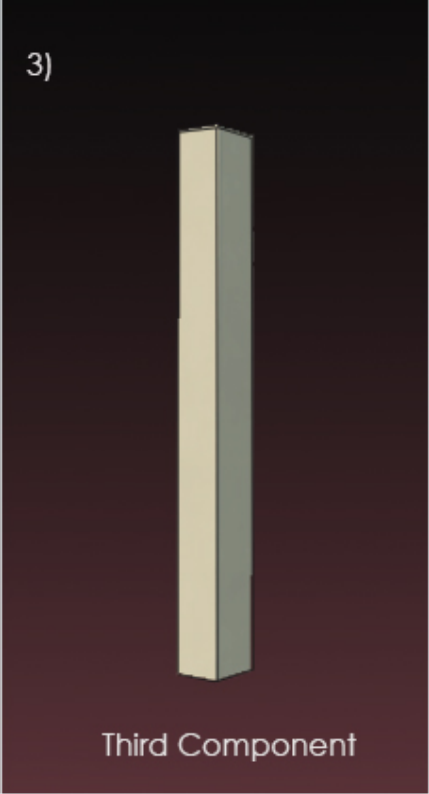
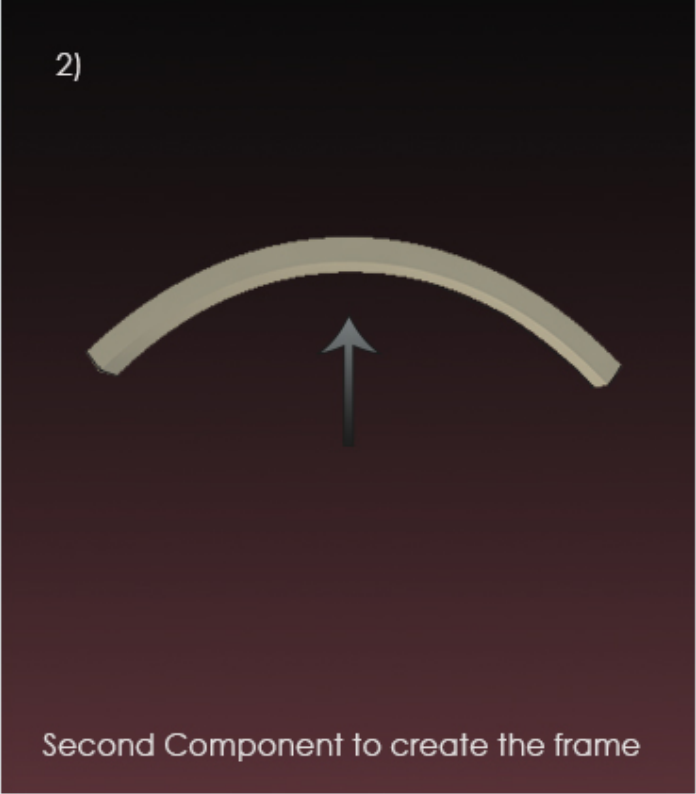
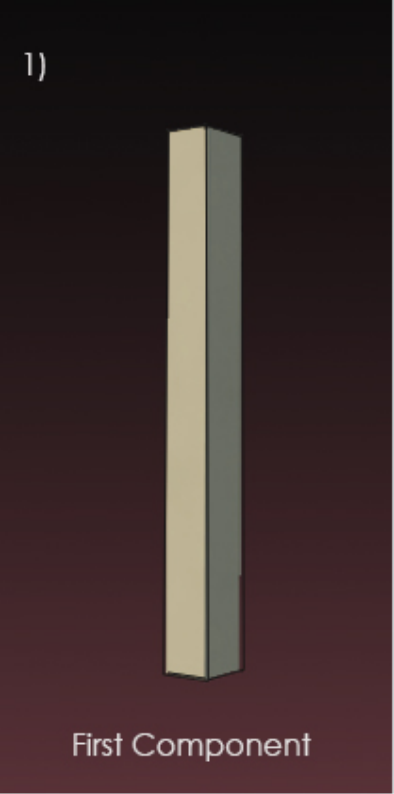
$$h = l/12 - l/15$$

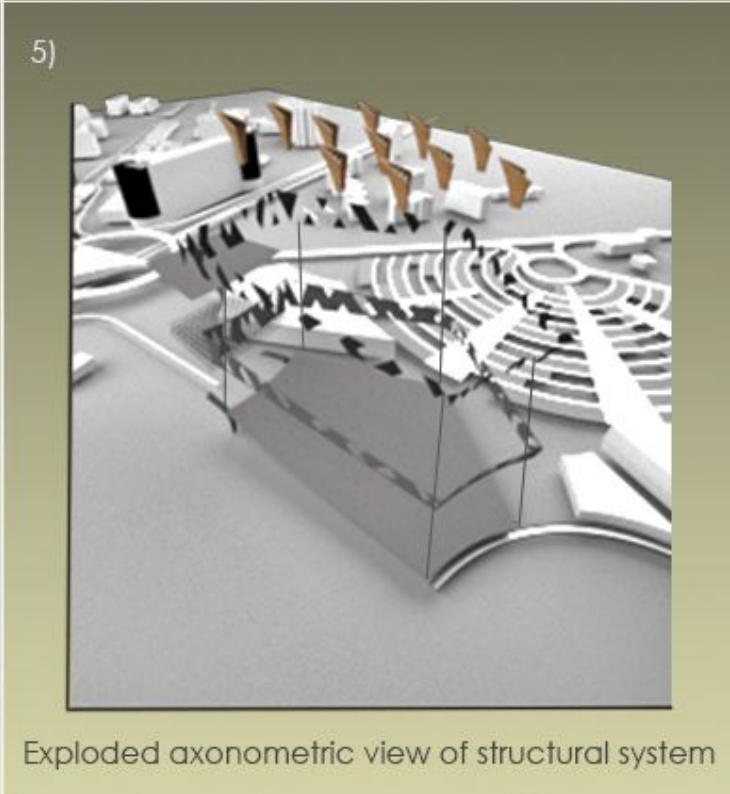
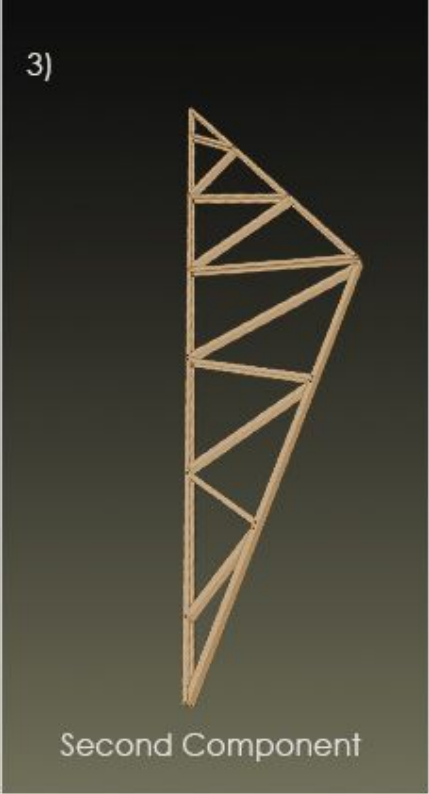
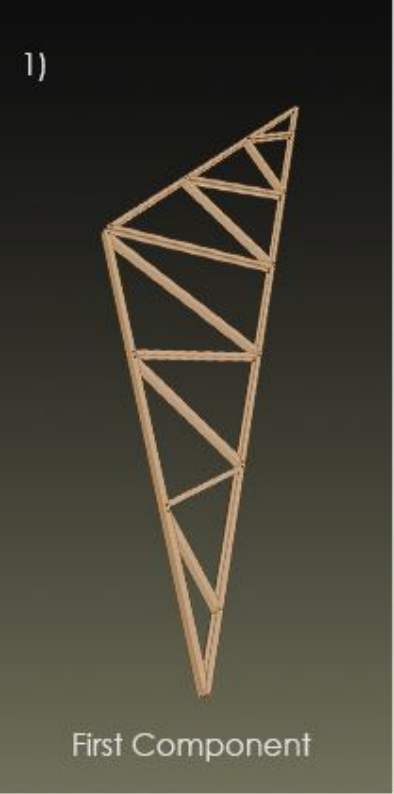
$$l = 7.5 - 60\text{m}$$

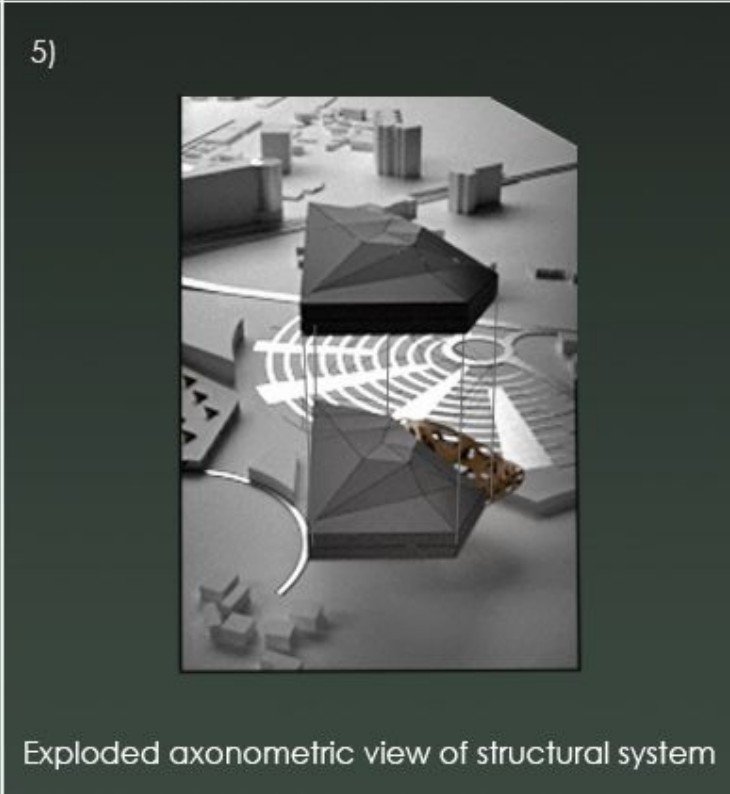
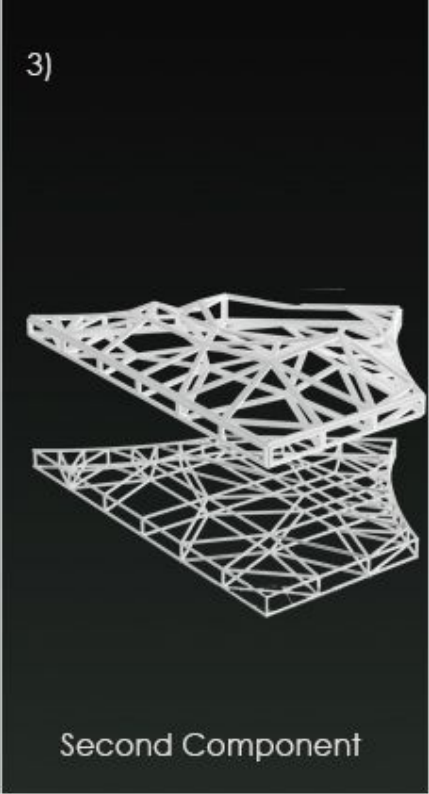
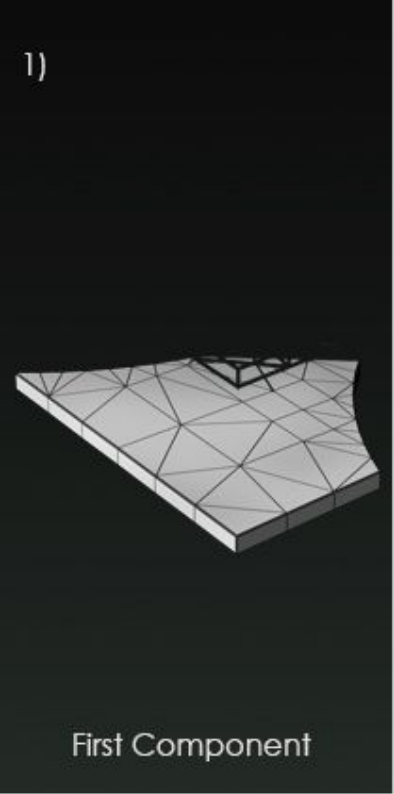
$$h = 65/12 - 55/15 \quad h60/12$$

$$= 4.58 - 3.66\text{m} = 5\text{m}$$

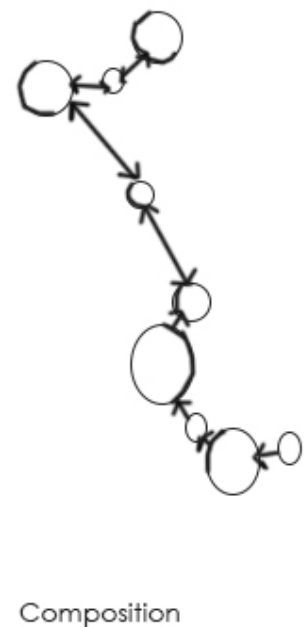
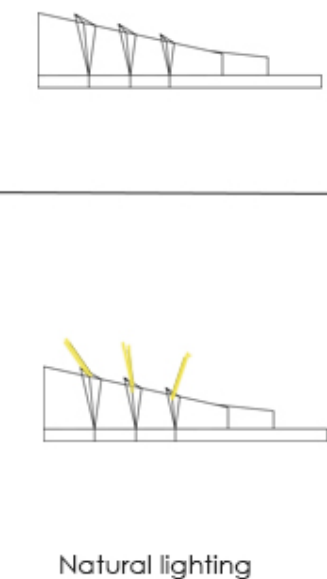
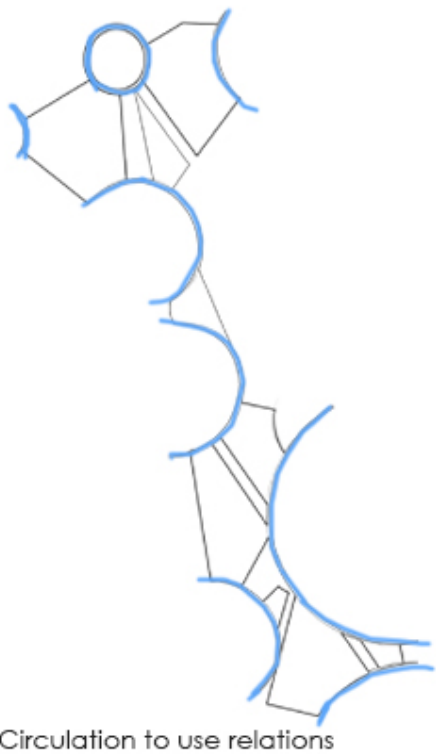
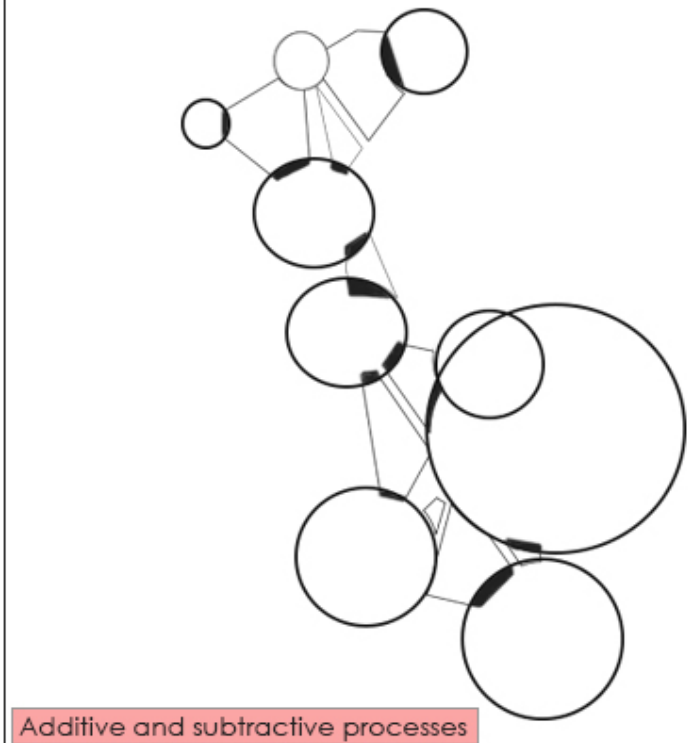
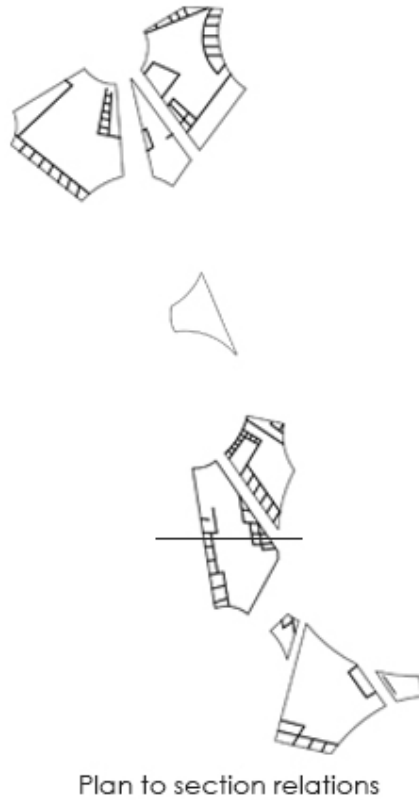
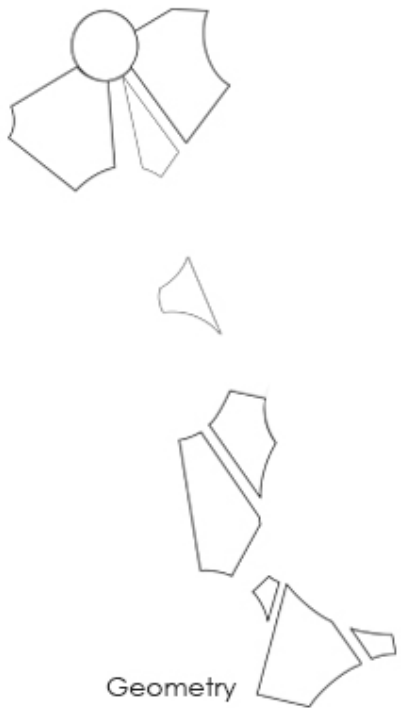




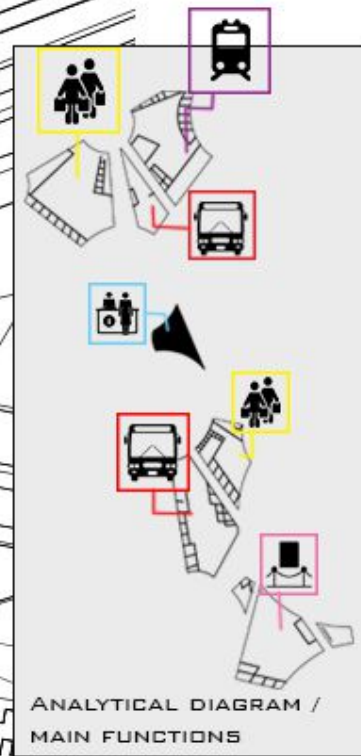
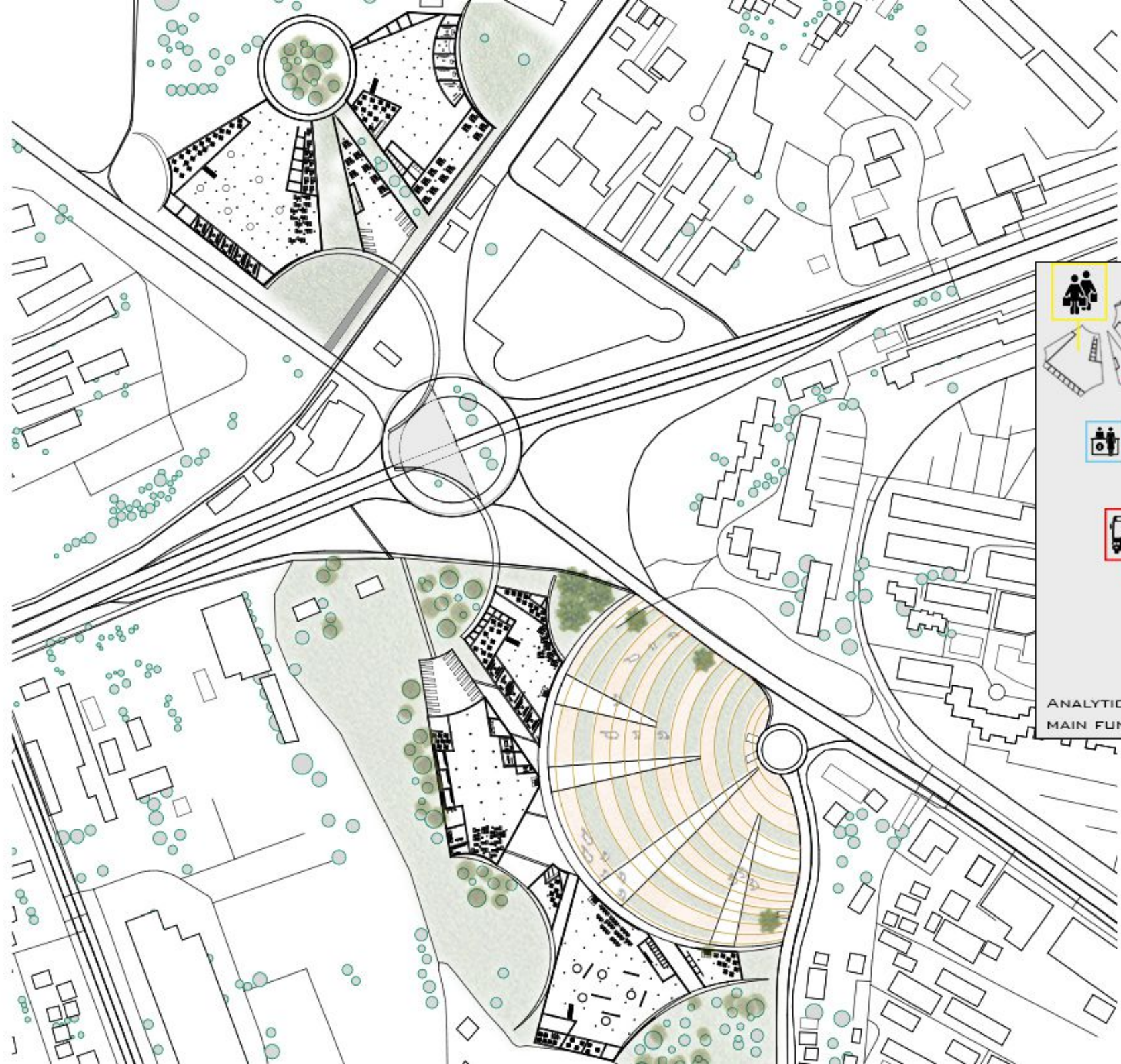




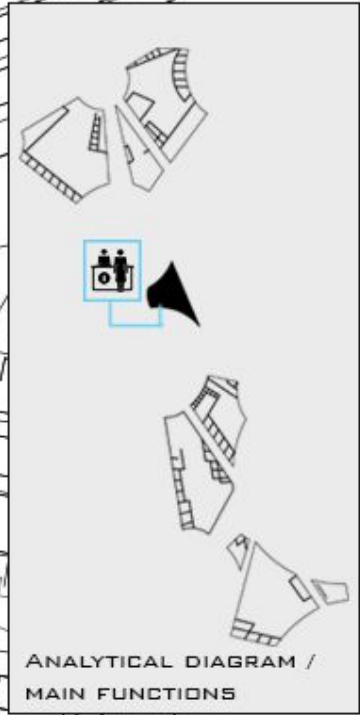
Analytical diagrams



SITE PLAN



UPPER LEVEL / TRANSITION  
POINT

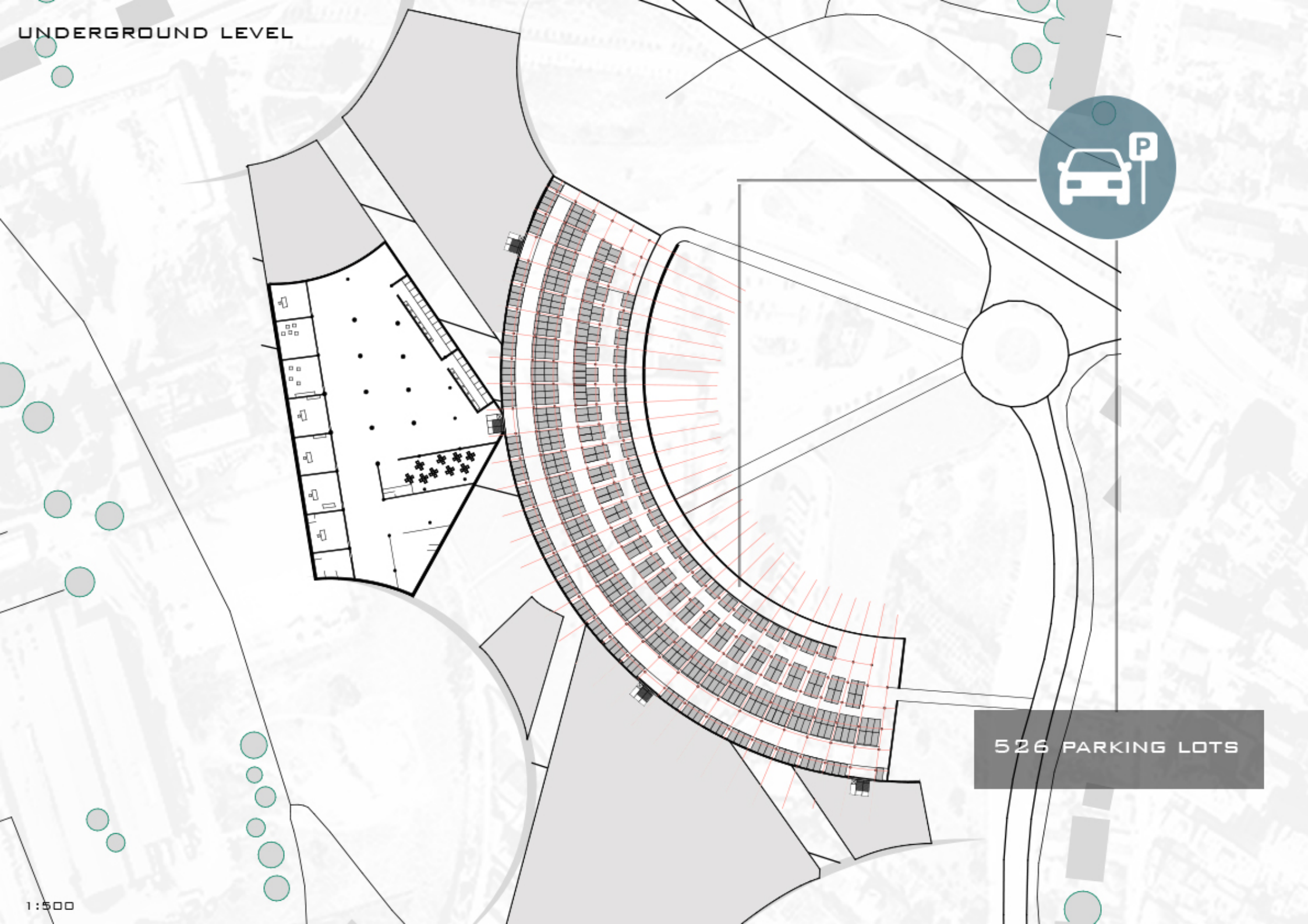


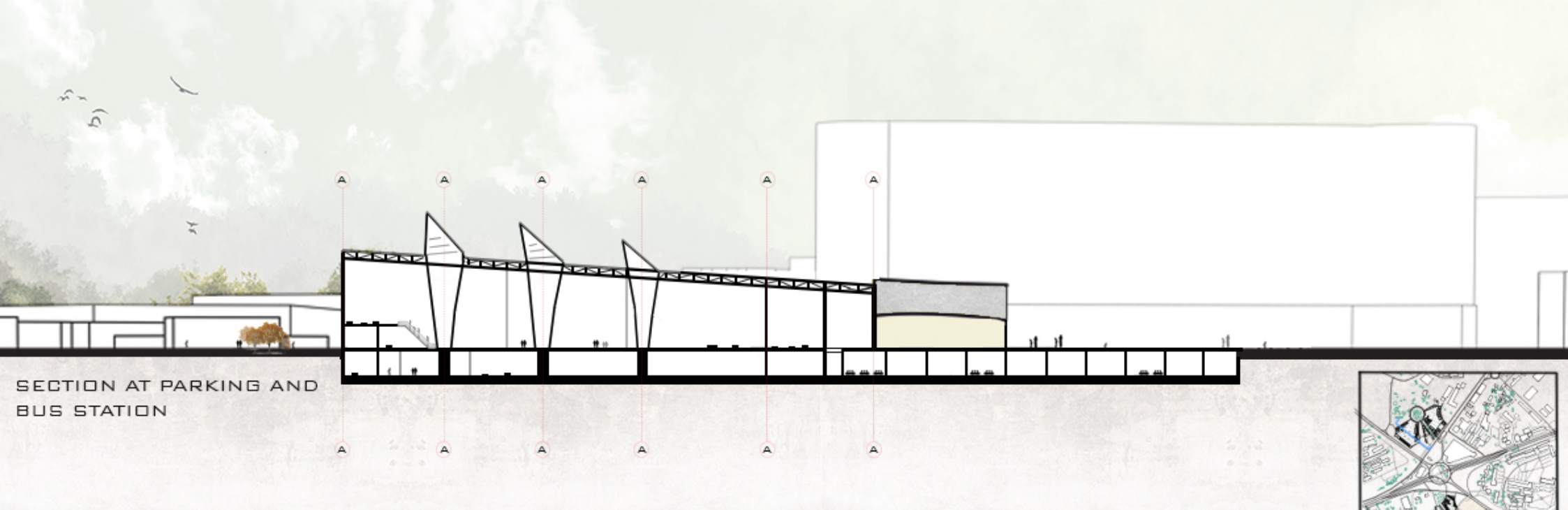
UNDERGROUND LEVEL



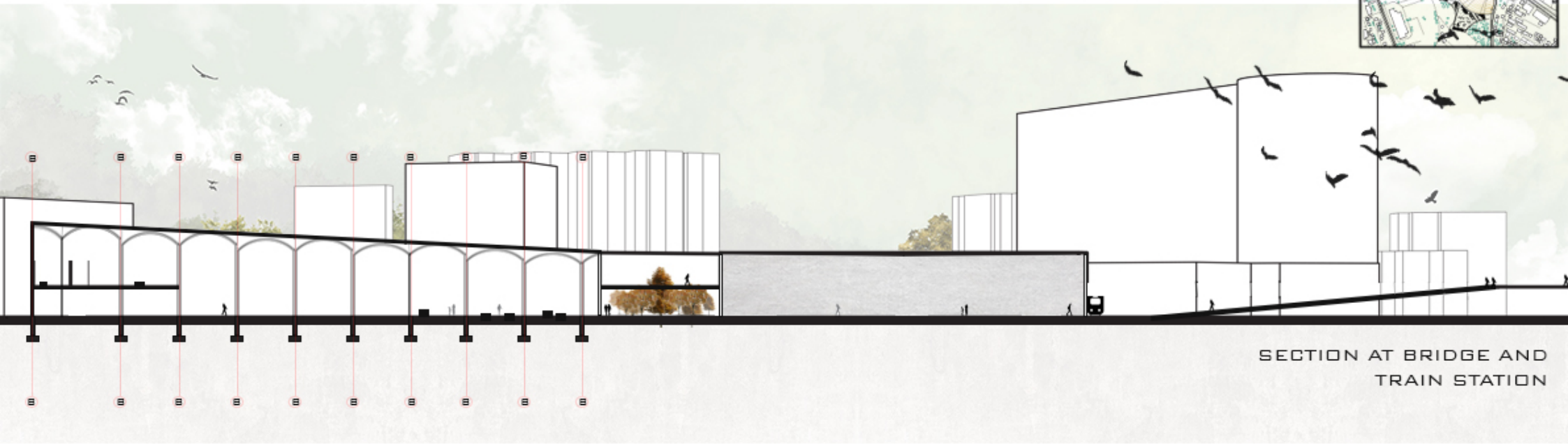
526 PARKING LOTS

1:500

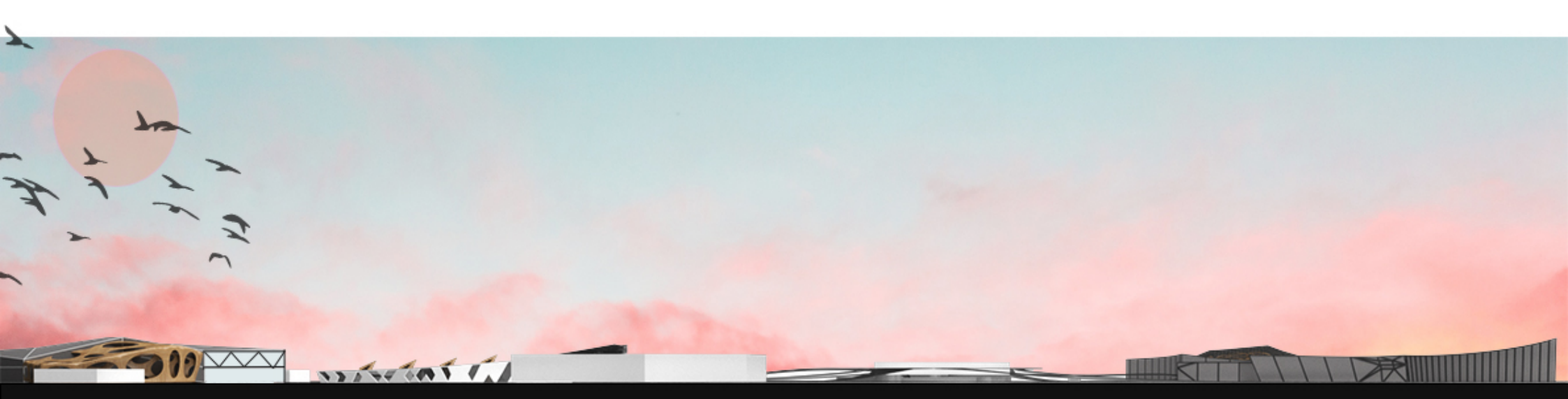




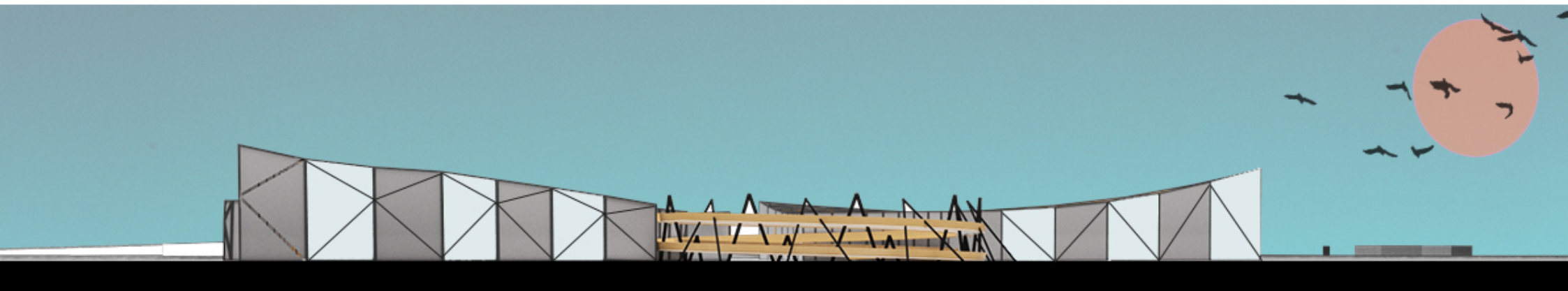
SECTION AT PARKING AND  
BUS STATION



SECTION AT BRIDGE AND  
TRAIN STATION



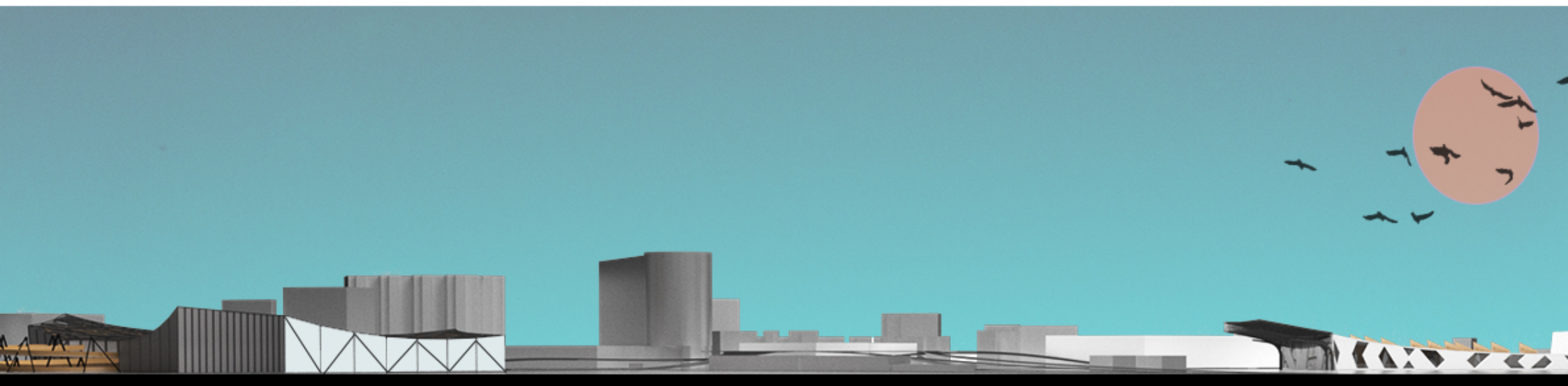
EASTERN FASADE



NORTHERN FAÇADE



SOUTHERN FASADE



WESTERN FACADE

OFFICE WORKERS



PASSENGERS



STUDENTS



• TARGET ACTIVITIES



• TARGET ACTIVITIES



• TARGET ACTIVITIES



• MODE OF TRANSPORT



• MODE OF TRANSPORT



• MODE OF TRANSPORT



## KIDS



### • TARGET ACTIVITIES



### • MODE OF TRANSPORT



## FAMILIES



### • TARGET ACTIVITIES



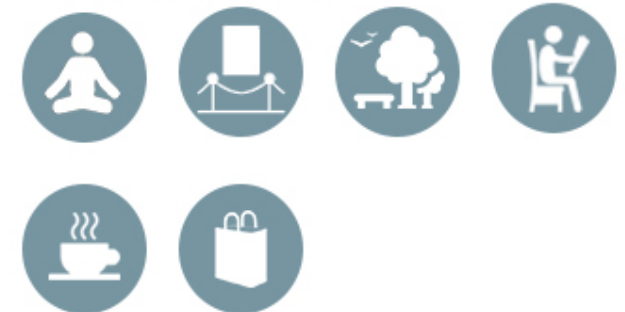
### • MODE OF TRANSPORT



## ELDERLY



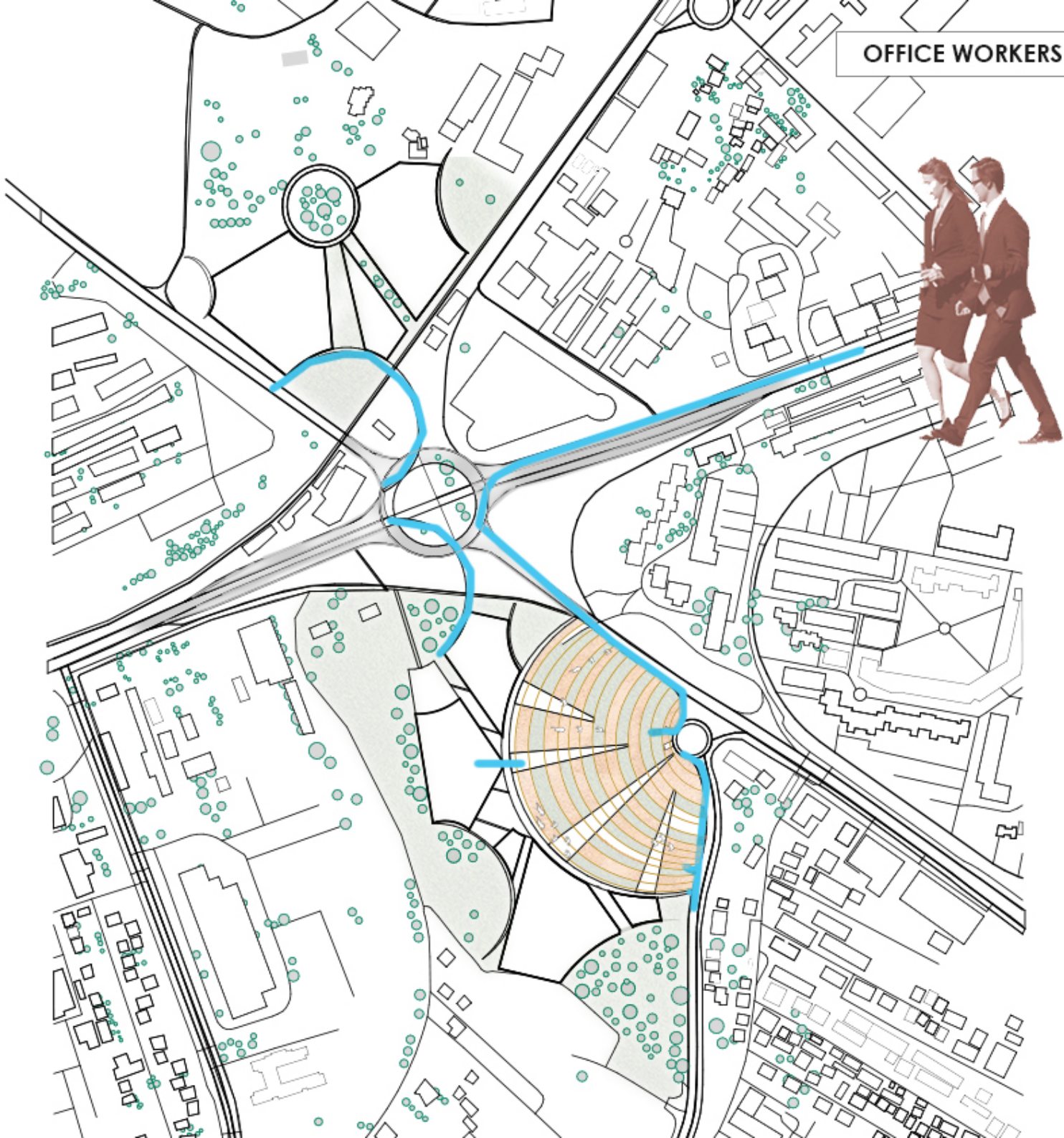
### • TARGET ACTIVITIES

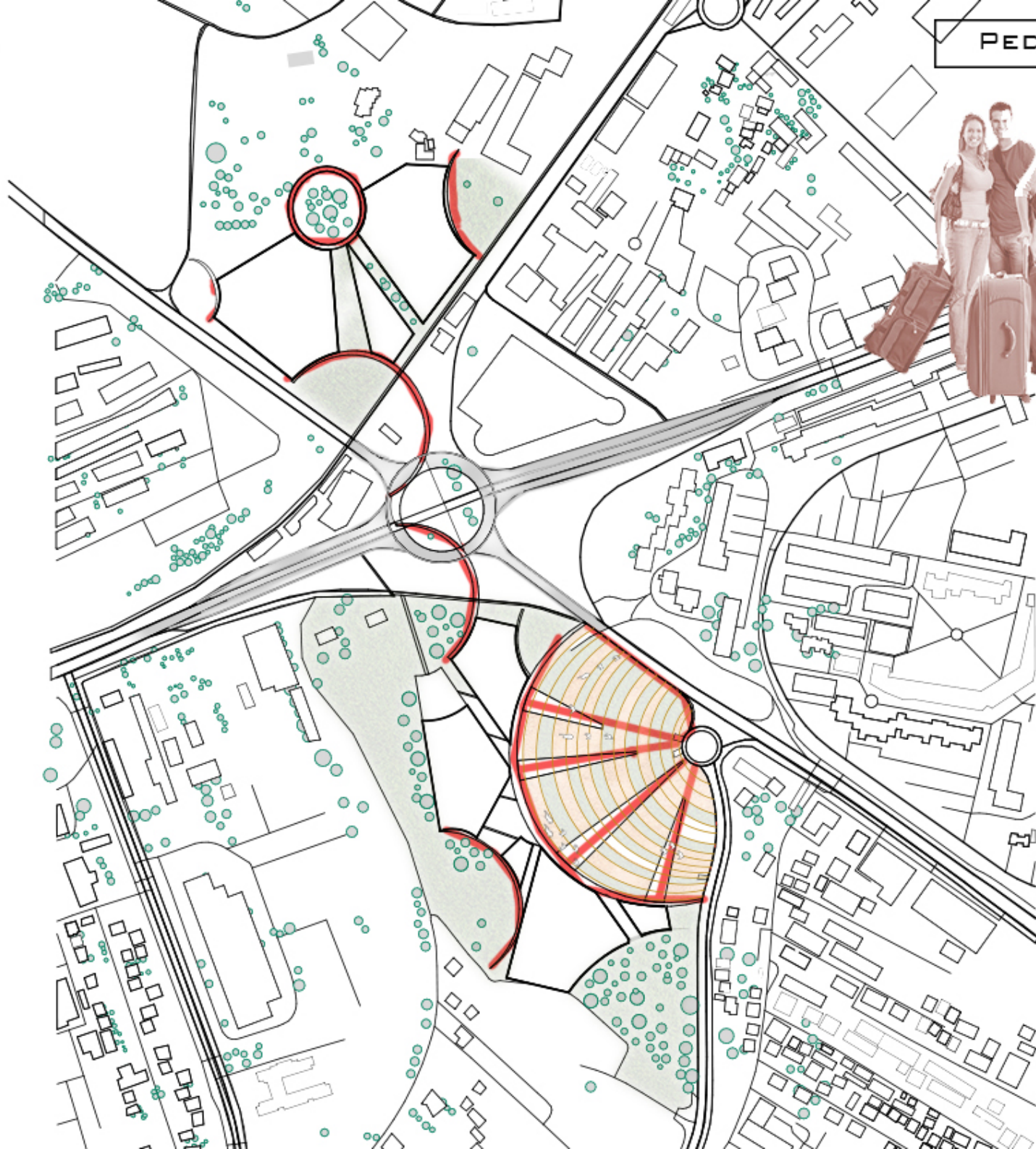


### • MODE OF TRANSPORT

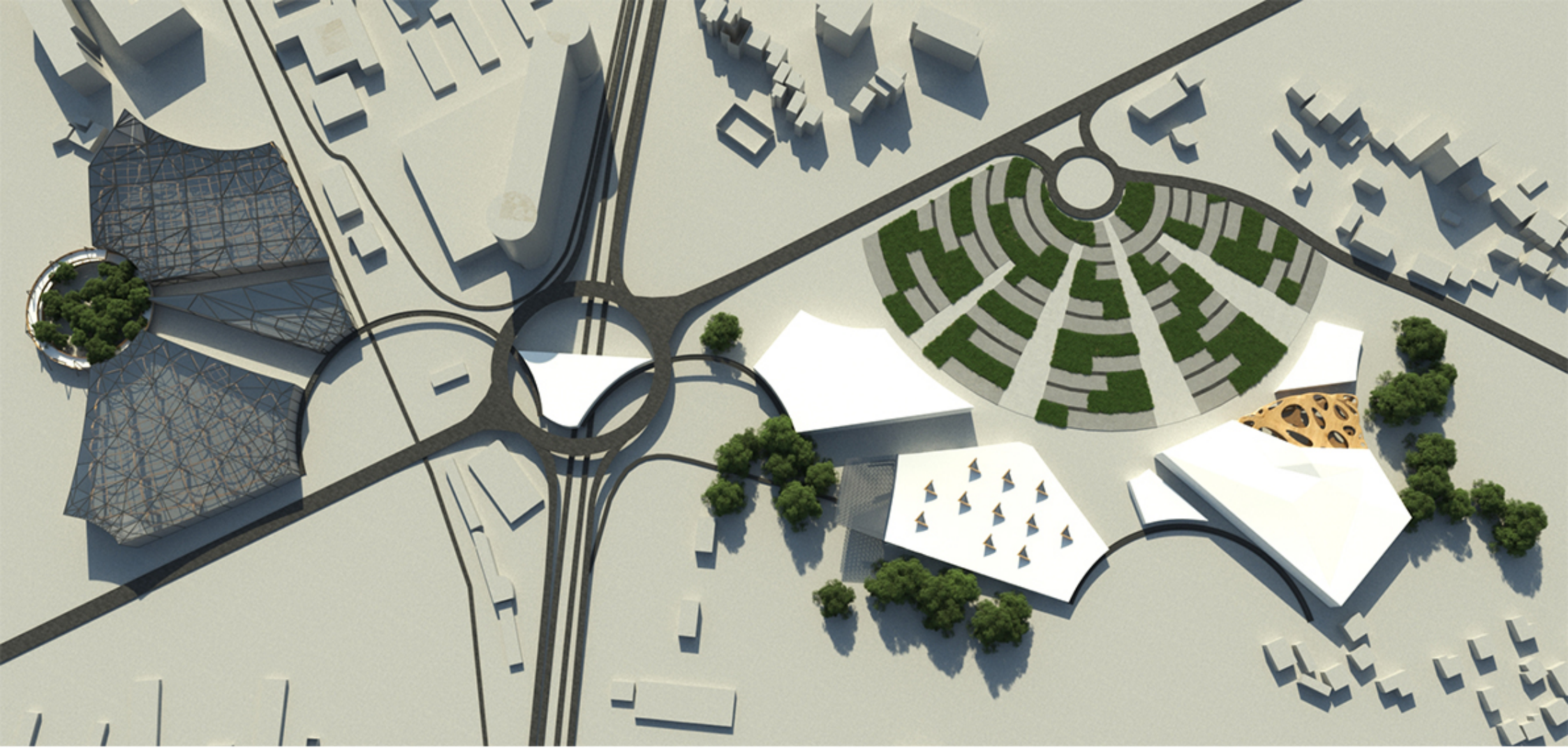


OFFICE WORKERS









TOP VIEW

