# FLOWING TIME FLOWING SPACE

SCHOOL OF ARCHITECTURE, URBAN PLANNING AND CONSTRUCTION ENGINEERING

NO. 860191 YAOLIN ZHANG

POLITECNICO DI MILANO BACHELOR OF SCIENCE DEGREE IN ARCHITECTURAL DESIGN A.A. 2018/2019 FEB. 2019

"A proper building grows naturally, logically, and poetically out of all its conditions."

-Louis Sullivan-

### <u>Abstract</u>

When *Ludwig Mies van der Rohe* created the Barcelona Pavilion in 1929, it was considered an instant milestone in the joining of free art and architecture. By placing Georg Kolbe's sculpture *Morgen* in the small water basin where all the optical effects would have the strongest impact, *Morgen* really became a "key point" within the open-plan *"flowing space"*. Autonomous sculpture and architectural space mutually complemented one another, making sculptures no longer to be applied to the building, but rather to be a part of the spatial design, to help define and interpret it. What if architecture plays the roles as a sculpture? A sculptural architecture stands naturally and poetically in the context, rytheming while people passing by, making a still work of art come alive. In this portfolio, selected works will be presented to showcase how design strategy Flowing Time Flowing Space answer to contemporary architecture.

Flowing Time Flowing Space	Moscova Civi	
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## ic Center

Art & Frame	City of Soul	Со
21	31	

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## Conclusion

39

### Flowing Time Flowing Space

/ Nine-square Problem

Project from Architectural Design Studio 2 2016/2017 | AUIC – Politecnico di Milano

a cura di / curated by

Prof. Cozza Cassandra Prof. Fabris Luca Maria Francesco Prof. Quaglini Virginio

Nine-square problem is an exercise carried out at the beginning of the second year design studio. It is a didactic tool introduced by Hejduk, J. seeking to reveal and test elements, relations and conditions. During this exercise, we were asked to design a space without a specific function, allowing us to focus more on the composition, circulation and the architectural theme.

Design Strategy:

The Nine Square Problem starts from the subdivision of a square into nine others. Instead of highlighting the rigid grid and structural forces, I tended to hide the internal columns. A combination of circular walls were placed inside the void. They covered the existing columns and were designed into various scales to define the static time respectively. Openings on the circular walls created guidelines, leading visitors walk through the space. Thus, time and space were linked together.

Progetti di / Projects by

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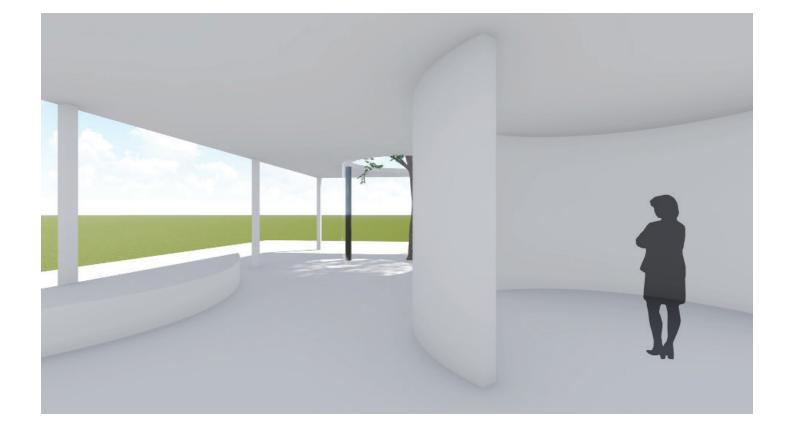














### Moscova Civic Center

Project from Architectural Design Studio 2 2016/2017 | AUIC – Politecnico di Milano

a cura di / curated by

Prof. Cozza Cassandra Prof. Fabris Luca Maria Francesco Prof. Quaglini Virginio

The Moscova Civic Center is an extension and optimization of two existing facilities: Play More and Media library of S. Teresa. It is located in the historical center of Milan, at the cross of Duomo di Milano-Garibaldi and two most important parks of Milan: Park Montanelli and Park Sempione.

The project aims to reopen and reconnect this area to urban life, meanwhile, providing a better environment for social activities, sports, entertainment, education and exhibition.

The project comprises five elements: glass façade exhibition center, piazza with shallow water, underground basketball and soccer field, underground interior entertainment and a sport pavilion with volleyball and swimming pool.

All innovations, emerging with the old church and highlighting the identity of the site, create a modern piazza for the community.

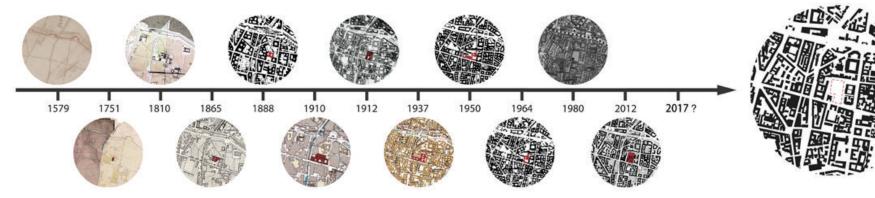
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Historical Map Analysis





There were two architectures built on the site in the history. The church of San Carlo was built in 1615. The plan of the church is a Latin cross with an apse to the north. In 1802, the church was transformed into a tobacco factory to manufacture pipe tobacco, cigars and finally cigarettes. The building was further expanded in 1841 and 1856. The factory was badly damaged due to the bombing in 1943. The site was redeveloped as an underground parking in 2008. In addition with a piazza with trees, public seating and fountain. In place of the convent and the church, a soccer field, basketball and athletics tracks are built.



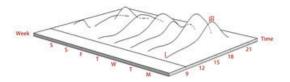
### **Site Analysis**

The project is located in Via Della Moscova and Corso di Porta Nuova. The rectangular site is sitting on a four-level underground parking lot surrounded by apartment buildings and a hospital at the back. The old church at south west corner was renovated into a media library, with a piazza with trees and benches on the east of it. Play more is an open sport facility hidden behind a huge staircase enclosed by the boundaries. These visual and physical boundaries block the site from urban life. As majority of people visit with public transportation (Metro and bus), main flow of visitors is from Via Della Moscova. However, due to the access from both front and back, the path on the right of Play more has becoming a shortcut. Pedestrian, children, wanderer and patients to the hospital are using the same path, which becomes a potential risk of the site.

By analyzing the built forms, public sport facilities percentage, flow of pedestrian and traffic, Usage frequency, site history, space of relation, parking, urban green system and historical alignment, we saw the potential of renovating the original site as part of the social life of the community. Through the enhancement of its accessibility, openness, publicity and key identity, more and more people can benefit from it regarding fitness, communication, health, integration, happiness, knowledge, art and life quality.

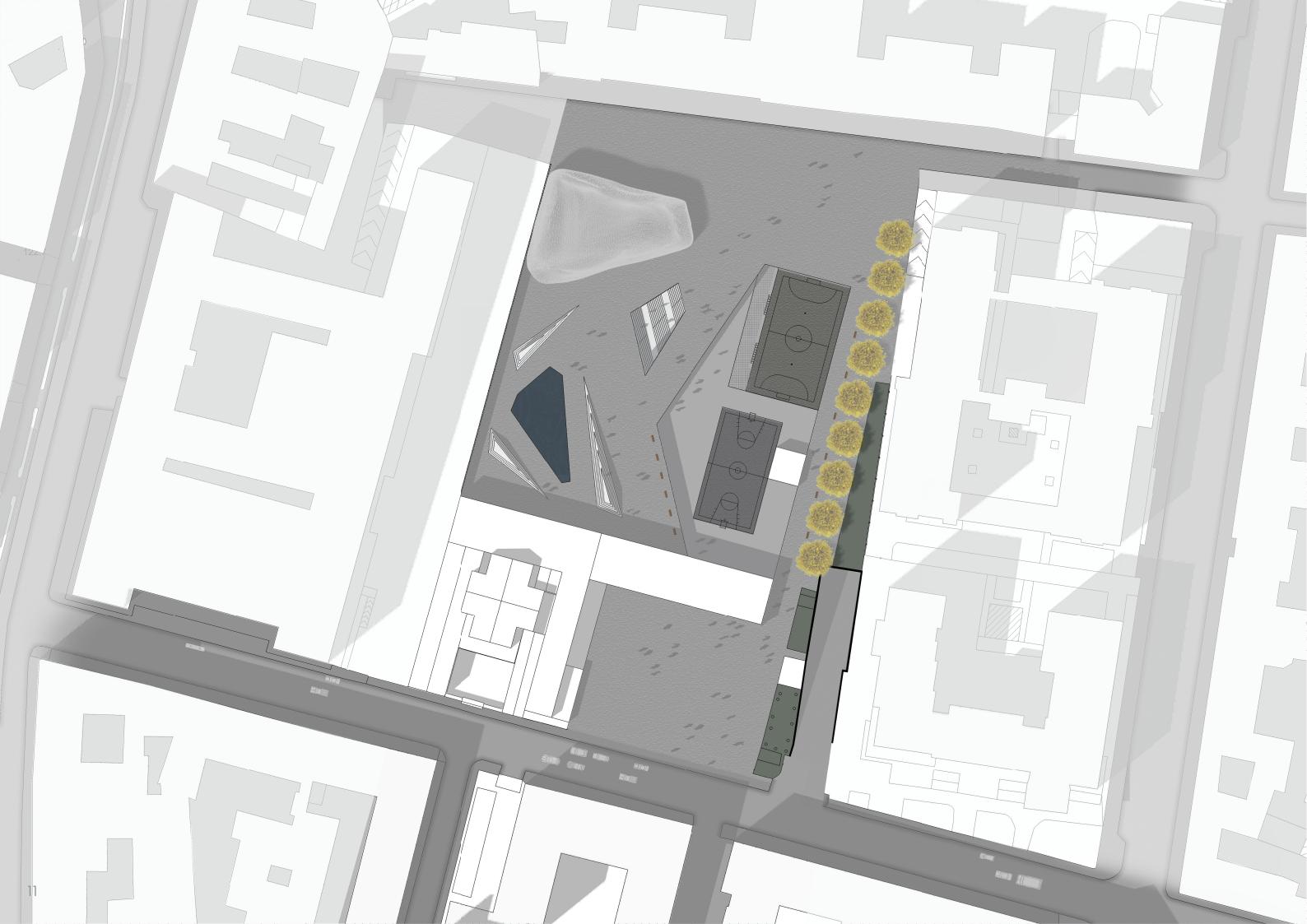


**Public Service - Sports** 



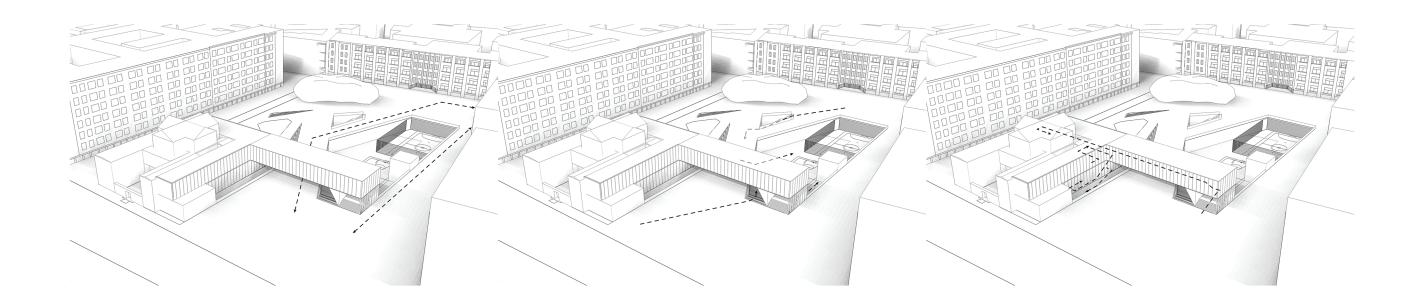
**PLAY MORE - Frequency of Use** 



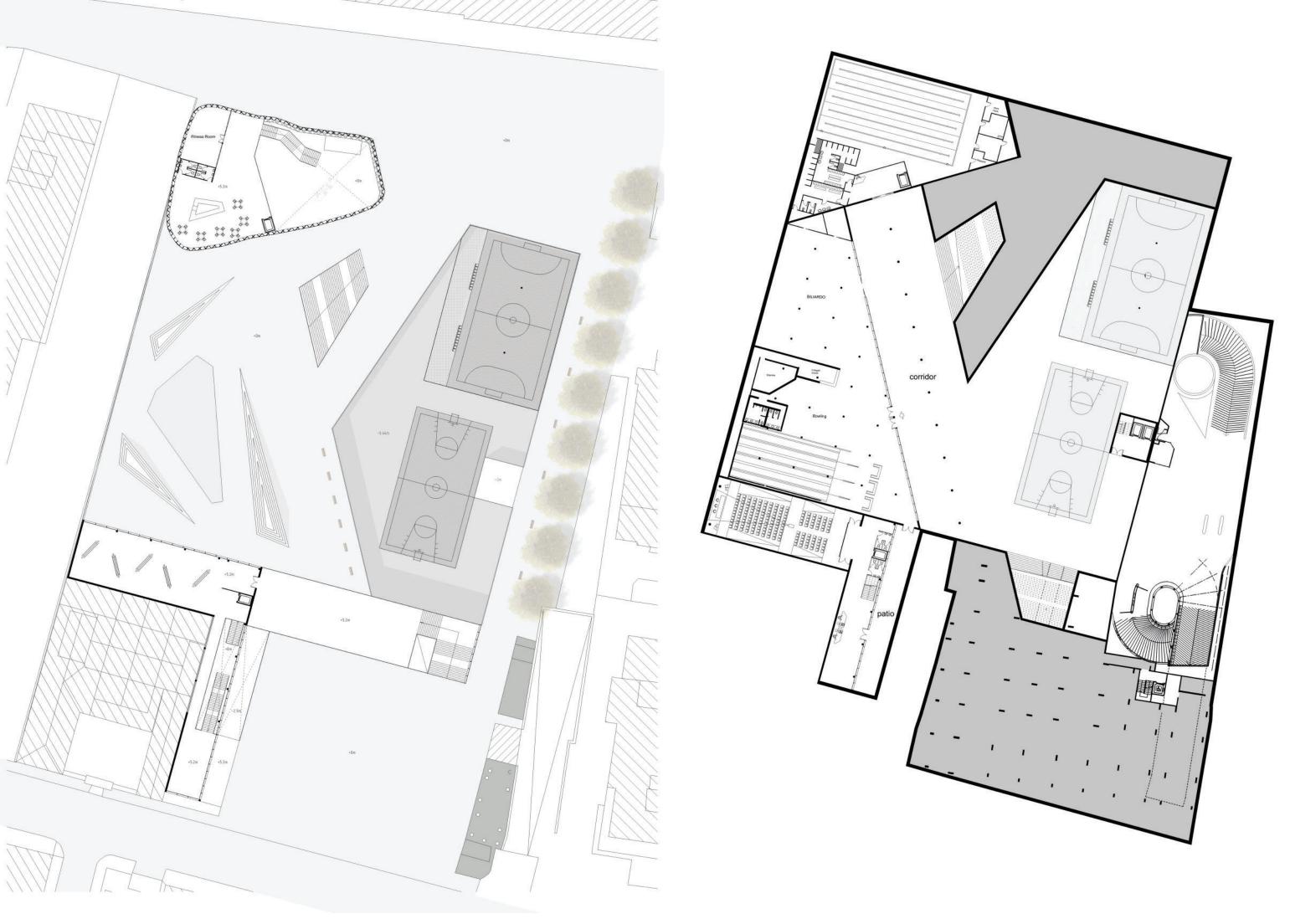


### **Design Strategy**

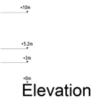
The design strategy of the project is to open up the piazza by eliminating all the physical boundaries primarily. Activities and space that are visually and physically accessible are more attractive and noticeable. Second step, we create a key building as an attraction point guiding visitor inside the piazza and make a restoration to the old church by adding a new glass façade architecture. This not only alleviate the abruptness of the strong religious identity to the site, but also harmonize the minimalistic design language. Third, in order to follow the alignment of the street and bring an entrance to the open piazza, an air corridor is designed aligning with the back façade of the exhibition center. It serves both as an entrance to the exhibition and open piazza. There is a great opportunity to overview the entire site from the air corridor. Fourth, the path, air corridor and the remaining shortcut shape the underground playground. By taking the advantage of level difference, we no longer need to create physical boundaries, so that people are able to experience a clear view to the site and activities.



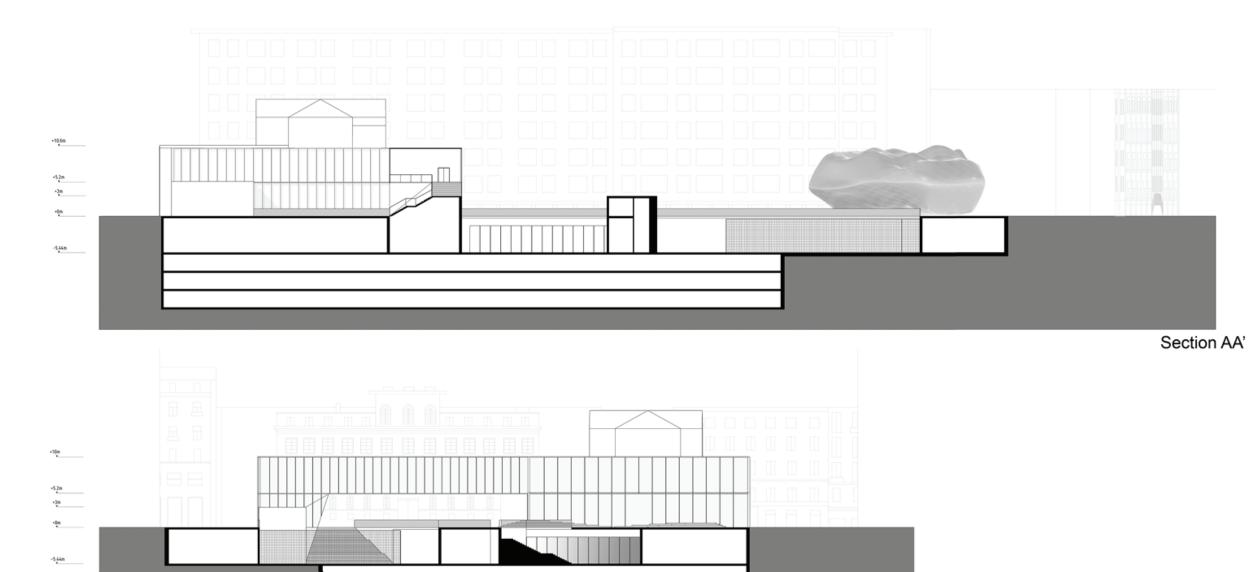




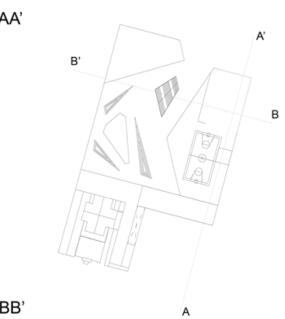




Elevation



Section BB'













#### Art & Frame

/ Architectural variations in the space of "Looking at Art" cultural association

Progetti degli studenti del Laboratorio di Progettazione dell'Architettura degli Interni 2017/2018 | AUIC – Politecnico di Milano /Student's projects from Interior Design Studio 2017/2018 | AIUC – Politecnico di Milano

a cura di / curated by

Prof. Yuri Mastromattei Prof. Cristina F. Colombo Francesco D'Aloisio Francesca Jorio Umberto Zanotti Cavazzoni

Art & Frame is a renovation project studied to meet the client's desire to have multiple scenes into a sole interior: a workplace, a venue for the cultural association "Looking at Art" and a temporary art gallery to exhibit a collection of art pieces signed by young artists.

Due to the special location of the association and the requirement of privacy of the client, the threshold becomes determinant. To highlight the significance of the transition from a public to a private sphere, the project presents a minimalistic double-façade system which directly announces the nature and function of the space: the centre is first and foremost a place devoted to study and host cultural meeting, but the façade system also suggests the possibility of displaying temporary art exhibitions. The real entrance is set on the diagonal corner of the void, which visually extends the dimension of the interior.

The spatial configuration allows to create a relatively versatile space. A mezzanine divides the horizontal space into a public and a more intimate area, furnished with tables, armchairs, kitchenette facilities and a concealed drinks bar. The full-height public area allows a good communication with the mezzanine level, reserved to more private activities. Getting rid of the vertical wall in the middle, also means the sunlight is brought back again to the front. The use of off white polished concrete enhanced this idea.

Metal frames, blank walls and the ending of the corridors are designed to maximise the hanging space. The colour palette is kept minimalist and neutral to align with the gallery's sensibility. The original floor texture and rear windows design are maintained, to preserve the identity that Piero Portaluppi conferred to the interior. The design emphasises the connection of the diagonal spaces.

Progetti di / Projects by

Yaolin Zhang, Yaochen Wu, Kejin Kuang



LOOKING AT ART ASSOCIAZIONE CULTURALE







The double-façade system allows you to see the interior and directly announces the function as an office. It keeps the privacy of the office and also suggests the possibility of displaying temporary art exhibitions.



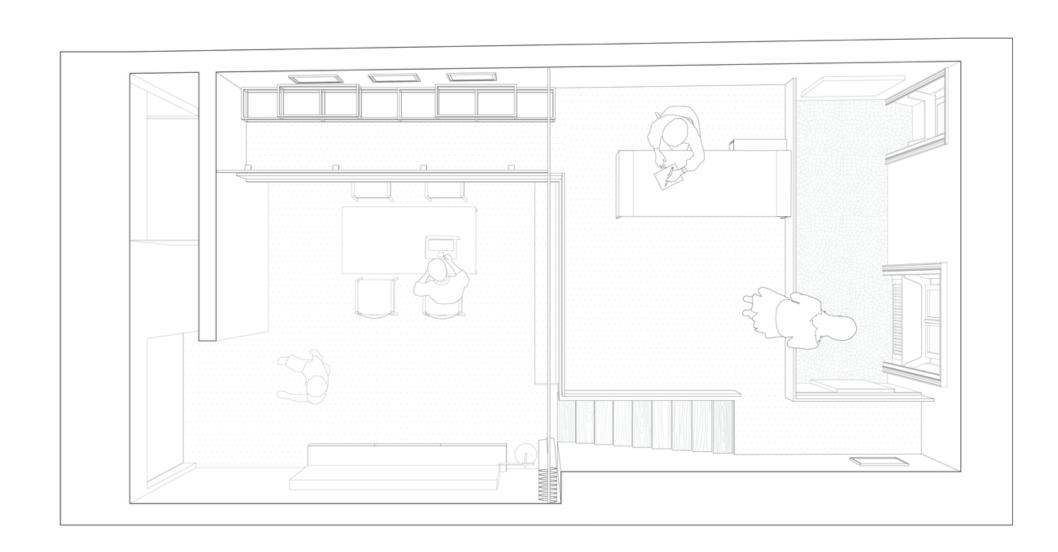
The entering space highlights the significance of the transition from a public to a private sphere. The mirror brings the sunlight back to the front and create a special human experience before you enter the office.

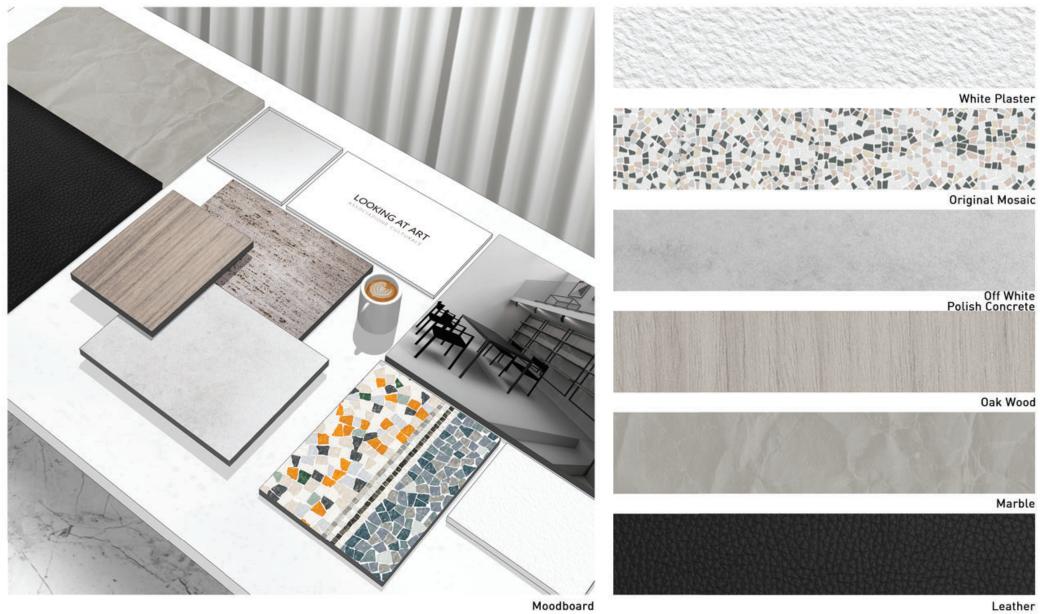


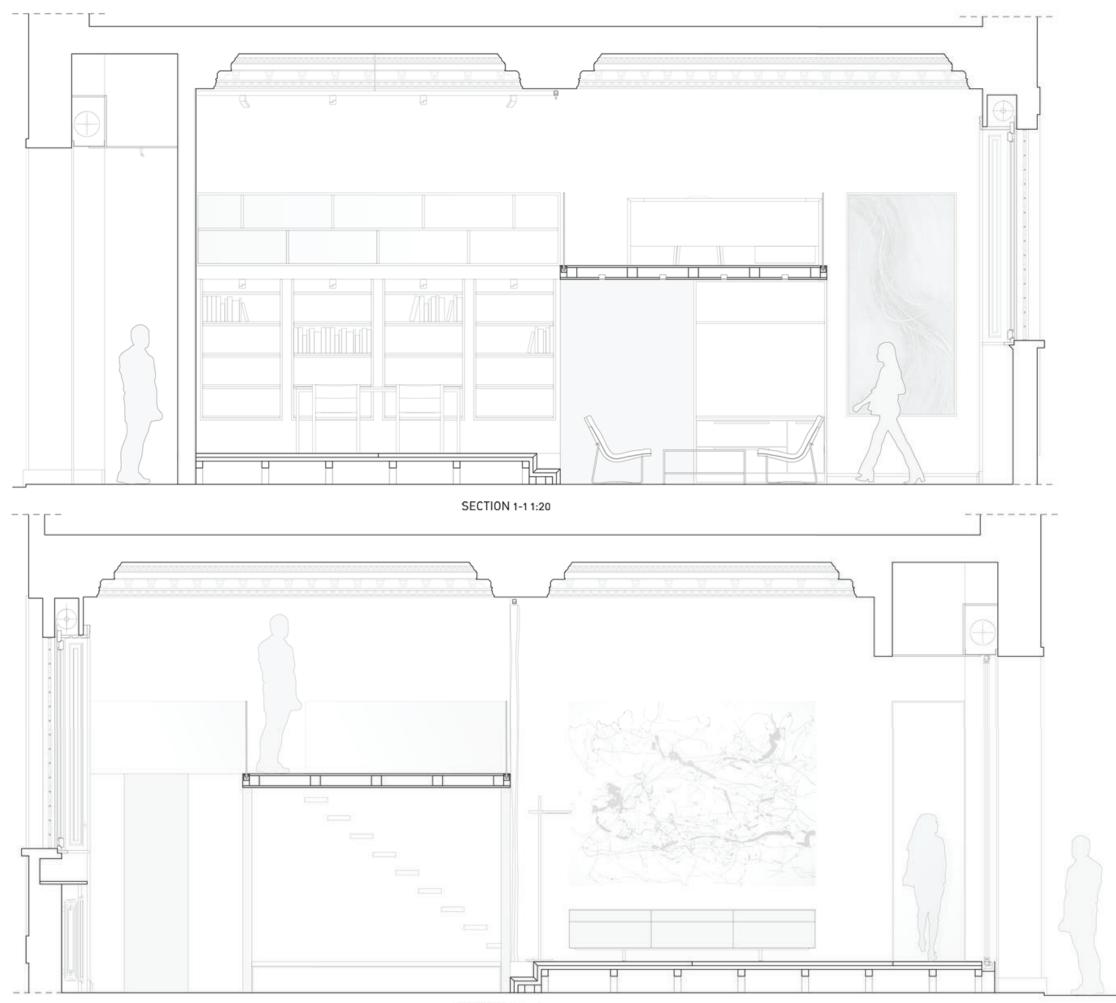
The thick curtain lower the general light level for the inner space and provide the privacy for the study area.



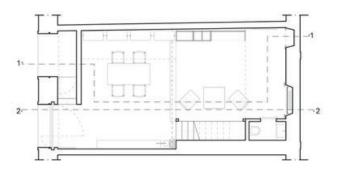
By opening the curtain, we create a continuous space without any physical boundaries.







SECTION 2-2 1:20



### LIGHTING SYSTEM 1:5

#### turn



material weight voltage cri wattage dali rotation inclination aluminium coated 380gr / 0,83lb 24Vdc >90 9,6W supported (option) DT6 355° 90°

#### dot



material weight voltage cri wattage dali rotation inclination aluminium coated 80gr / 0.17lb 24Vdc >90 3,6W not supported 4 steps of 90° 90°

#### in



material weight voltage cri wattage dali aluminium coated 260gr / 0.57lb 24Vdc >90 16,5W supported (option) DALI DT8 tunable white





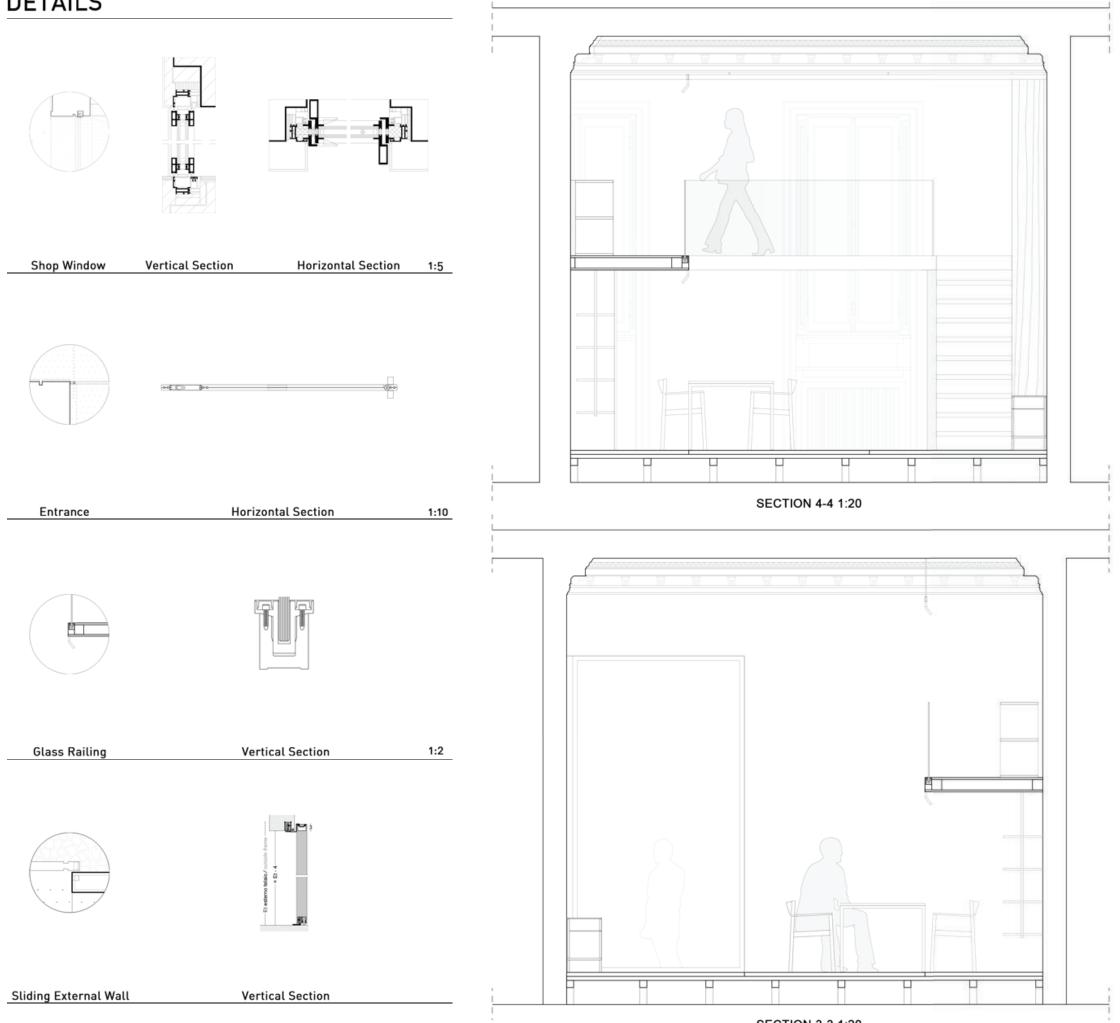
#### HIDDEN TOILET

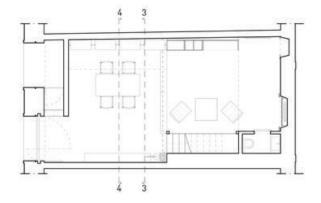




ECHOING CABINET DESIGN

## DETAILS

















### City of Soul

#### / The Rebirth Of The Prosperous Palmyra

Project from Architectural Design Studio 3 2017/2018 | AUIC – Politecnico di Milano

a cura di / curated by

Prof. Magni Camillo De Matteis Andrea

City of Soul cemetery project happened in the ruins of ancient Palmyra, a UNESCO World Heritage Site, situated just about 500 metres southwest of the modern city centre.

Once called the "Pearl of the desert", Palmyra, due to the outbreak of the Syrian Civil War and the rise of ISIS, has been badly damaged. Ancient wonders such as the Temple of Bel, the Temple of Baal Shamin, the Arch of Triumph, and columns in the Valley of the Tombs were destroyed.

On this occasion, An oxymoron was pointed out:

How to answer to the need of reconstruction and the memory of deconstruction?

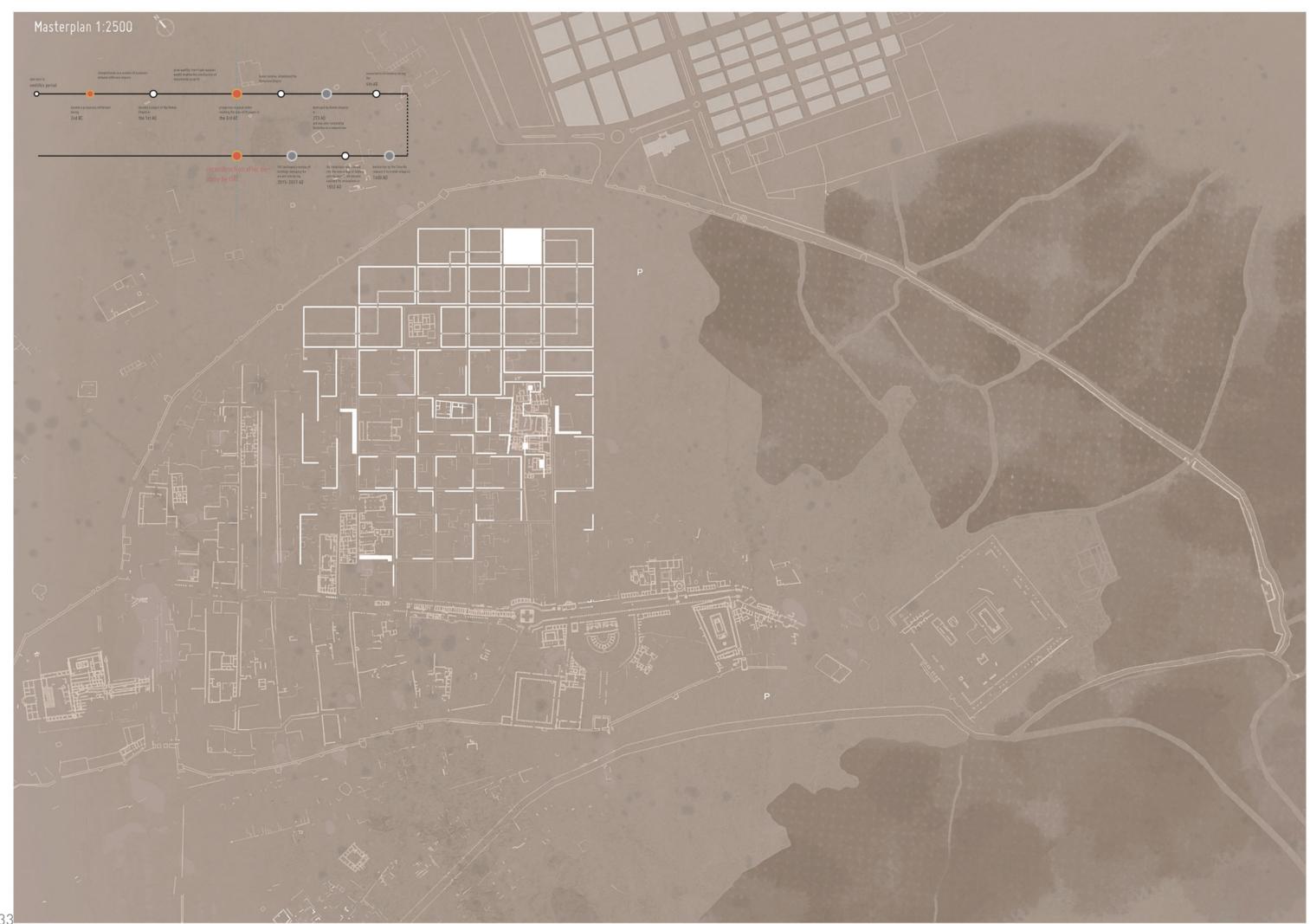
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Yaolin Zhang, Yaochen Wu, Linchen Song









## Design Strategy

Looking back into the historical timeline, we found out that Palmyra has been destroyed multiple times in the history. Therefore it is our understanding that the reconstruction should not merely memorize the death and destruction caused by ISIS, but reconstruct the prosperous palmyra.

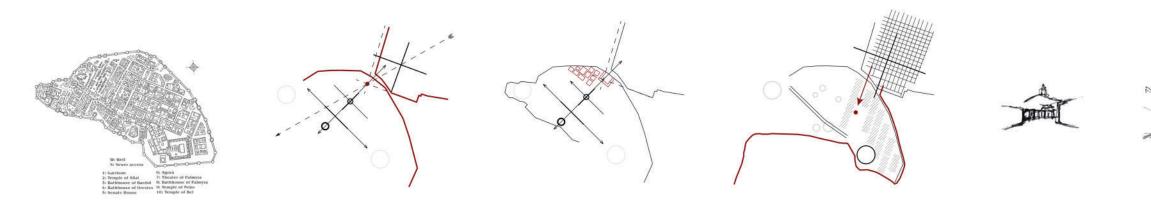
Taking funeral parlor as the axle center, The project with the design following the ancient City planning, looked northeast at the modern city centre. The project was divided into 3 stages: built cemetery, archeology park and future development.

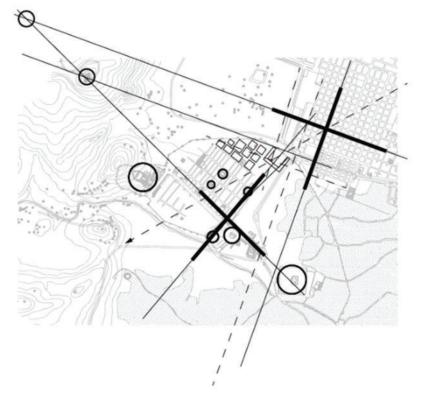
The first stage, built Cemetery, carried out by blocks, surrounded the funeral parlor. It was divided into three regions, Islam, Christian and unknown. Entrances on the enclosure walls connected the blocks consistently, creating a parallel path together with the main flow.

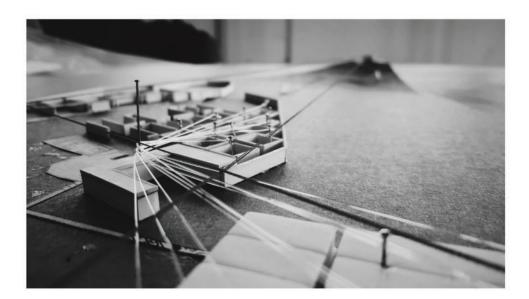
Walls in the second phases were carefully designed to distinguish the area. Drew inside the memory of the place, these walls marked the new entrance and invited people to contemplate from a new angle the monument. They are also used as guidelines for the people inside. Openings on the wall facing the ruins highlighted the passing time. Ancient wonders were protected. By building bridges and overwatches, restoration and recovery work could be carried out. Visitors may see them again.

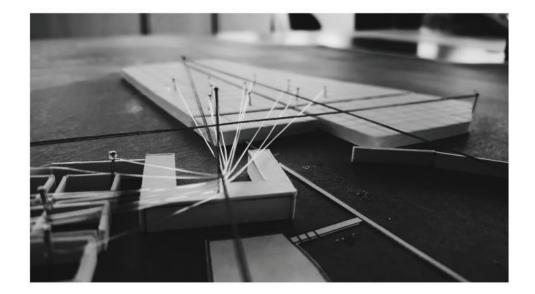
The third stage will lead people to a growing city, letting the citizens enlarge and finish the project in their way, bring the people back , bring the ancient palmyra back.

City of soul created two different human experiences from two altitudes. From the mountain top, City of soul restored the shape of ancient palmyra, turning the project into a huge sculpture. From the ground level, the cemetery blended into the archeology site, revealing the relationships with the environment, where any path is a succession of changing sequences, drawing different perceptions and allowing to re-read and re-understand the same surrounding landscape.



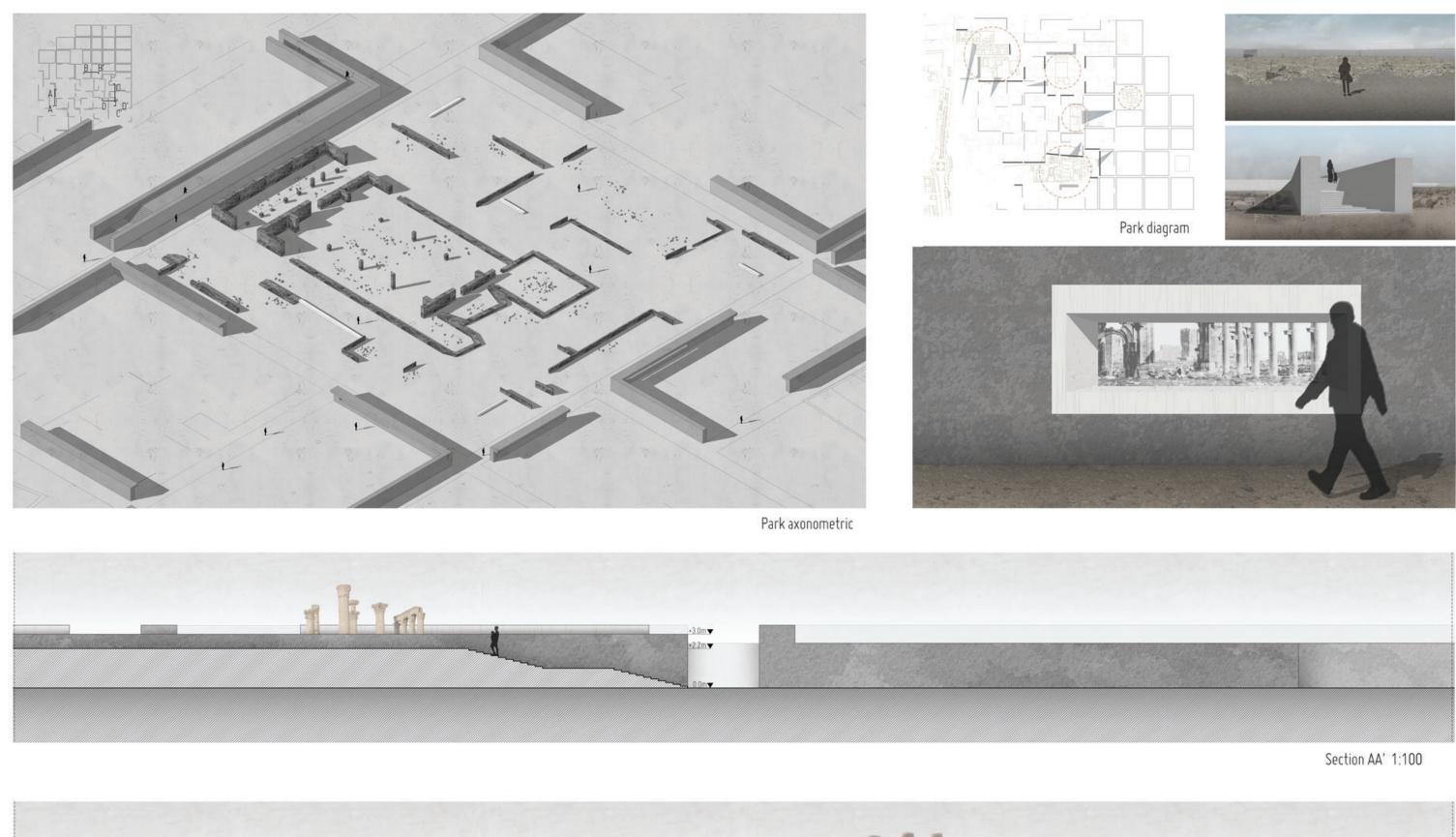


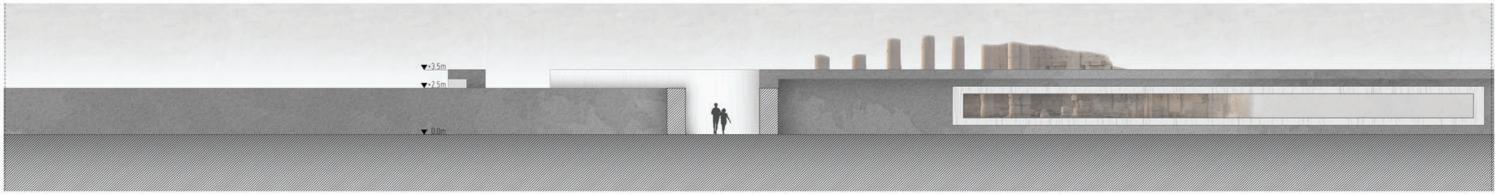


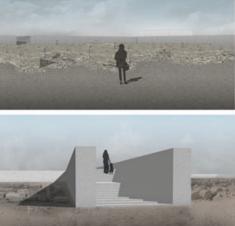




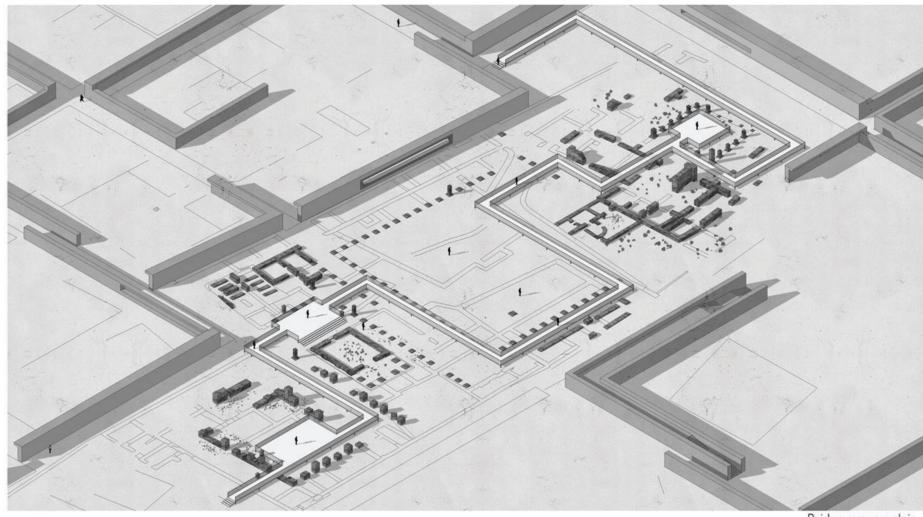


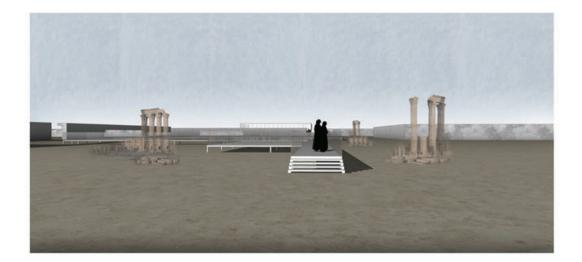






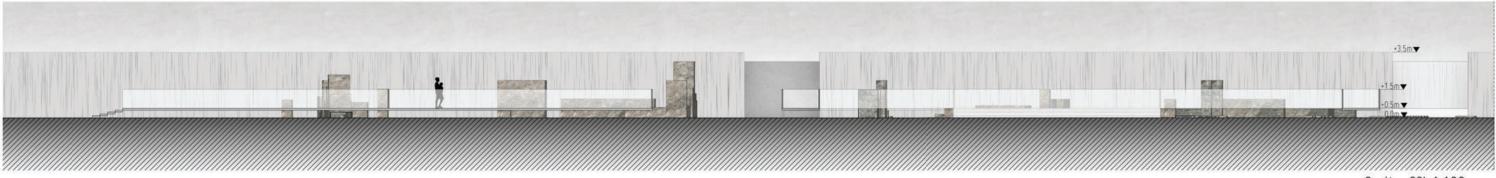
Section BB' 1:100

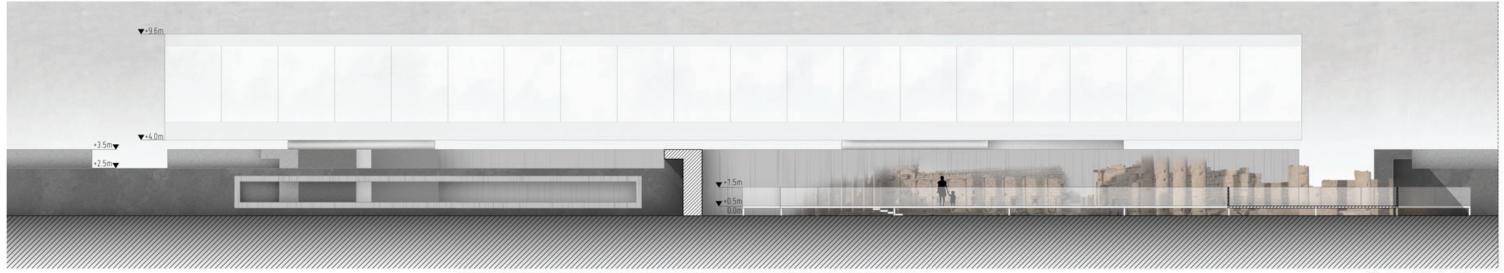




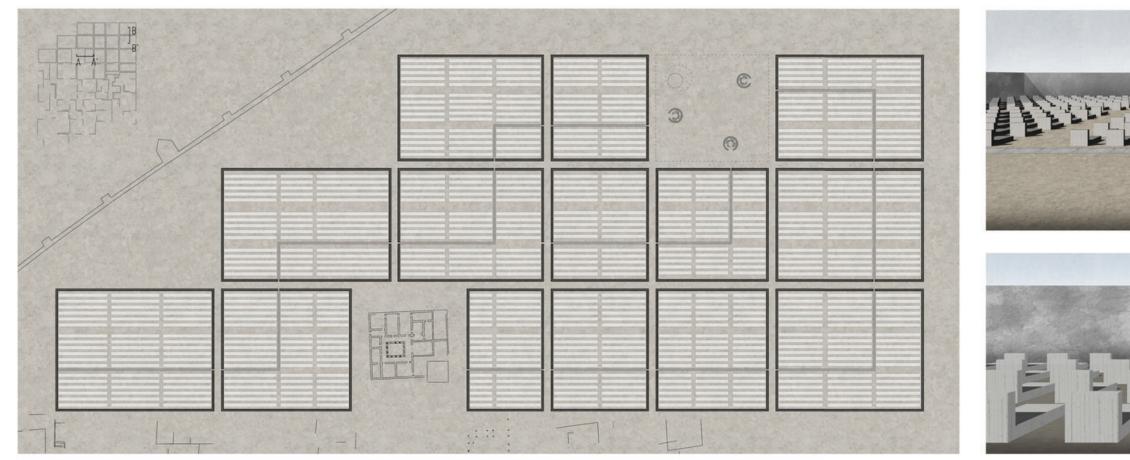


Bridge axonometric

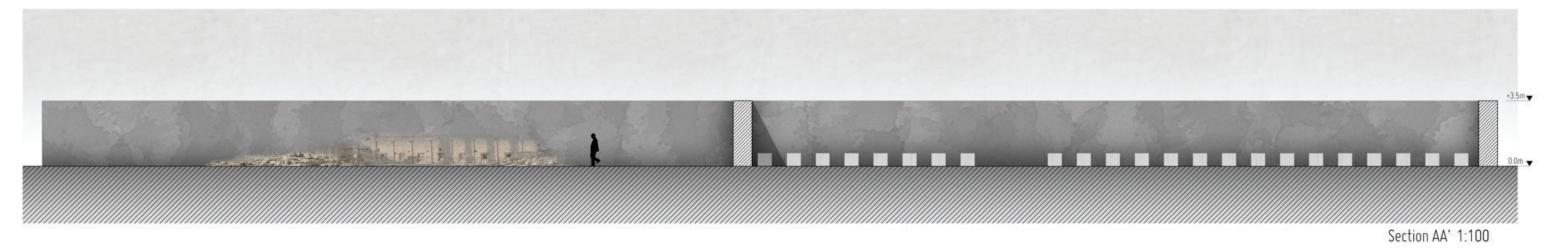


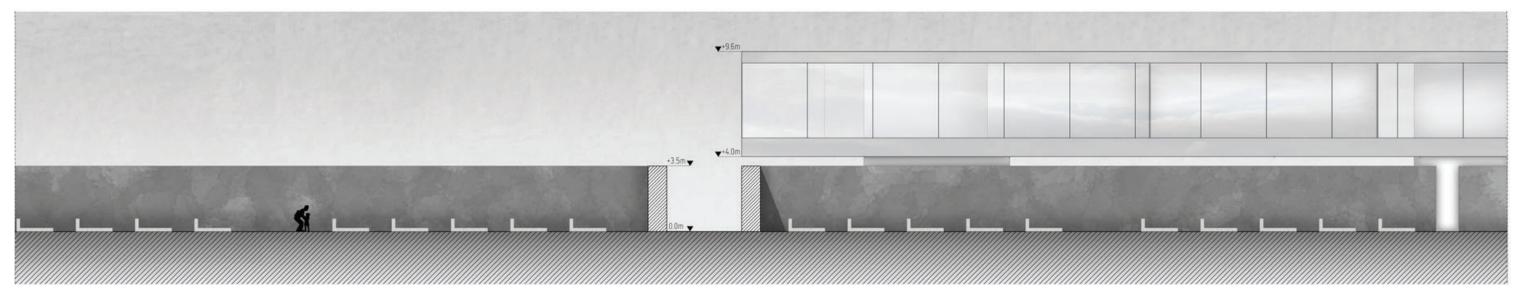


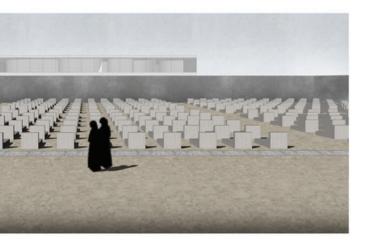
Section CC' 1:100



Cemetery plan 1:1000

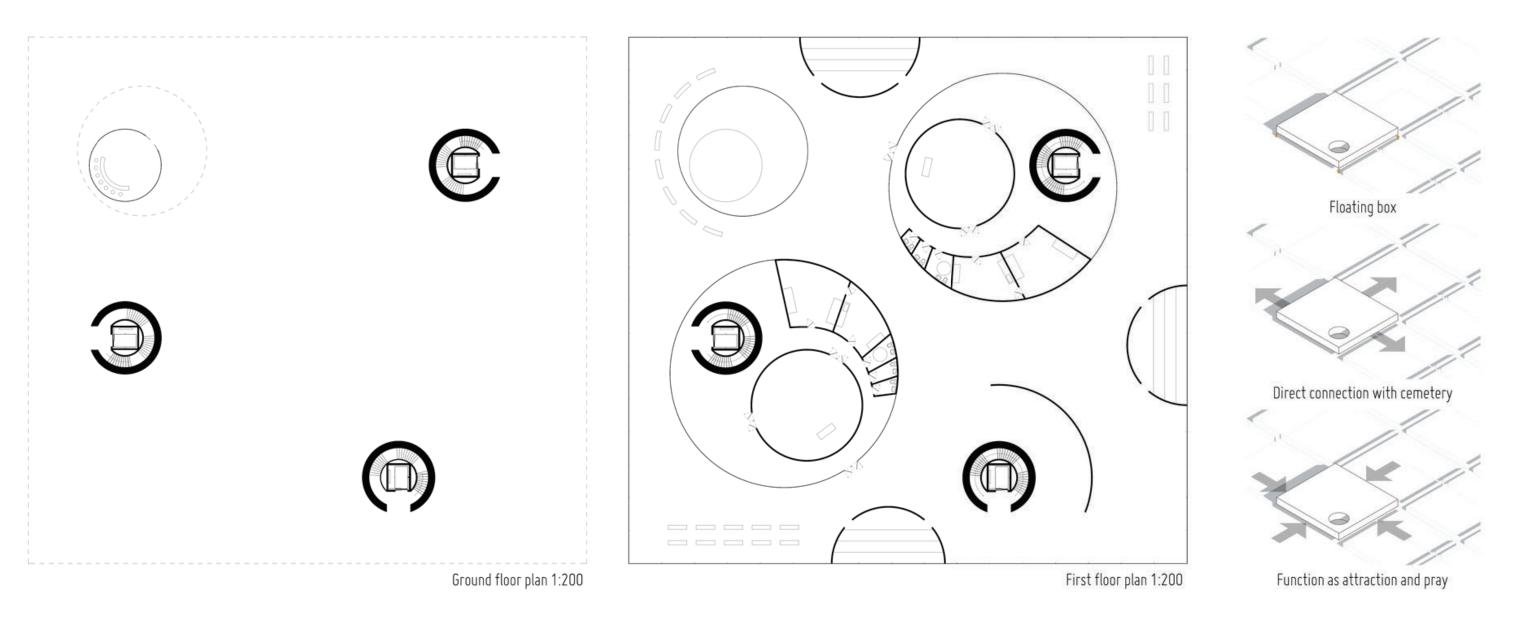


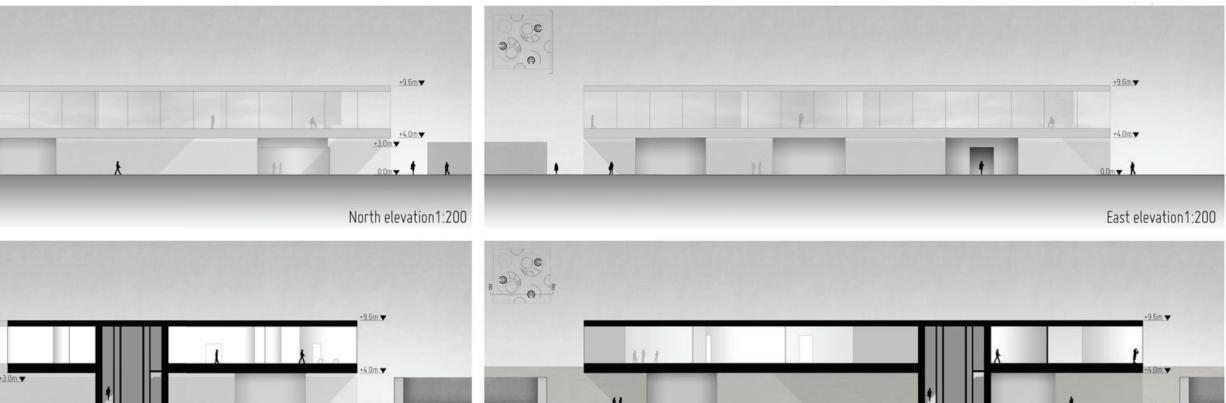


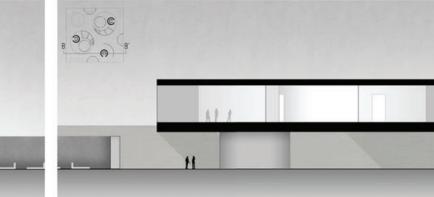




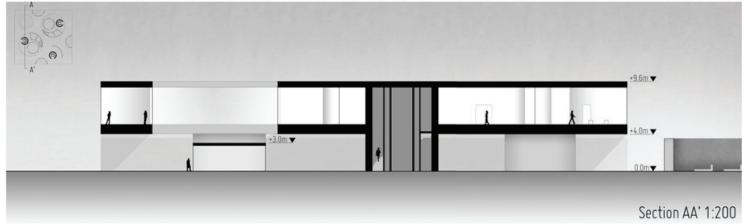
Section BB' 1:100











Section BB' 1:200 38

**Flowing Time Flowing Space** was a concept firstly mentioned during the second year design studio. It was meant to be applied to a void without any specific function to test and reveal elements, relations and conditions. After two years of practicing, it gradually became a design strategy which can be applied to various scales of projects. Projects vary from the macro-level (urban design, landscape architecture) to the micro-level (interior design and furniture). The focusing point of Flowing Time Flowing Space remained unchanged throughout the time – to create a better human experience. An experience people can actually feel.

Two aspects are relatively important in an urban scale project: *contextualism and sculpturalism*. Nowadays many projects and understandings of contemporary architecture have left contextual design behind. Context is sacrificed to build an artificial identity and brand. Many projects don't look like something belong to the environment.

Louis Sullivan once said "A proper building grows naturally, logically, and poetically out of all its conditions." Architecture should stand in the environment aesthetically and naturally and the structure is designed in response to its urban and natural environment.

Thus research work stands out as a crucial design tool. Each project bears its unique set of contextual issues. A critical probing into the specificities of program, site, function, and history is essential to the creation of the property and the design of the work.

After the research work, initial design process begins. Results from the research lead the process to the partition of the site and the definition of main walk flow. Diagrams are used to determine flow space and static space. In my theory, spaces will be divided in to three types: zero, one and two, referring to static space, space where activities happens and main walk flow respectively. Three numbers also refer to different amount of time people spent in that zone.

Guidelines were always carefully thought in each project, from key building at the end of vison in Moscova Civic Center, vertical walls that extend into the cemetery in City of Soul to threshold designed to showcase the void in Art and frame. They were all designed from eye level and human scale. However, it still works the best in Nine Square Problem where traditional Chinese design strategy in Classical Gardens of Suzhou "Varying sceneries with changing view-points" has been used. A new view emerged with each different step.

In a larger scale project, experience can be layered. In the project City of Soul, it created two different human experiences from two altitudes. From the mountain top, City of soul restored the shape of ancient palmyra, turning the project into a huge sculpture. From the ground level, the cemetery blended into the archeology site, revealing the relationships with the environment.

Whereas in a smaller scale project like art & frame, Flowing Time Flowing Space works more into details, materials, textures, colors and design language. People became more sensitive about the space. So during our practice, instead of treating it as an interior renovation project, it's much more challenging to treat it as a interior architecture project. Studying the history of the void, light effects, sun path and structure etc. Furnitures were carefully chosen, some of them were even designed by ourselves.

*Flowing Time Flowing Space*, a design strategy starts with research and exploration on contextualism and sculpturalism, answer to the contemporary architecture.

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www.yaolinzhang.com