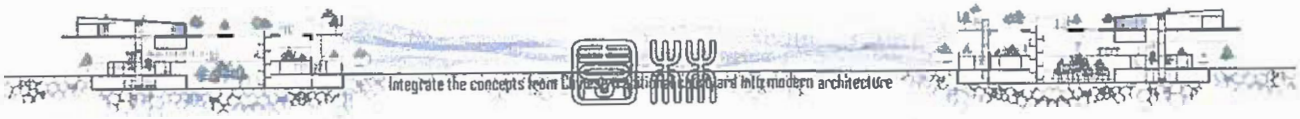

integrate the concepts from

CONTENT

Statement

From ancient Greek architecture to modern architecture, the evolutionary history of Western architecture is complete. However, the evolution of Chinese architectural history is incomplete. With the invasion of Western architectural culture and the growth of China's population, Chinese architecture have directly entered Western modernist architecture. This makes most buildings in contemporary China have the characteristics of Western culture.As we know, each country has its own culture and traditions, thus the architecture in different countries should have their own style. But what the architecture of contemporary China should be like?`

Abstract

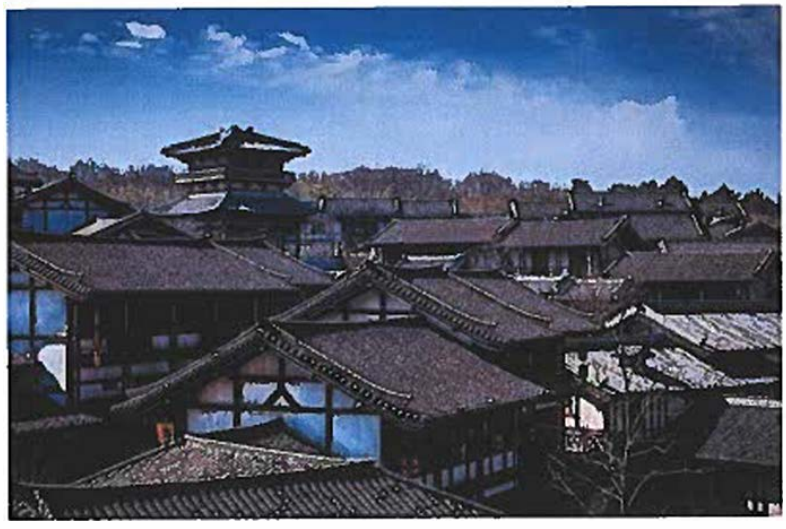
As one of the fastest-growing country in the world today, China only took a few decades to reach the achievements of the West for hundreds of years. In order to meet the needs of the population and the development of society, China's architectural development has completely replicated the Western architectural style. Although these buildings meet the development needs of China, they have made China's architecture lack of cultural heritage. And many Chinese architects today try to add Chinese elements to architectural design, but it is always too shallow to add Chinese elements directly.

From the history of Western architecture, when a architectural form develops to the extreme, people will explore a new form to continue to pursue the ultimate essence. For example, when the Baroque and Rococo buildings developed decoration to the extreme, it was discovered that this might not be the essence of architecture, thus the eclectic architecture was created. Architects integrated architectural features of each previous period into the building for exploring other development directions of architectural forms in that era, And these led to the emergence of modernism. Nowadays, modernism is coming to an end. Architects have proposed postmodernism and continue to explore the reality of architecture.

In contrast, the history of the development of Chinese architecture, due to the invasion of Western powers, led to the development of Chinese architecture into Western modernist architecture directly. This event has accelerated the evolution of China's architecture, but it make Chinese buildings lack the cultural of China. Therefore, architects should refer to the history of China and try to deduct contemporary Chinese architectural forms from history. In the history of architecture in China, the roof, material, and spatial form are different from those of the West. According to the deduction, the changes in the materials and functions of modern buildings will lead to the gradual simplification of Chinese architectural form, but it is different from the original form of the West, like long window and flat roof is impossible to appear in China. The modern architecture of China will still retain the elements of traditional form in facade, like upturned eaves, double-eave roof and bracket set. However, their form will not be as usual, but will use modern technology to carry out simplicity and abstraction to meet the aesthetic concepts of contemporary people.

Introduce

The form of the building can be divided into facade and space, and they interact and are independent of each other. Therefore, in this paper, author will discuss the form of architecture through two aspects: Facade and Space. And explore what kind of architectural form is Chinese by comparing the history of architecture between China and the western countries.



China

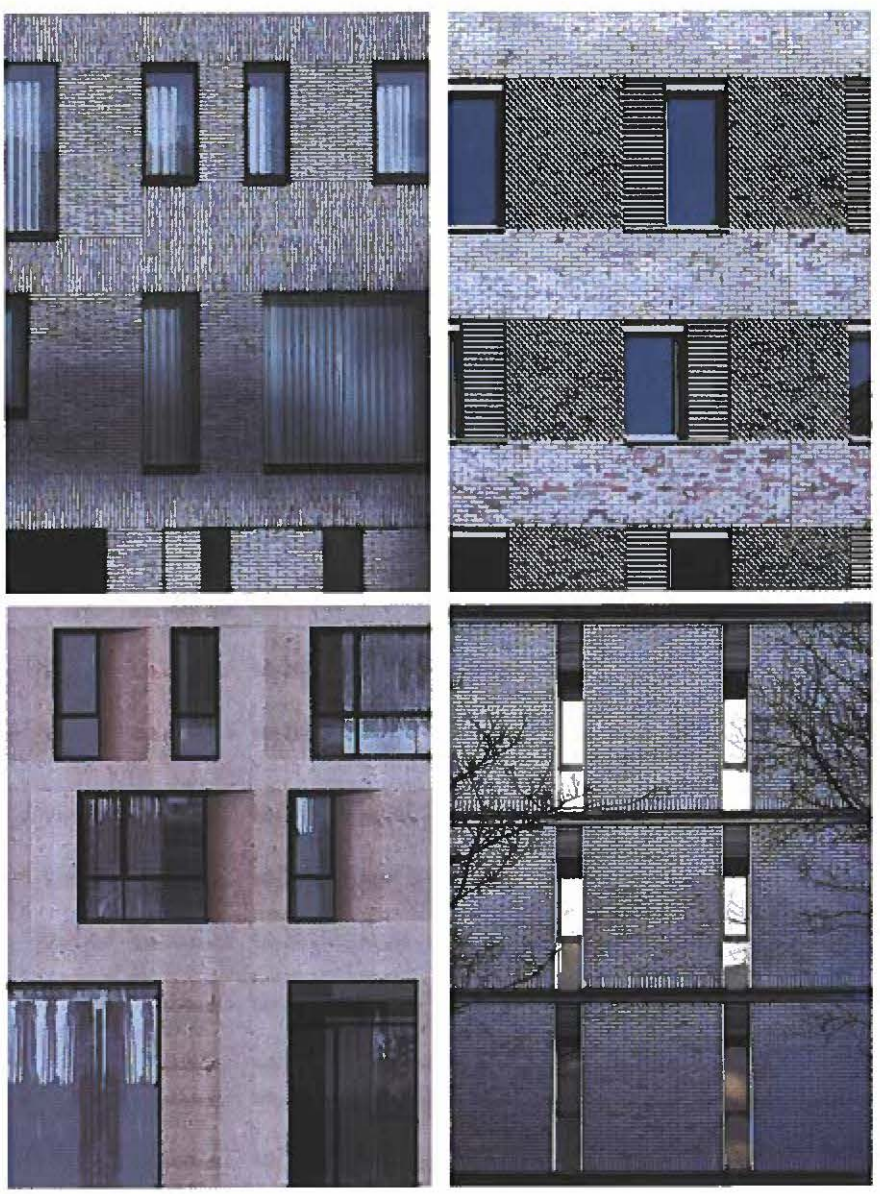
Western Country

Facade

The importance of the facade

The facade is very important for a building. It is the outermost layer of the building and reflects the overall condition of a building. People can think about the space inside the building through the facade. In the past, the outer walls were merely coverings, protecting the structure and the people living inside. However, with the improvement of human culture, the pursuit of beauty and art has risen, which led to the building's pursuit of beauty in addition to functional requirements.

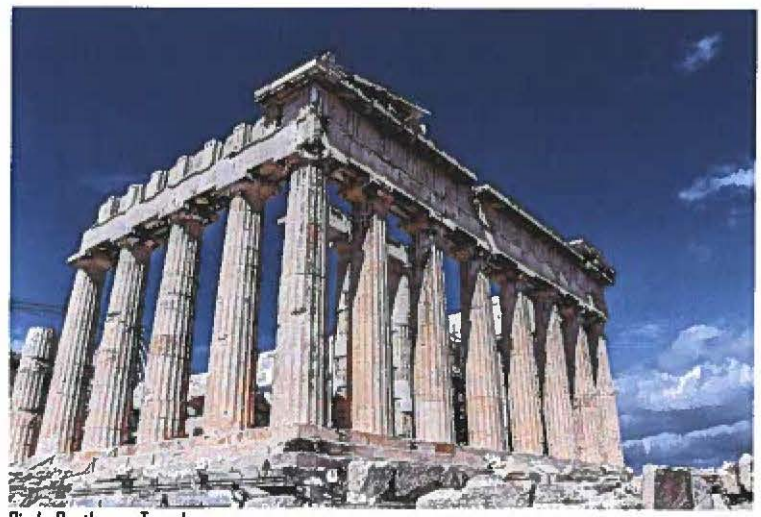
In addition, over the years, facade design has undergone tremendous changes due to the evolution of materials and architecture. The earliest building facade records can be found in Japan in 800 BC, where wood and clay were used to create a sturdy look to the building. A century later, European architecture began to use clay, stone and glass to build durable buildings. With the advent of the industrial revolution, metals such as steel began to be used in construction. The non-bearing skin appeared, and the outer wall was not used as a load-bearing structure, and it was separated from the internal load-bearing frame. This causes the variability of the outer wall to increase. When people don't have to think about whether the facade can support the entire building, they put more energy into how to make the elevation more beautiful and catch the public's eyes.



Facade features and functions in some Western periods

Ancient Greek architecture (500BC-400BC)

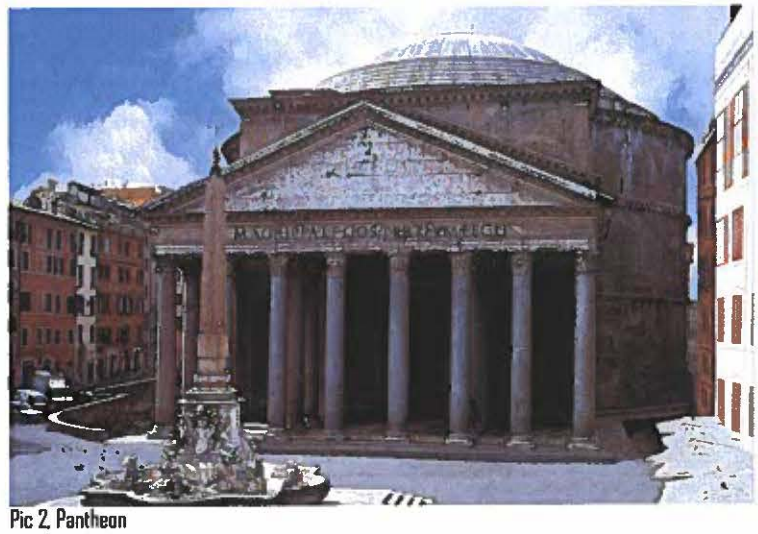
Ancient Greece was the birthplace of European culture, and Ancient Greek architecture is the ancestor of European architecture. The structure of ancient Greek architecture is a beam-column system, and in the early, architects used stone as building material. Due to the limited of material properties, the span of stone beams is generally 4 to 5 meters, and the maximum is 7 to 8 meters.This has led to less changes in ancient Greek architectural forms and simple closure of internal spaces. According to pic1, the ancient Greek architecture is a ring-column building. The pillars on one side are placed outside and separated from the wall to create a sense of layering inside, and produce abundant light and shadow effects and virtual and real changes. The exterior pillars are beautifully engraved and reflect the complexity of the facade.



Pic 1. Parthenon Temple

Ancient Roman architecture(30BC-476AD.)

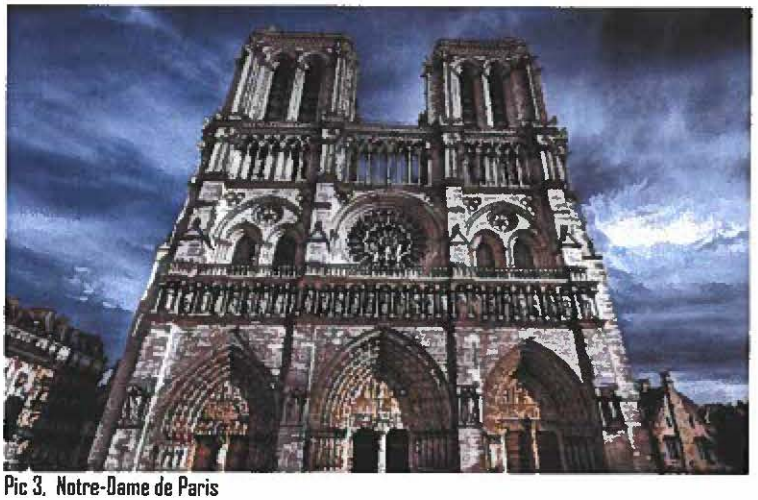
The architecture of ancient Rome was mainly the pillar structure and the beam-column system, that is, the pillars were used as the frame, and the weight of the roof and the eaves was transmitted to the pillars through the beams, and the walls only functioned as partitions, instead of the structural part of the weight of the house. The voucher arch technology is the biggest feature and achievement of the Roman architecture. It has made tremendous contributions to European architecture and its influence is unparalleled. The voucher arch technology enabled the Romans to build huge indoor spaces for human activities. On the facade, the voucher arch led to the dome, which enriched the ancient Roman architectural facade. Architects at that time also began to think about how to adjust the proportion of the building between the frame structure and the dome.



Pic 2 Pantheon

Gothic architecture (12th C. to 16th C.)

Religious architecture itself is abstinence, huge, not in line with the human scale, in order to make people feel psychologically awe. The greater the scale, the stronger the sense of awe. Therefore as one of the representatives of religious architecture, Gothic architecture is characterized by tall towers, pointed arches, large windows and window panes with biblical stories. In the design, the ribbed vault, the flying buttresses, and the slender beam column are used to increase the strength of the supporting top, giving the entire building a straight line, a majestic appearance and an empty space inside the church. In addition, the reason for using the pointed arch is that because of the same diameter, the pointed arch can be made higher and the side thrust is smaller than the vault. Due to the structure, the facade of the Gothic building is reflected in the form of a pointed arch at the entrance and at the door and window. Although the exterior is stone and does not have transparency, through its facade, we can feel the general image of the internal space structure.



Pic 3. Notre-Dame de Paris

Baroque architecture(17th C. to 18th C.)

Baroque architecture is an architectural and decorative style developed on the basis of Italian Renaissance architecture. It is characterized by its free appearance, dynamic pursuit, rich decoration and engraving, strong colors, and commonly used interspersed curved surfaces and oval spaces. During this period, because the church was very rich, many useless decorations appeared on the facade of the building. These decorations add to the complexity of the facade. In Baroque architecture, architecture, painting, and engraving penetrate each other. Regardless of structural logic, using an irrational combination to achieve an abnormal illusion.

Pic 4 St Paul's Cathedral

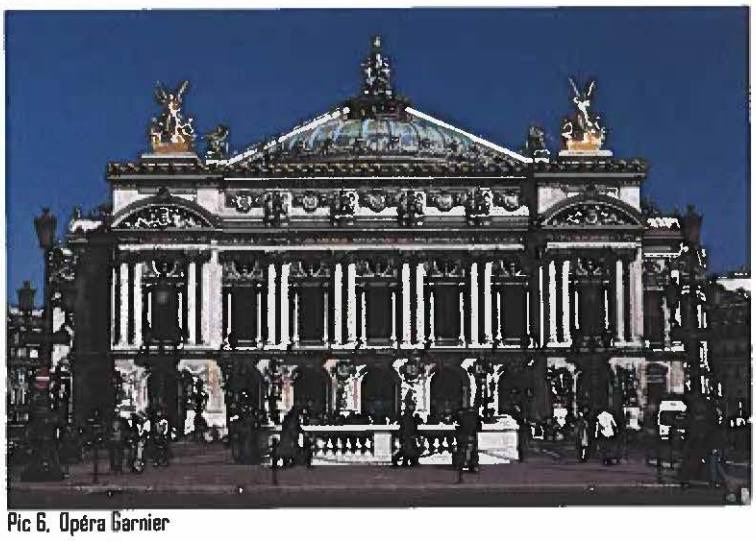
Rococo architecture (18th C. to 19th C.)

The French Rococo style that emerged in the 1820s was developed on the basis of Baroque architecture. Rococo itself is not like an architectural style, but more like an interior art. The architect's creativity is not used to construct new spatial models, nor to solve a new architectural problem, but to study how to create more gorgeous and complex decorative effects. It pushes the Baroque decoration to the extreme, in order to create a service beyond the real, dreamlike space. Because of architects in that era have developed decorativeism to the extreme, thus they begin to be confused and need to explore a new path in architectural design. These led to the emergence of syncretism architecture.

Pic 5. Palác Kinských

Syncretism Architecture (19th C. to 20th C.)

Syncretism architecture was an architectural style popular in some countries in Europe and America in the first half of the 19th century to the beginning of the 20th century. Syncretism architects arbitrarily imitate various architectural styles in history, or freely combine various architectural forms. Architects do not emphasize fixed style, but only emphasize proportional balance and focus on the beauty of form. Because architects at that time were quite confused, they didn't know what the next style was like, so they could only continue to combine the styles of history to explore new paths. This led to the façade of this period with a variety of period styles. It is an excess of decorativeism to functionalism. This laid the foundation for the emergence of modernism.



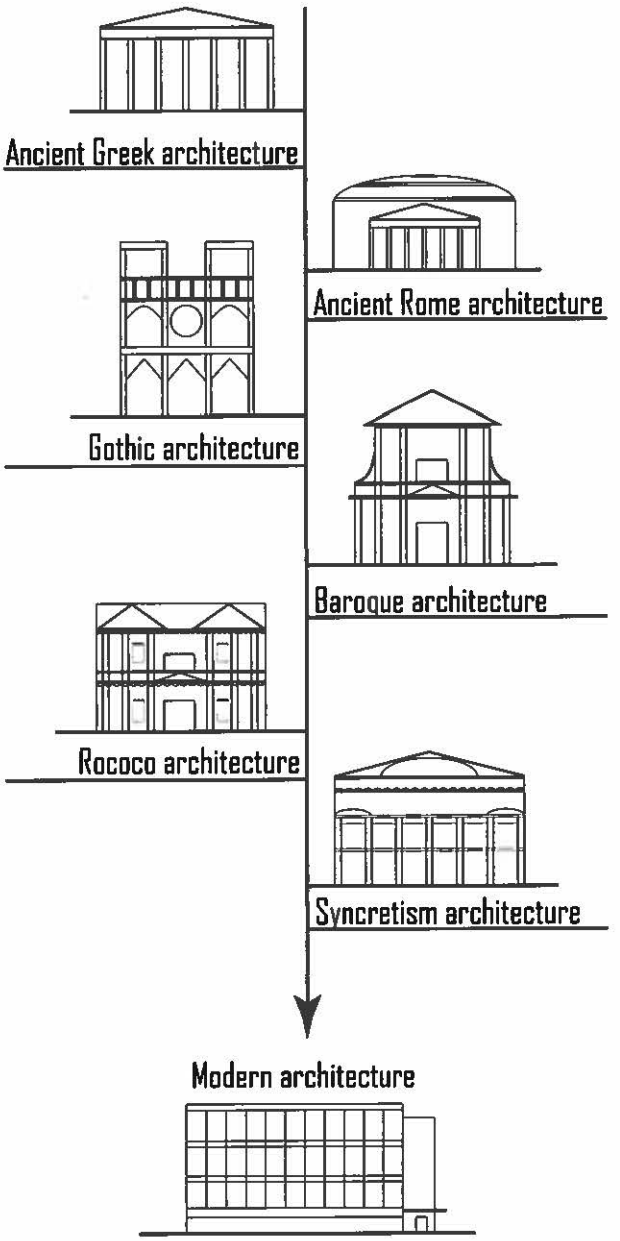
Pic 6. Opéra Garnier

Modern architecture (19th C. to Now)

With the emergence of new building materials such as steel and concrete, modernist architects emphasize that buildings should be developed at any time, and modern buildings should be compatible with industrialized society. It advocates the active use of new materials and new structures, and exerts the characteristics of new materials and new structures in architectural design. During this period, the architects emphasized the importance of function, without the cumbersome facade decoration of those previous periods. In addition, representatives of modernist architecture advocate new architectural aesthetic principles. These include the unification of expression techniques and construction methods; the coordination of architectural forms and internal functions; the logicality of architectural images; the flexible and balanced asymmetric composition; the simple handling and pure body shape; and the new results of visual art in architectural art. In addition, flat roofs, asymmetrical layouts, smooth white walls, simple crotch treatments, and glass windows of varying sizes are the main features of this period.

Pic 7. Staatliches Bauhaus; Designed by Walter Gropius

The evolution of western architectural forms



Facade features and functions in some Chinese periods

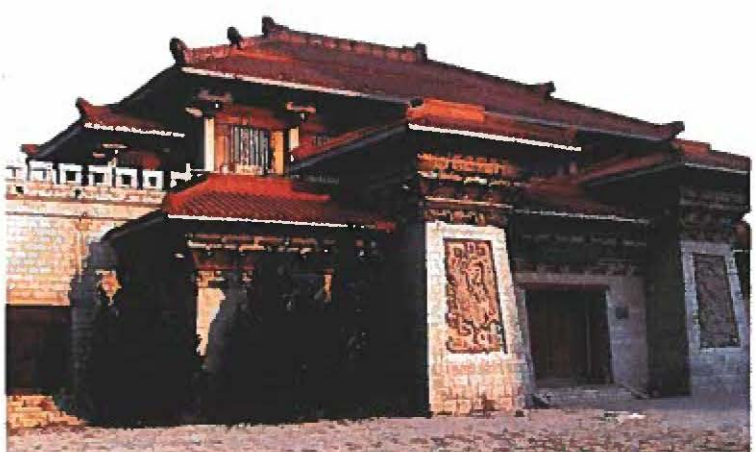
Shang, Yin, Zhou, Chunqiu (13th BC to 3th BC)

Shang and Yin is a slave society. Although the characteristics of feudal social system have existed since the beginning of the Chunqiu Period in the early Chunqiu Period, basically slavery still exists. Serfs and captives are still slaves of feudal lords. Therefore, the buildings at that time were huge in size, and used this huge understanding to deter slaves. At the same time, they also believe that tall buildings are more accessible to the gods.On the facade of the building, the high platform is in front of the house, and each room has an external terrace. This form has continued for many dynasties

Pic 8. High-rise building

Qin and Han Dynasty (2th BC to 4th AD)

The architecture of Qin and Han Dynasties is dominated by capitals, palaces, sacred buildings and mausoleums. At the end of the Han Dynasty, Buddhist architecture appeared. The planning of the capital city is symmetrical by the rules of the Western Zhou Dynasty, but urban planning was free during the Chunqiu period, and the Qin and Han dynasties gradually returned to regularity. In addition, the ritual architecture is an important type of architecture in the Han Dynasty. Its main building is still a high-rise building prevailing in the previous dynasty. It is in the form of a mass, which is symmetrically combined with the axis of the cross. The scale is huge and the image is prominent, and the symbolic meaning still is pursued. Building materials are bricks and tiles. The invention of bricks was one of the important achievements in the history of architecture. In the Qin and Han Dynasties, brick and tile buildings were everywhere.



Pic 9. Qin Shihuang Eastern Touring Palace

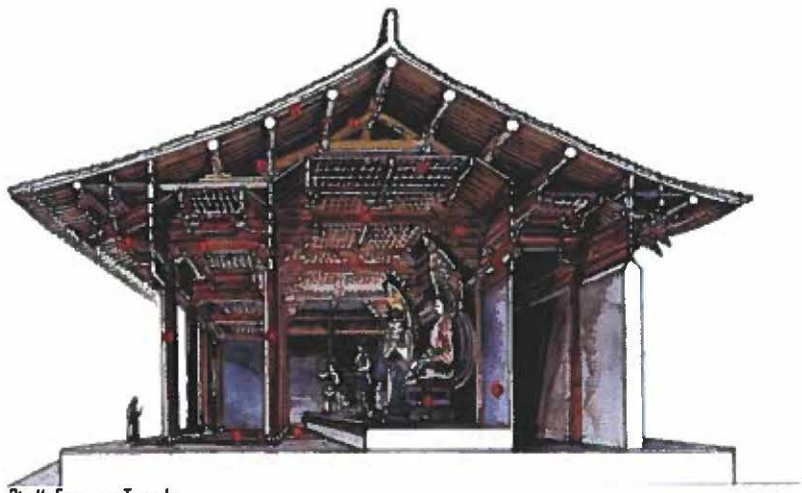
Wei and Jin Dynasties (5th AD to 7th AD)

During the Wei and Jin Dynasties, apart from the palace of the emperor, the main theme was religious buildings. Since the introduction of Buddhism into China, stone and brick buildings and sculptures have appeared and they are more durable than wood. In addition, with the increase of various building materials, combinations of different materials on the façade have begun to appear. Architects can use different materials to enrich the form of the facade. Since the Han Dynasty, the form of the roof has also changed from flat eaves to upturned eaves, and the squatting of the sill will form a curve on the façade, making the building more beautiful. As with the evolution of Western architecture, as housing construction gradually meets people's needs, people begin to decorate their buildings to meet their own exploration of beauty.

Pic 10. Oriental Salt Lake City

Sui and Tang Dynasty (7th AD to 11th AD)

During the Sui and Tang Dynasties, Buddhism prevailed and religious activities increased, so a large number of temples were built. In addition, Taoism was also active because of the support of the feudal lords. The splendid Buddhist temples and Taoist temples were filled with China. At that time, the craftsmen in that time invested enthusiasm and strength in many artistic creations, therefore, the Tang Dynasty buildings were strict in the processing of details, on the decorative patterns and in the woodcut stone carvings. These strict and wonderful methods have become a feature of that era. This time is equivalent to the Western Baroque period. With the development of the economy, architectural decoration has become a tool for the rulers to show their financial resources.



Pic 11, Foguang Temple

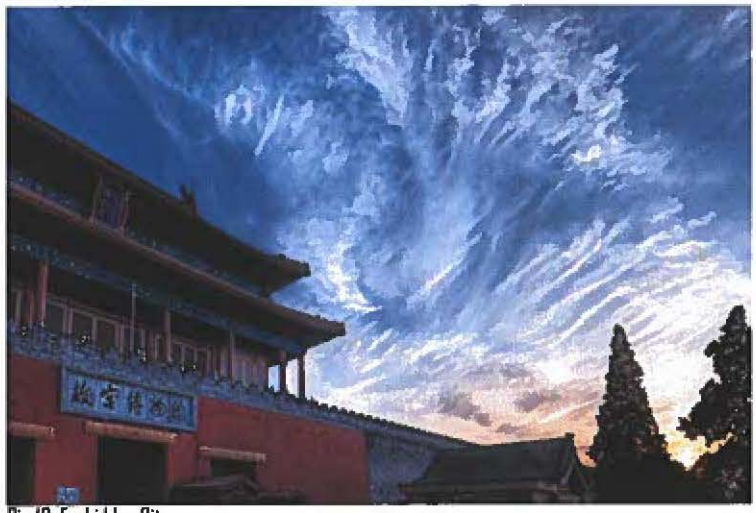
Song Dynasty(11th AD to 14th AD)

In the Song Dynasty, industrial and commercial development was greatly developed, and a large number of public and private buildings appeared. The creativity of the builders of the building is played, and the technique begins to tend to be delicate and feminine. In addition, the shape of each part of the building is more careful. At this time, the building facade has developed to the extreme, like the Western Rococo period. And the decoration of the beam makes the most abundant in this era, various paintings and colors are painted on the wooden beams to show the financial resources of the homeowner.

Pic 12. Yuelu Academy

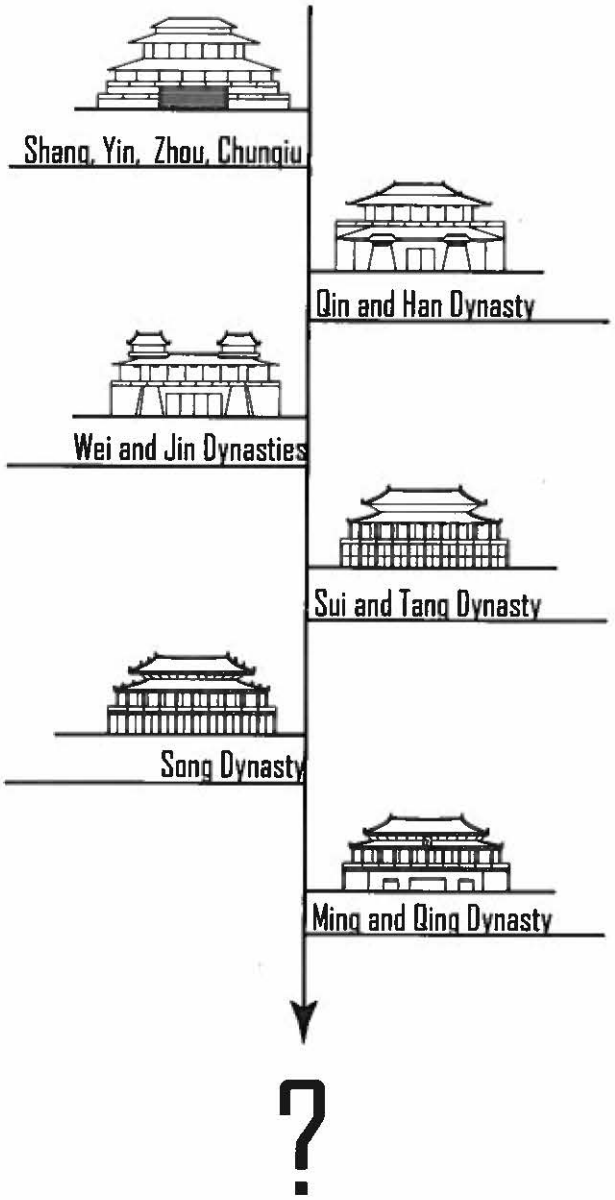
Ming and Qing Dynasty(15th AD to 19th AD)

In the Ming and Qing Dynasties, on the building, the large building group, the application of strong wood and serious engineering skills , are the characteristics of the Ming Dynasty. Compared with the Song Dynasty, the Ming Dynasty's façade was more concise, and some extra decorations were removed. In the Qing Dynasty, Chinese architecture suddenly came to a trend of imitating the West. This was also the beginning of the "Western House" built in the Yuanmingyuan. The so-called Western influence at the time was mainly to imitate the classical architectural facade of the Italian Renaissance. At that time, Chinese architecture was in a state of confusion and began to imitate the West. But architects vdid not give up the traditional architectural form.After the Qing Dynasty, China's construction market was invaded by the Western countries, which led to China architecture are similar with Western architecture.



Pic 13. Forbidden City

The evolution of China architectural forms



Space

The Chinese-style residential culture has two characteristics: the quadrangle in the north and the patio-style building in the south. Its influence scope covers the vast culture areas. The building is mostly one floor.

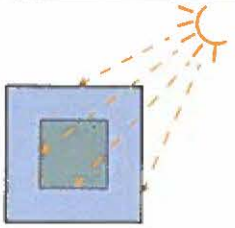
Although there are different levels of Chinese living space, there are many shared outdoor spaces for family members, and such outdoor spaces are generally not open to outsiders. The courtyard or patio is an integral part of the building.

In the Western-style residential culture, in many cases, the building is in the middle and the courtyard is surrounded. The courtyard is for foreigners to watch, and the activities of family members in the courtyard are inevitably seen by outsiders. Its buildings are mostly 2-3 stories.

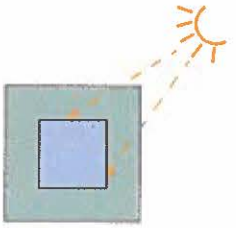
The building is mostly long and deep, and the room can only be single-sided towards the outside, and the natural ventilation effect of the room is relatively poor. To go outdoors, you have to go through the stairwell and other transportation spaces.

In general, the western residential culture, its courtyard space and architectural relationship are not very close. It can be said that it is optional, and it can be big or small. The living space, which is generally open to the public, is only a public space such as a living room. Even for family members, their respective spaces are relatively closed. In the Chinese space, the inner courtyard makes the communication between the family closer, and creates more lighting space for the building.

China House



Western House



Conclusion

From a historical perspective, the development of Chinese architecture, like Western architecture, has a slow evolutionary process. However, due to the expansion of the population and the invasion of Western architectural culture, China's architectural evolution has experienced a fault. China's architectural style directly enters modern architecture, with a focus on function. The building was built to meet the needs of the population at the time.

Nowadays, China's rapid development has made people not satisfied with functional buildings, and architectural needs to reflect national culture. Therefore, by simulating the evolution of Western architecture, readers can deduce the form and space of contemporary Chinese architecture.

The evolution of the facade of Western architecture evolved from a pillar to a facade, from rational to romantic, then integrated, and finally turned to function, namely, to return to rationalism. The evolution of Chinese architecture is also from simple to complex. Although the form is completely different from that of the West, the evolutionary history of the facade is similar, because with the power of the empire, the ruler always wants to use the architecture to show national power. Until the Qing Dynasty, China gradually opened to western countries, and the style of Chinese architecture began to change. A large number of Western-style buildings appeared in the open areas, which drowned Chinese traditional buildings.

Imaging if it is assumed that the Western architectural style is not copied in China, and the Chinese architecture continues to evolve, What should contemporary Chinese architecture look like?

The concrete will begin to dominate the construction market due to material changes, and the wooden structure will gradually be abandoned or be a decoration part, but the shape and function cannot be changed with the change of materials. In this era, the functionality of architecture is of the utmost importance. Therefore, the evolved architectural form will retain some traditional forms and spaces, such as retaining the basic shape of upturned eaves and double-eave roof, but complex load-bearing structures such as bracket set will be replaced by concrete and steel.

ANNOTATED BIBLIOGRAPHY

Anamorphosis and the Eccentric Observer: History, Technique and Current Practice
Author(s): Daniel L. Collins
Source: Leonardo, Vol. 25, No. 2 (1992), pp. 179-187
Published by: The MIT Press
Stable URL: https://www.jstor.org/stable/1575710

Anamorphosis through Descartes or Perspective Gone Awry
Author(s): Lyle Massey
Source: Renaissance Quarterly, Vol. 50, No. 4 (Winter, 1997), pp. 1148-1189
Published by: The University of Chicago Press on behalf of the Renaissance Society ofAmerica
Stable URL: https://www.jstor.org/stable/3039406

Art and Ambiguity
Author(s): Judith Farr Tormey and Alan Tormey
Source: Leonardo, Vol. 16, No. 3, Special Issue: Psychology and the Arts (Summer, 1983),pp. 183-187
Published by: The MIT Press
Stable URL: https://www.jstor.org/stable/1574910

Fred Sandback's Perspectives
Author(s): Edward A. Vazquez
Source: Art Journal, Vol. 71, No. 3 (Fall 2012), pp. 98-116
Published by: CAA
Stable URL: https://www.jstor.org/stable/43188557

Urban Illusions
Author(s): SUSANA MARTINEZ-CONDE and STEPHEN L. MACKNIK
Source: Scientific American Mind, Vol. 23, No. 1 (March/April 2012), pp. 15-17
Published by: Scientific American, a division of Nature America, Inc.
Stable URL: https://www.jstor.org/stable/24942102

The Life and Unusual Ideas of Adelbert Ames, Jr.
Author(s): Roy R. Behrens
Source: Leonardo, Vol. 20, No. 3 (1987), pp. 273-279
Published by: The MIT Press
Stable URL: https://www.jstor.org/stable/1578173

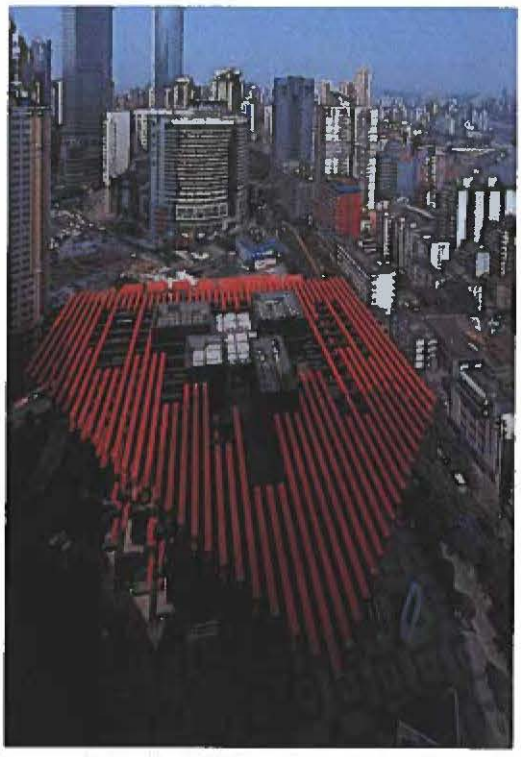
A New Angel/Angle in Architectural Research: The Ideas of Demonstration
Author(s): Marco Frascari
Source: Journal of Architectural Education (1984-), Vol. 44, No. 1 (Nov., 1990), pp. 11-19
Published by: Taylor & Francis, Ltd. on behalf of the Association of Collegiate Schools ofArchitecture, Inc.
Stable URL: https://www.jstor.org/stable/1424971

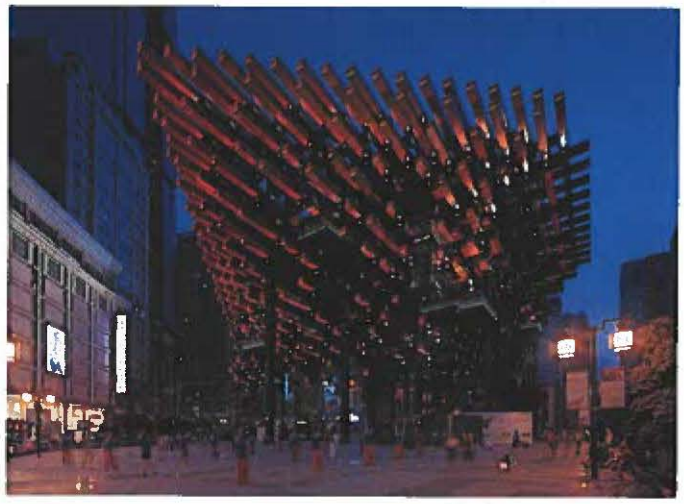
Transparency: Literal and Phenomenal
Author(s): Colin Rowe and Robert Slutzky
Source: Perspecta, Vol. 8 (1963), pp. 45-54
Published by: The MIT Press on behalf of Perspecta.
Stable URL: https://www.jstor.org/stable/1566901

The Evolution of Building Facades
Posted on May 19, 2017 by MaltBlogger

PRECEDENT AND CASE

Some of these cases show the history of China in form, and some use traditional materials to build modern architecture. The rest is about how to use the facade to reflect history.

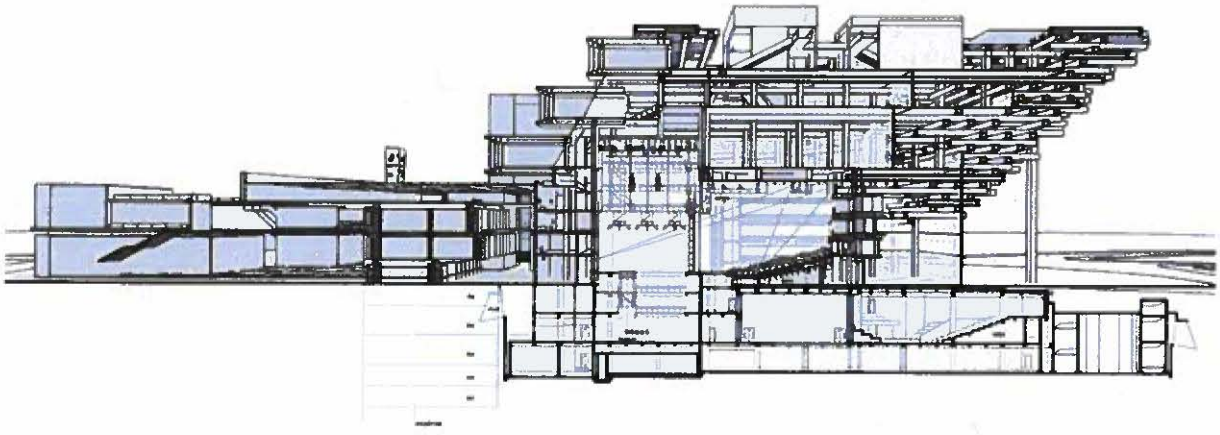




Chongqing Guotai Arts Center

Designer: Cui Kai
Project year: 2005-2013
Location: Yuzhong District, Chongqing City, China

Chongqing Guotai Arts Center has a distinctive regional characteristic in colors, with a sense of direction and belonging by revealing red corners in between tall buildings. The architectural form derives from a multi-component bracket set in Huguang Guild Hall in Chongqing, with traditional brackets space interspersed. It expresses the spiritual content of traditional architecture in a modern way. The red components act as the ventilation system and the black components stored with water are the refrigerant. Both of them function together to form the building's external eco-energy saving system. The stacking of red and black components also be invited inside as the theme of the interior decoration.



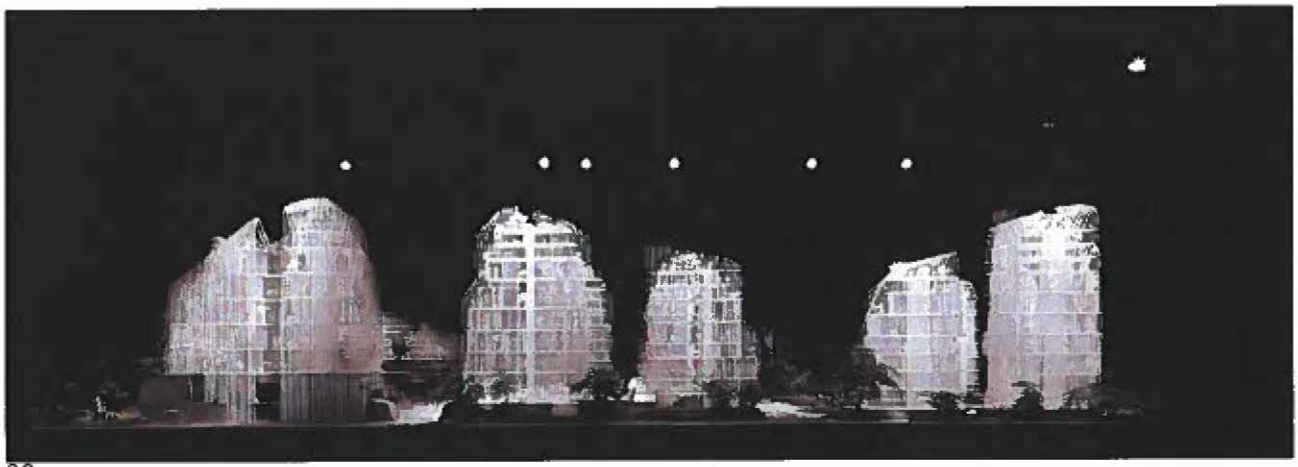
Nanjing Zendai Himalayas Center

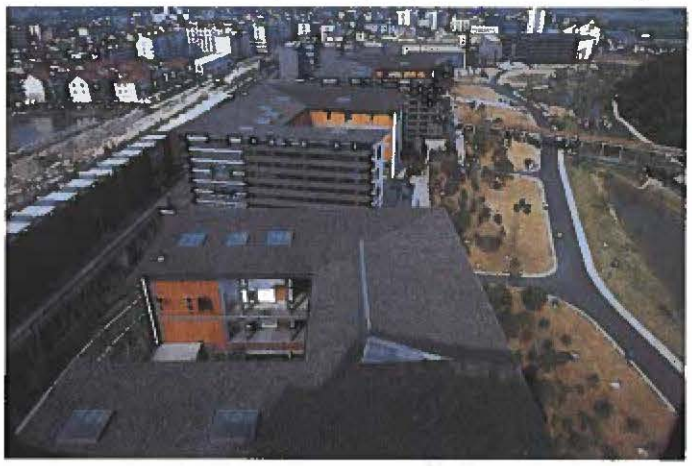
Architects: MAD
Location : Nanjing, China
Project year: 2012-2017

The Nanjing Zendai Himalayas Center is a city-scale urban project, with an overall building area of approximately 560,000 sqm. Working at this scale, MAD strives to capture a fully realized "Shanshui City"— a concept at the center of MAD's designs that adapts the traditional Chinese Shanshui ethos of spiritual harmony between nature and humanity to the modern urban environment.

The site is composed of six lots, two of which are linked by a vertical city plaza. Curving, ascending corridors and paths weave through the undulating commercial complexes, bringing people from the busy ground level to the vertical park for opportunities to wander among the buildings and gardens.

At the center of the site is a village-like community of low buildings, connected by footbridges and nestled into the landscape. This scene of footbridges, artificial hills and flowing water together creates a poetic moment at the heart of the project.





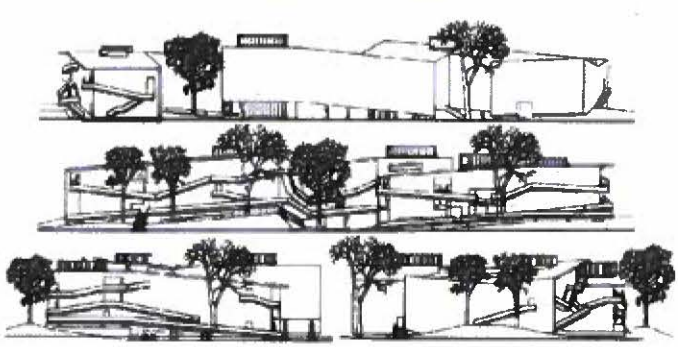
China Academy of Art Xiangshan Campus

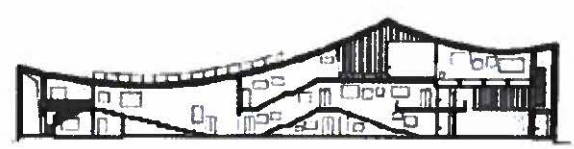
Architects: Wang Shu
Location: Hangzhou City, Zhejiang Province, China
Project year: 2004-2007

Architect Wang Shu reflected his thoughts and ideas in the construction of the new campus in Xiangshan. How to rebuild the structure of a place with geographical roots in a Chinese city that quickly loses its regional culture, how to make the architectural paradigm of Chinese tradition and landscape coexist in today's reality and how to use the construction scale of university campus to explore a new urban construction in contemporary China mode.

In this campus, architecture is not designed in isolation, but in the thinking between "nature" and "city". In the architectural tradition of China, such buildings are called "gardens." It refers to the fact that "nature" is placed in the "city", and thus urban architecture undergoes a qualitative change, presenting a semi-natural form of semi-architectural construction.

The shape of the building often appears in the form of a square box. Usually, a place mode based on the word " 回 " is established, and " 回 " is the courtyard.



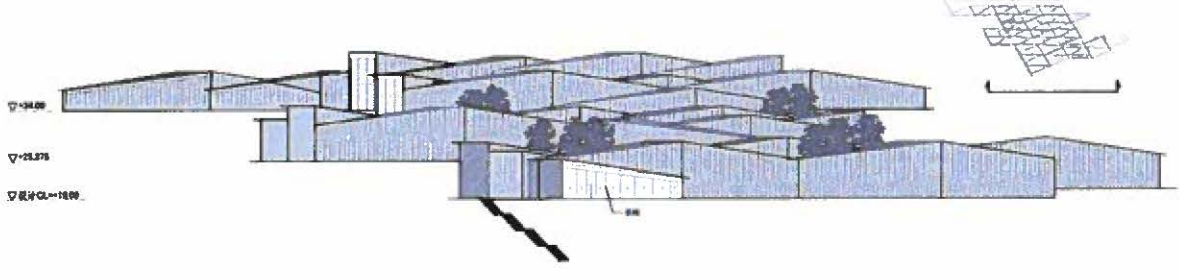


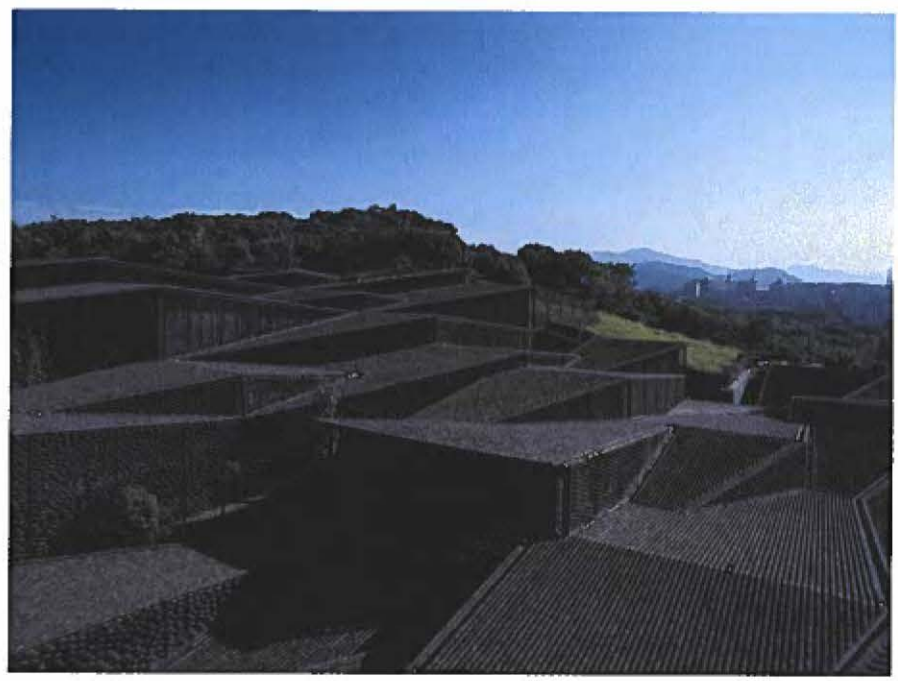
China Academy of Arts' Folk Art Museum

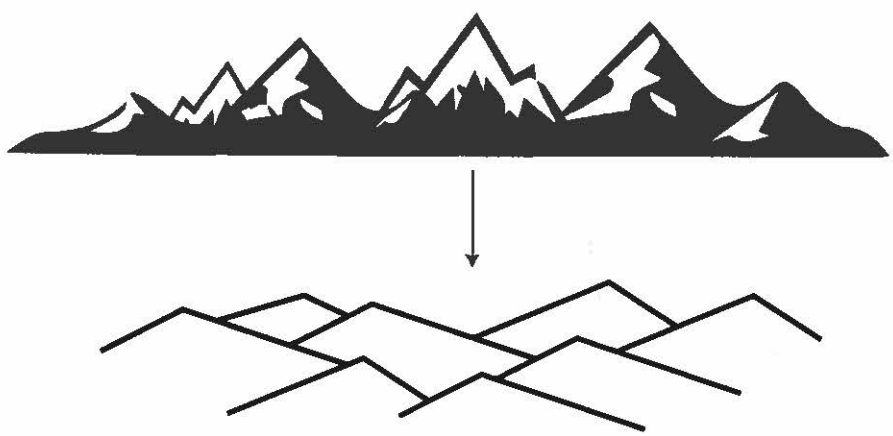
Architects: Kengo Kuma
Location: Hangzhou City, Zhejiang Province, China
Project year: 2015

The project is constructed by three mirrored aluminum bi-dimensional planes of 3.2 m. high and 25 mm. of thickness containing a landscape of gentle hills, spongy vegetation, wild flowers and moving water that has been translate from an imaginary place. The pavilion is also the support for the development of a series of cultural activities including concerts, live music or stagings, which are all open for public and free.

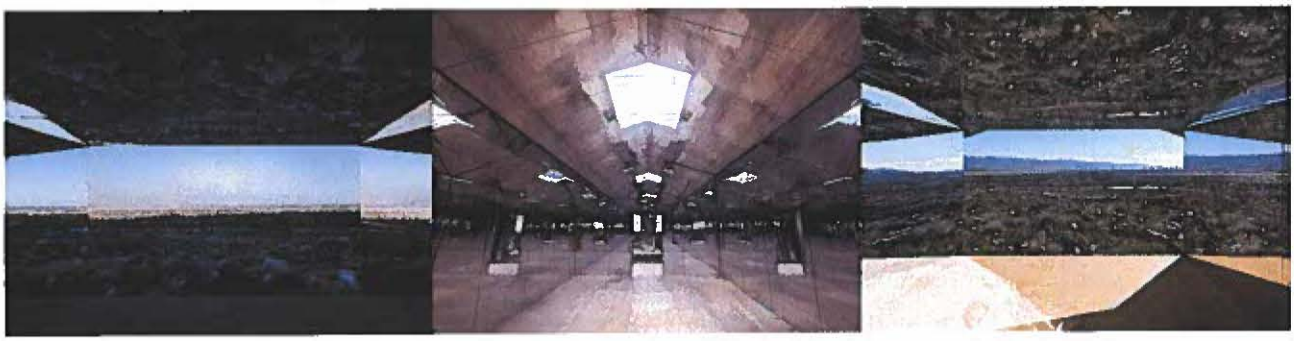
Architects have meant to build an uncertain experience, a situation of estrangement, one which we do not intend on controlling, as the possibilities of reflection and deformation provoked by the concave and convex mirrored steel bi-dimensional planes are infinite. They have multiplied the amount of reflecting and deformation







China has loved nature since ancient times, so many forms of simulated nature will be added to the building, and the overlapping roofs are like mountains. Although the building is a whole, the use of this overlapping design method has created the feeling of ancient Chinese residential areas.



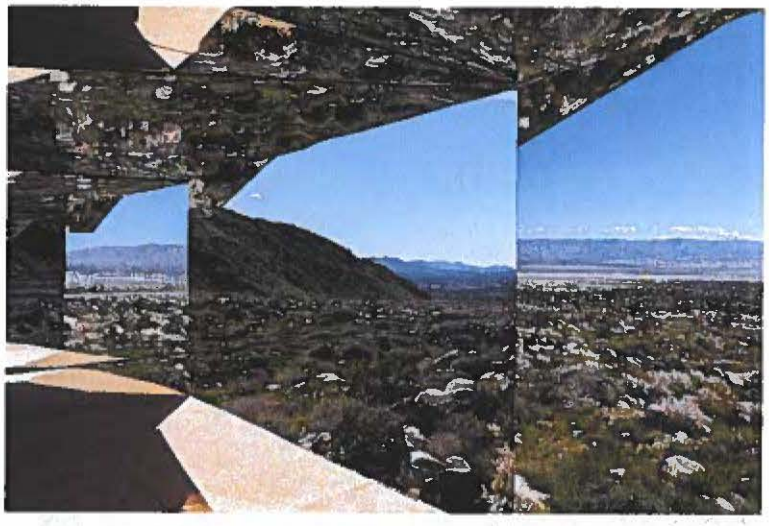
MIRAGE

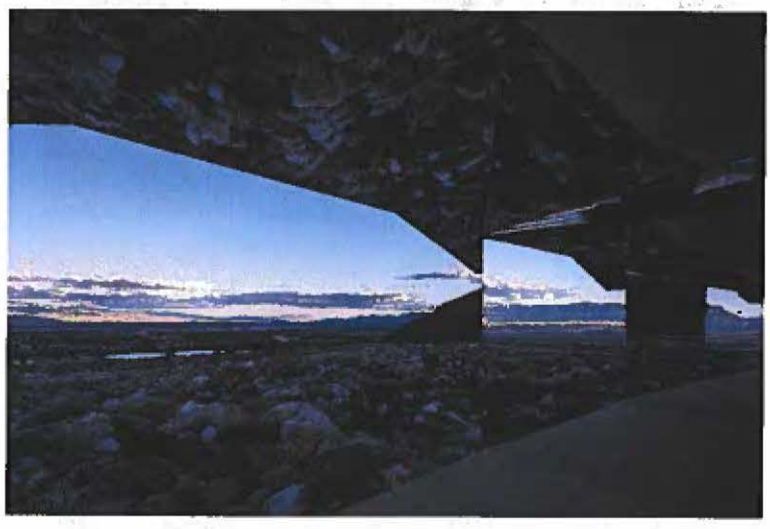
Architect: Doug Aitken
Location: PALM SPRINGS, CALIFORNIA
Project year: 2017

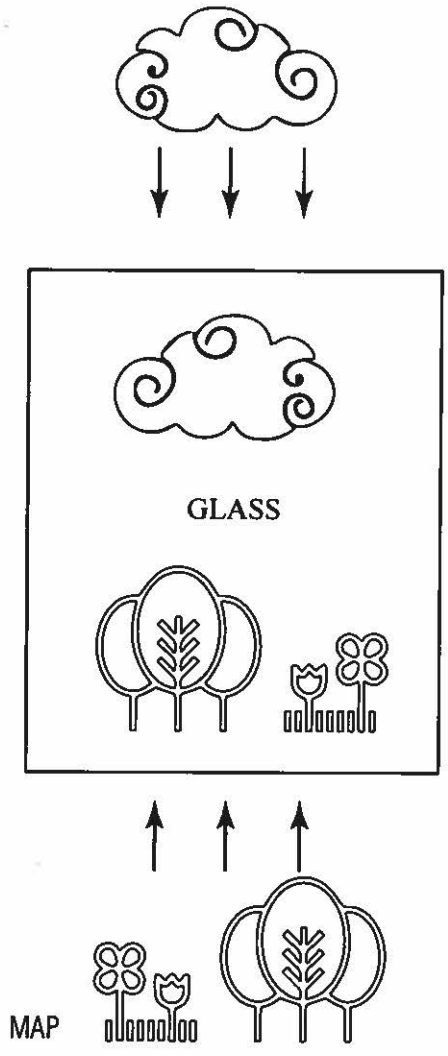
"MIRAGE" is reconfigured as an architectural idea: the seemingly generic suburban home now devoid of a narrative, its inhabitants, their possession," states the Doug Aitken Workshop. "This minimal structure now functions entirely in response to the landscape around it. The doors, windows, and openings have been removed to create a fluid relationship with the surrounding environment."

"Subject and object, interior and exterior, the psychological and physical; each of these oppositional forces are held in constant tension, yet allowed to shift and transform in the ever-changing desertscape" ,said the design team.

Given its unique character and location, the space can be experienced at any moment in time, providing different distortions and reflections for every viewing, be it under the darkness of the night sky or the endless expanses of sunlit desert.





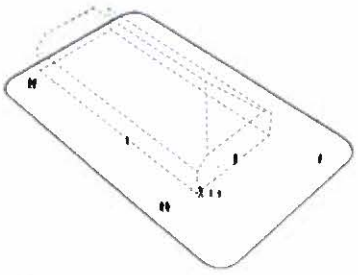


The use of glass as the skin makes the boundaries between the building and the surrounding environment obscure. Because the glass maps the surrounding environment onto the building. In addition, people's visual perception of space has also been extended. Architects often use mirrors to reflect historical buildings in new buildings, which can further highlight the status of historic buildings.

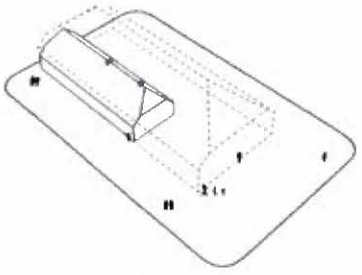
GLASS FARM

Architects: MVRDV
Location: Schijndel, The Netherlands
Project year: 2008-2013

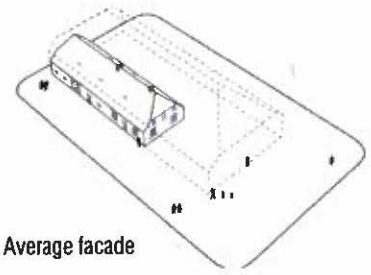
In collaboration with MVRDV, artist Frank van der Salm photographed the historic buildings, and from these, a collage of the 'typical farm' was composed. This image was printed using fritted procedure onto the glass facade, resulting in an effect similar to stained glass windows in a cathedral. The print varies in translucency depending requirements for light and views. At night the structure is illuminated from the inside, a monument to the traditional farmhouse. At a height of 14 metres, the Glass Farm is intentionally designed out of scale and is 1.6 times larger than a real farm, symbolizing the village's growth into a town. The printed image follows this 'augmented history', with the superimposed farm door appearing 4 metres tall for example. When adults interact with the building, they are once again the size of a small child in relation to the building, possibly adding an element of nostalgic remembrance to their experience.



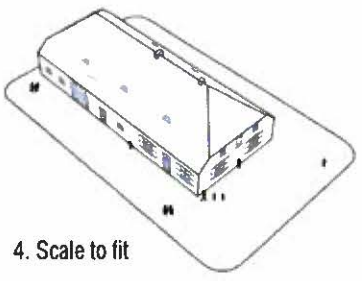
1. Maximum volume



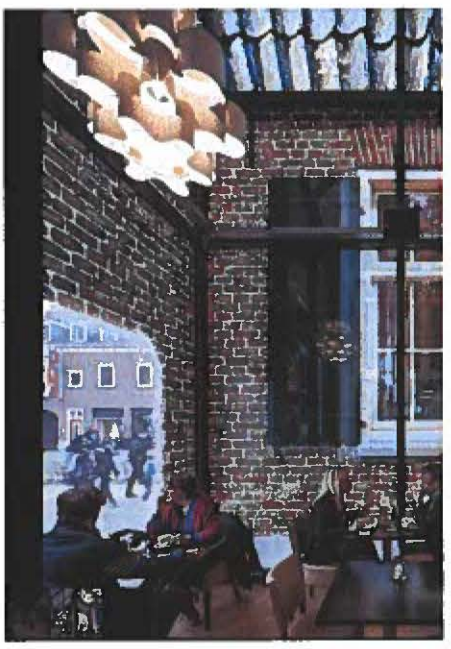
2. Average Schijndel farm volume



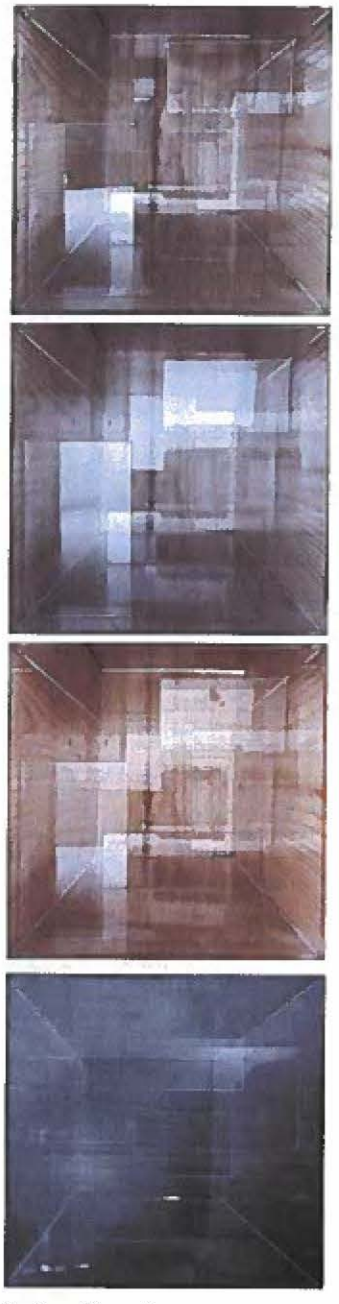
3. Average facade



4. Scale to fit

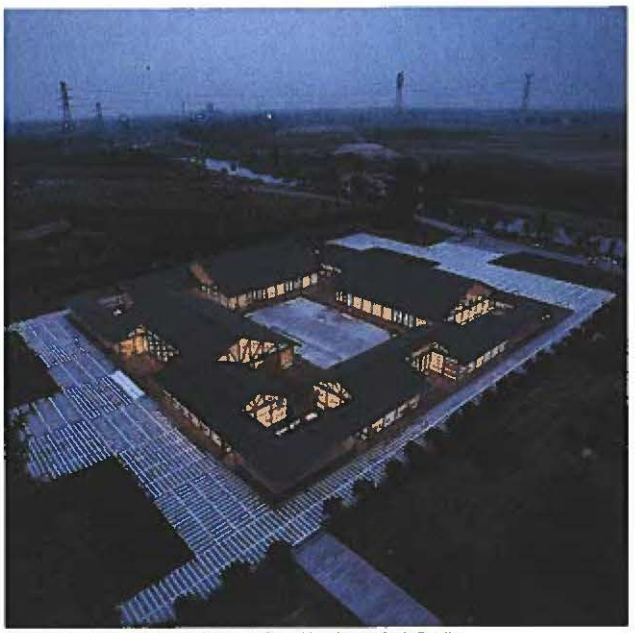


The picture of history is displayed on the facade in the form of glass, reflecting the respect for traditional culture. When multiple pieces of glass are stacked together, due to the principle of reflection and transparency. The superposition of images is produced. This spatial superposition makes it impossible to use visual perception to feel the real space.

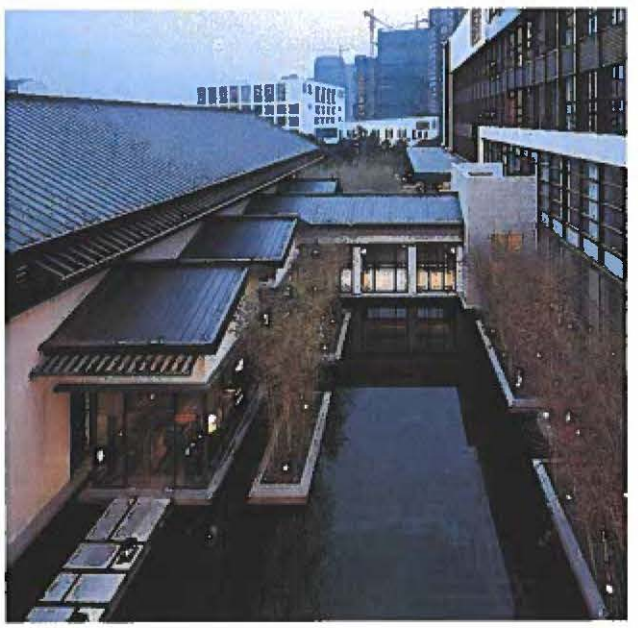


Designed by author

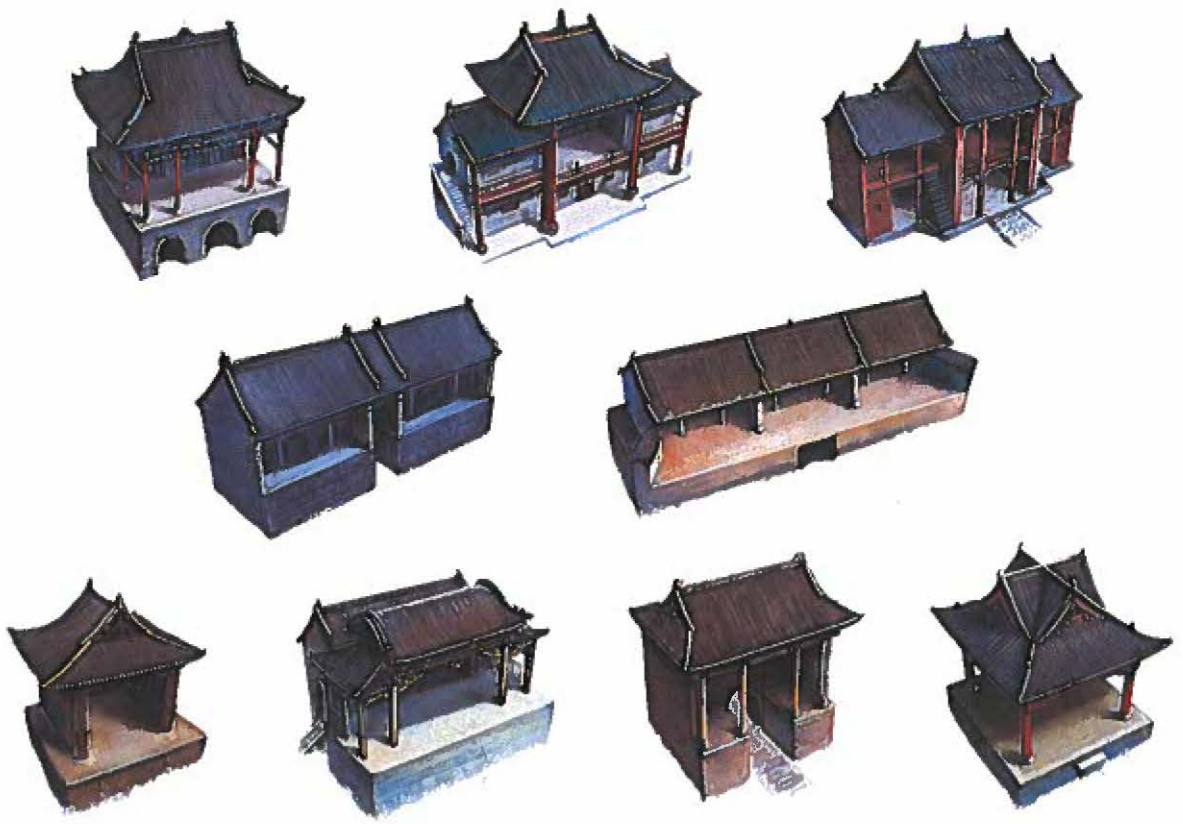
INSPIRATION IMAGES



Organic food-processing facility, designed by dezeenArch Studio

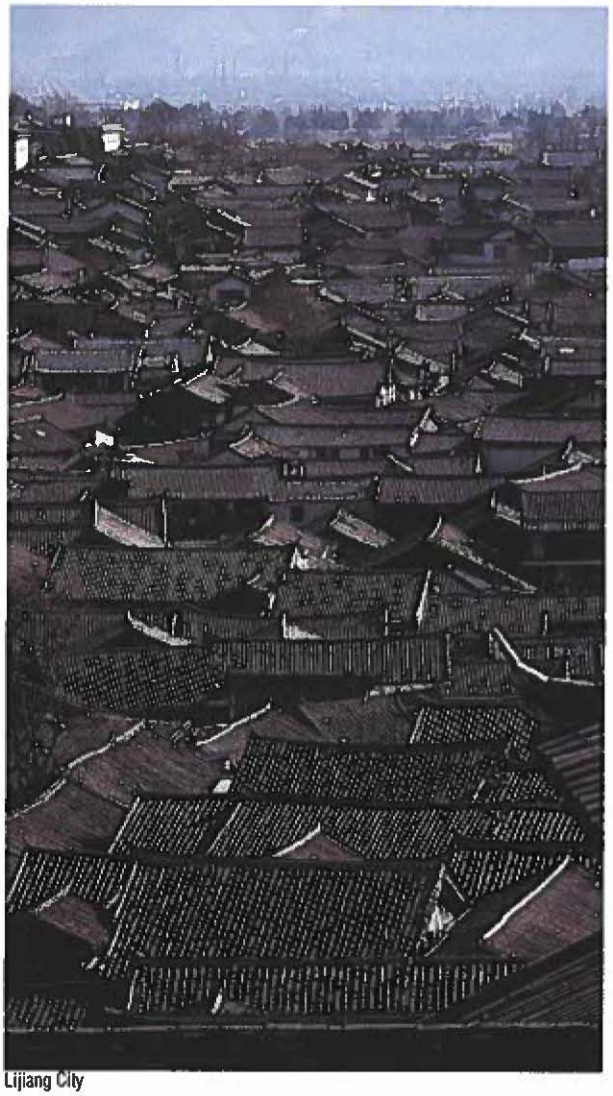


LuzhouFu Restaurant, designed by Pan Kaifu

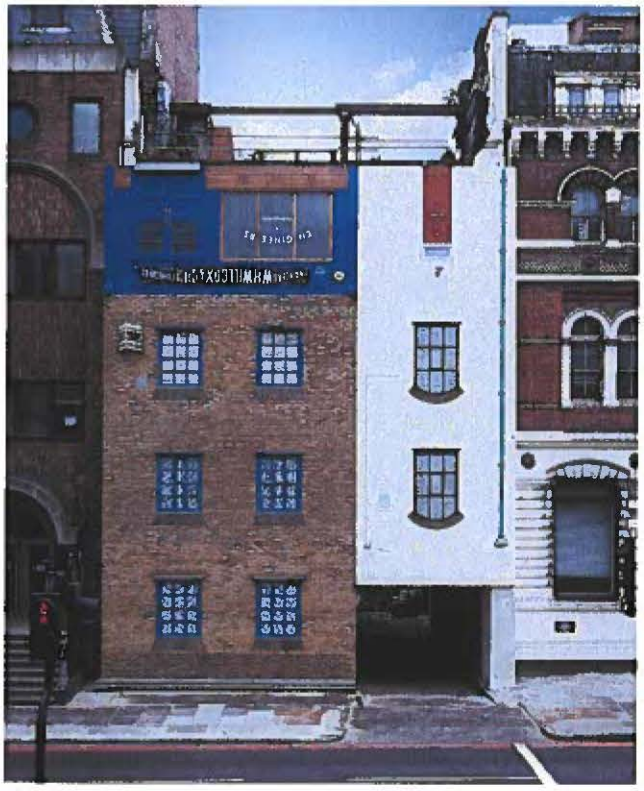


Stages in China, designed by zhenyu

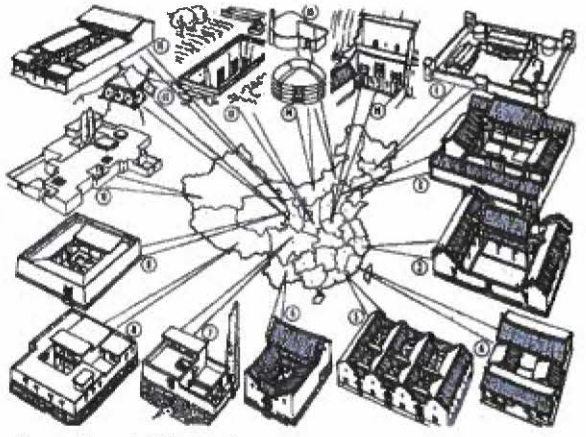
Roof Type



Lijiang City



Subversion, designed by Peter Kogler



Architectural forms in different regions

PROGRAM

The theme of this project is to be a communication center, the main use of the crowd is the design worker. It consists of office space, exhibition space and public event space. Forms should be biased towards the style of modernism and combined with traditional Chinese elements. Trying to create a modernist façade with Chinese characteristics and interior space.

Asakusa Culture and Tourism Center

Architects: Kengo Kuma & Associates
Location: Asakusa, Taito, Tokyo, Japan
Project year: 2012

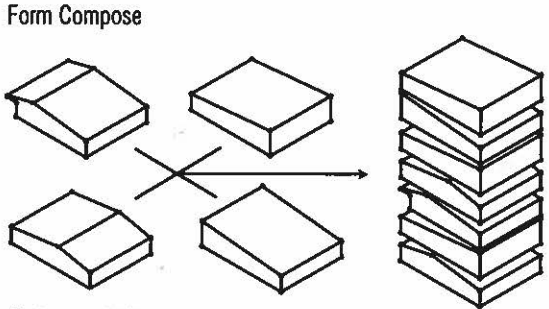
The Asakusa Culture and Tourism Center vertically stacks traditional houses, containing different activities, creating new profiles and subverting traditional hierarchical relationships.

Different slash-type spaces are formed between the roof and the floor. In this way, the building achieves a huge volume in a limited height. In addition, the roof not only separates the structure, but also forms eight single-level units, while also defining the roles of each different floor.

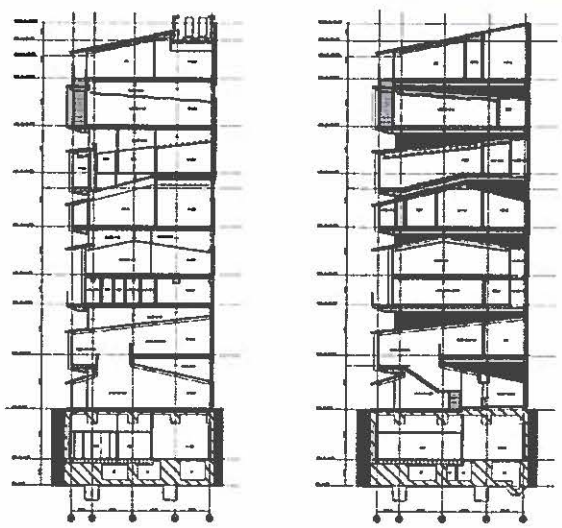
The first and second floors have an atrium and an indoor staircase, which creates a sense of order for the two roofs. The six floors maximize the use of the sloping roof to create a stepped space for use as a theatre. Because the angle of the roof is skewed to one side, the height of the floor is different, and each layer forms a different relationship with the outdoor, thus forming a unique feeling for each space.

Kengo Kuma subversive the tradition and using the new way of expressing tradition.

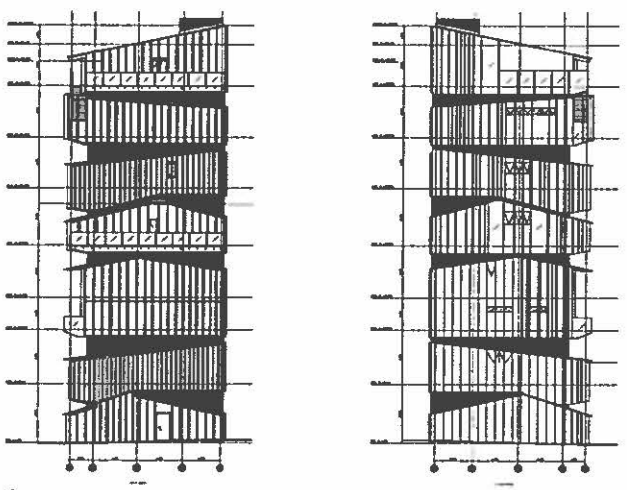
Form Compose



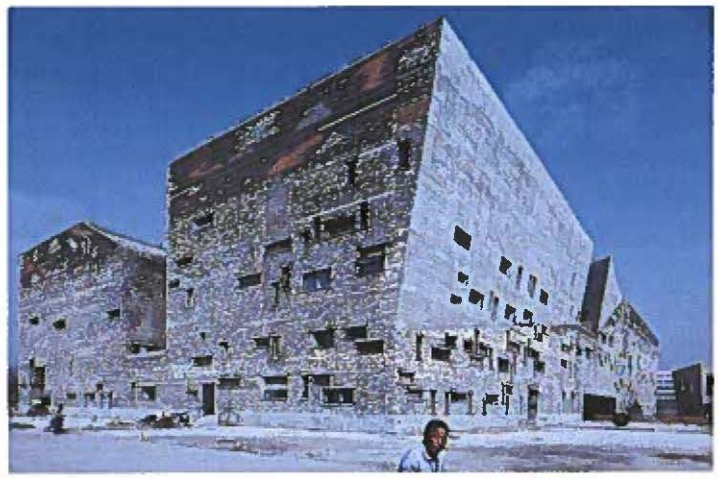
(Design by author)



Section



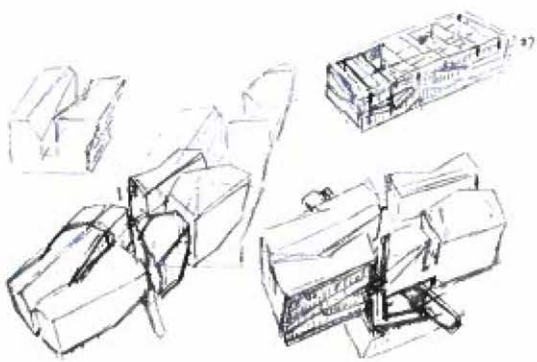
Elevation



The appearance of the Ningbo Museum was shaped into a piece of a mountain, so the building has a squared boundary cut by human. The lower half of the building is just a simple rectangle. From a distance, this is a square box, or a pile of bricks on the side of the monumental Grand Place. When you close it, the building cracked into a mountain-like shape in the upper half.

The inside and outside of the building are wrapped by bamboo formwork concrete and a wall that is mixed with more than 20 kinds of recycled old bricks. The square of the outer frame limits other redundant meanings. Its northern section is immersed in the artificially digging pool in the middle section. At the entrance, a stone dam overflowed and ended in a large pebbly beach. In the upper part of the building's crack, there is an open platform, with four different shapes of cracks, looking far into the city and the distant rice fields and mountains.

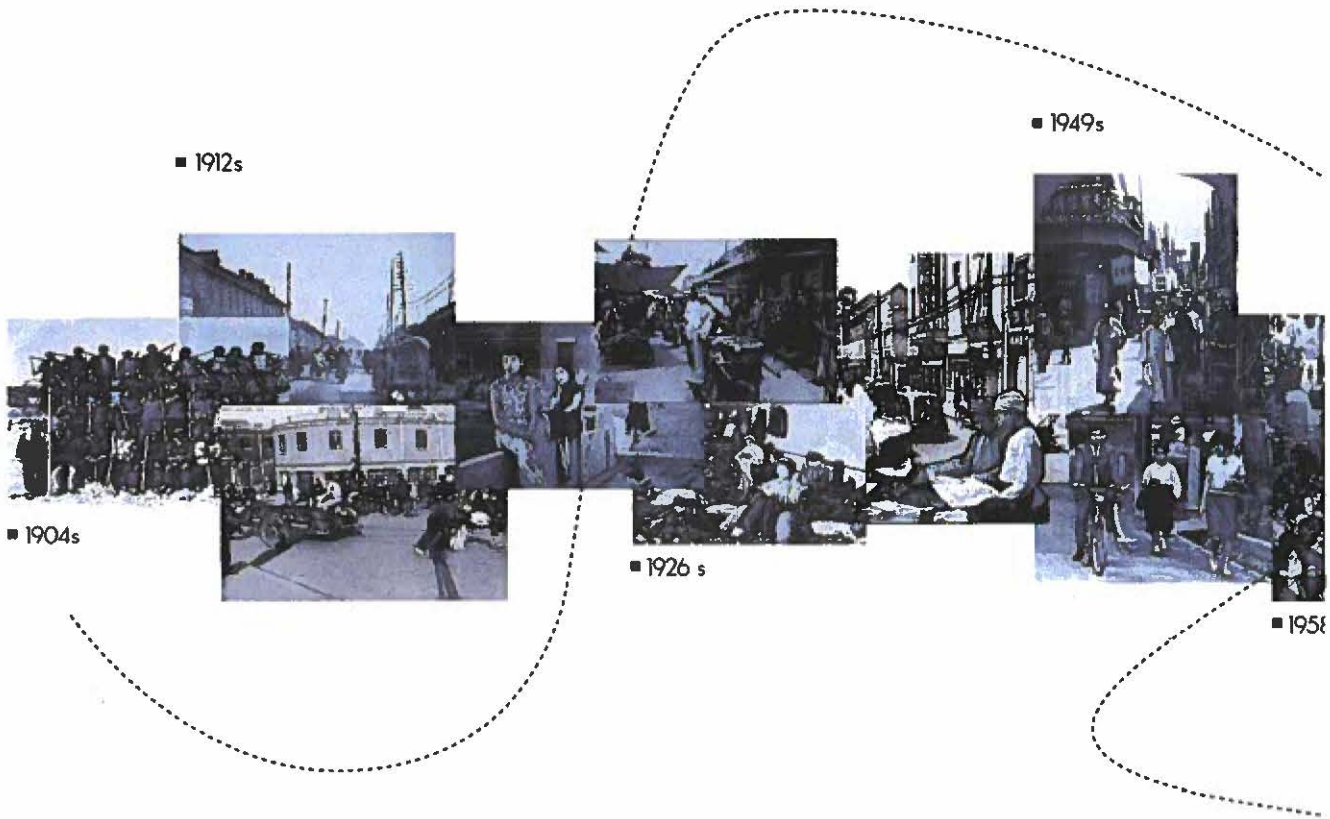
v

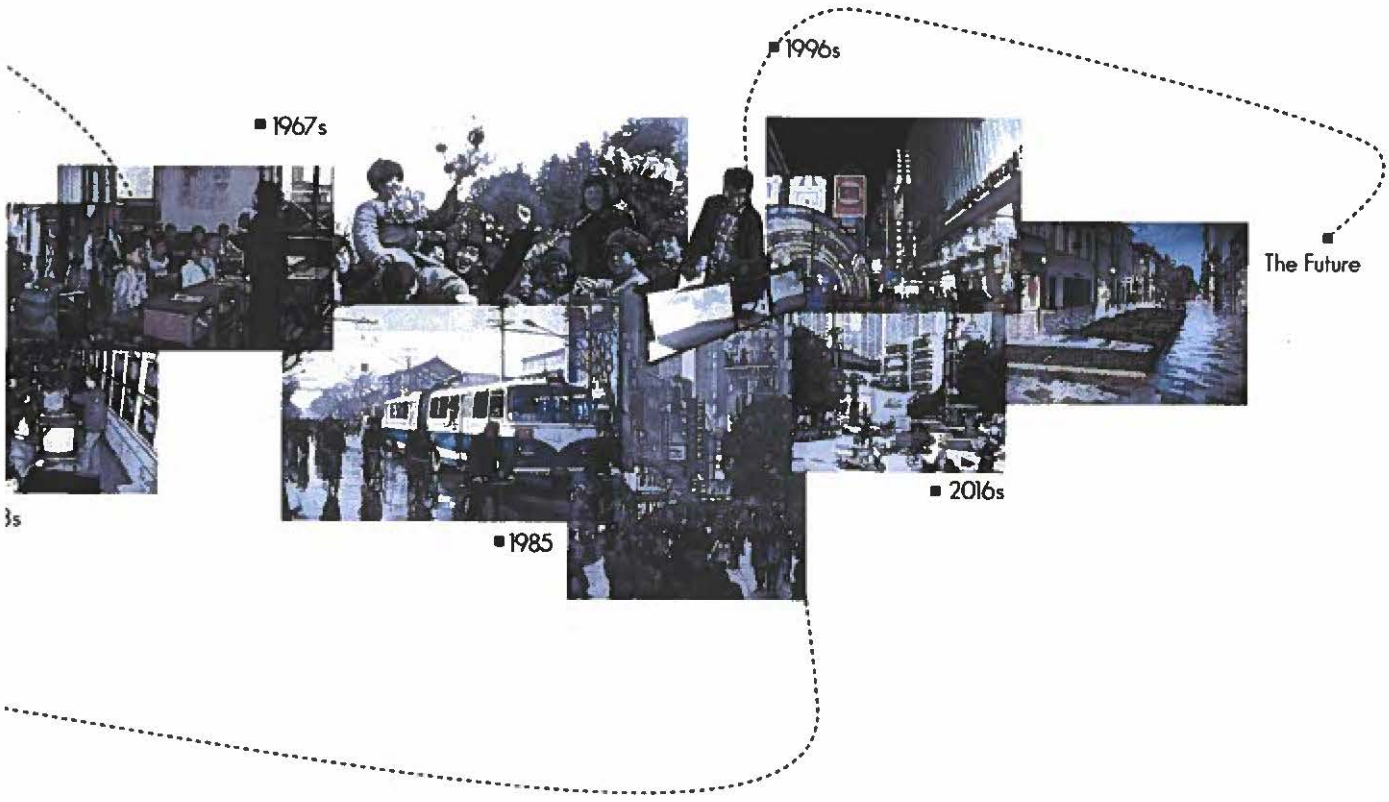


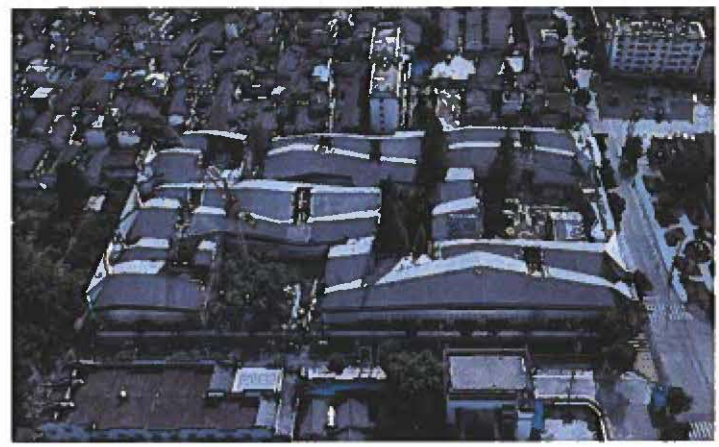
Bamboo was widely used as building material in early China. Thereforer, Concrete, using bamboo as a formwork to fix concrete, giving the concrete a bamboo texture, reflecting the characteristics of traditional China.

Bricks are also one of China's important architectural inventions, which record the local history. Bringing these old bricks together and placing them in a new building, which gives a feeling of a new building that evolved from the old.

The historical Timeline of China



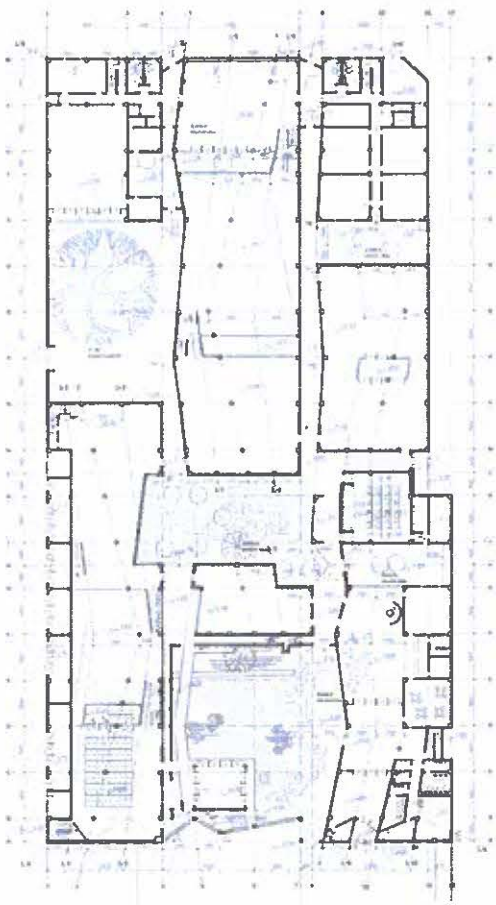

1996s
1967s
The Future
2016s
1985

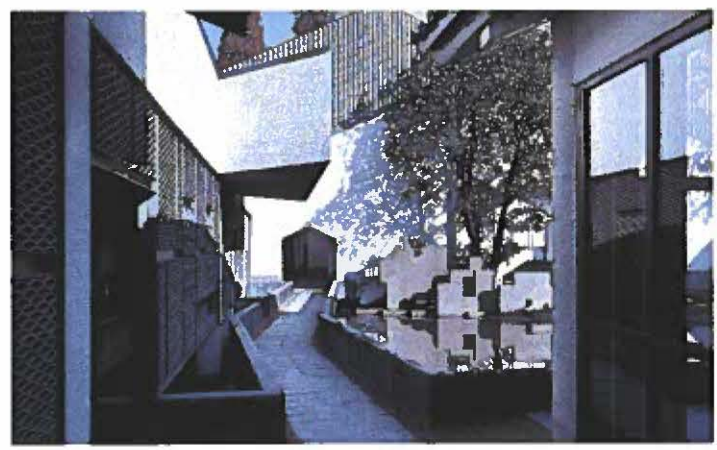


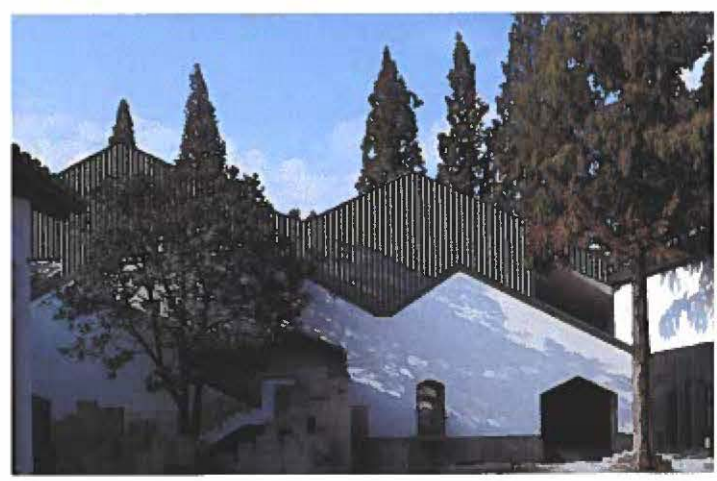
Jixi Museum

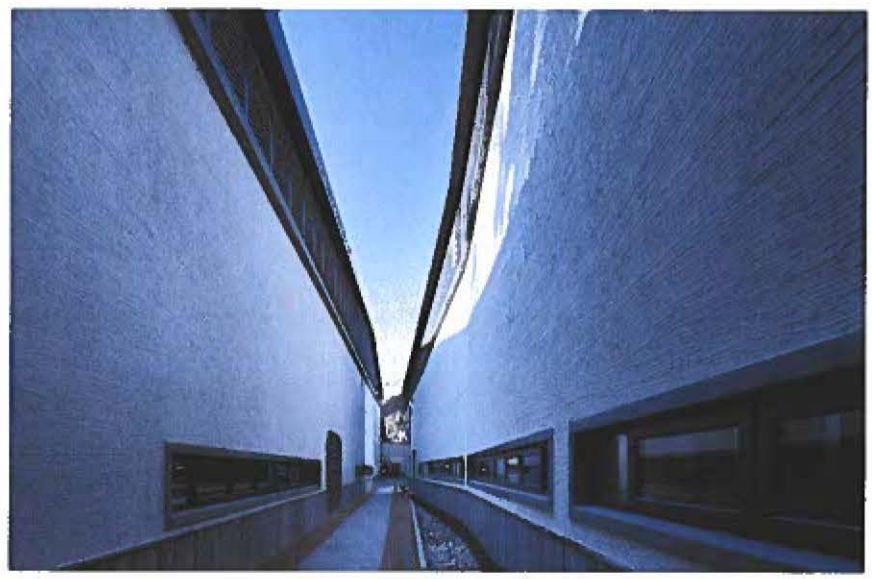
Architects: Li Xinggang
Location: Jixi Xian, Anhui Province, China
Project year: 2013

The overall layout of the building is set with multiple courtyards, patios and streets, which not only creates a comfortable and pleasant indoor and outdoor space environment, but also reinterprets the spatial layout of hui-style architecture. Triangular roof truss units arranged in a regular combination, whose slope originates from local buildings and adapts to the continuous undulating roof form; While appropriately adopting local traditional architectural techniques, bricks, tiles and other common local building materials are used in a flexible way, and attempts are made to present a contemporary sense.

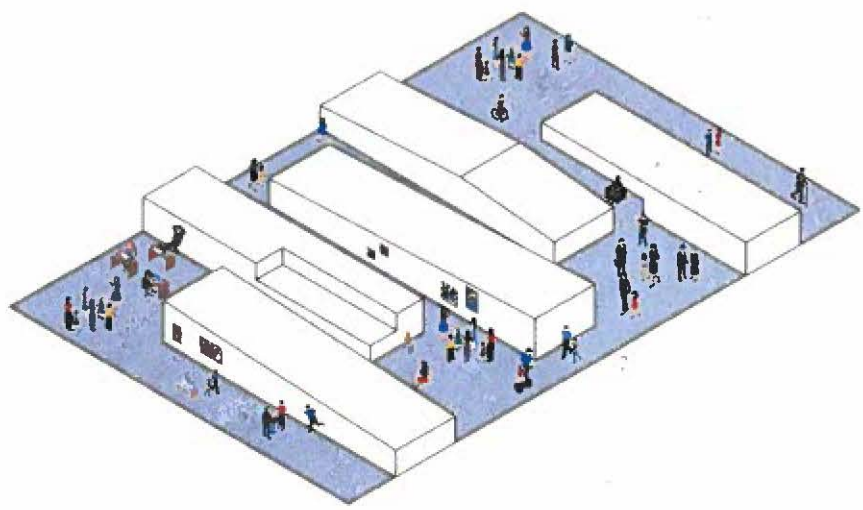






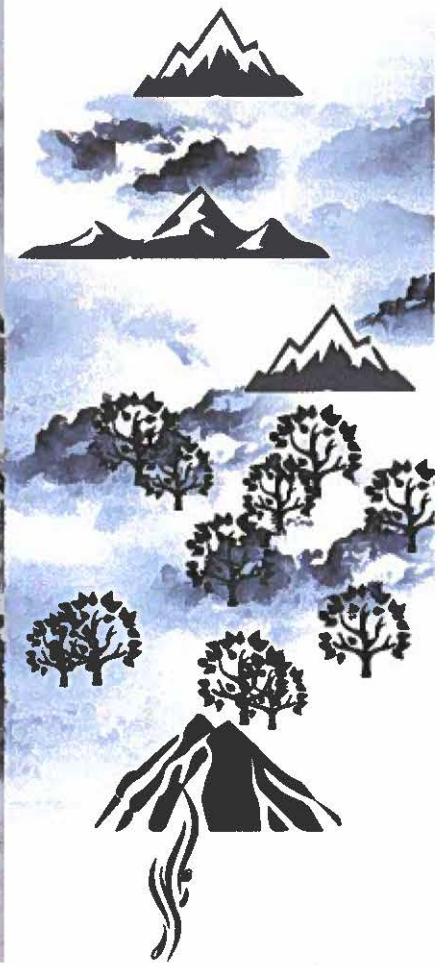


Corridor space

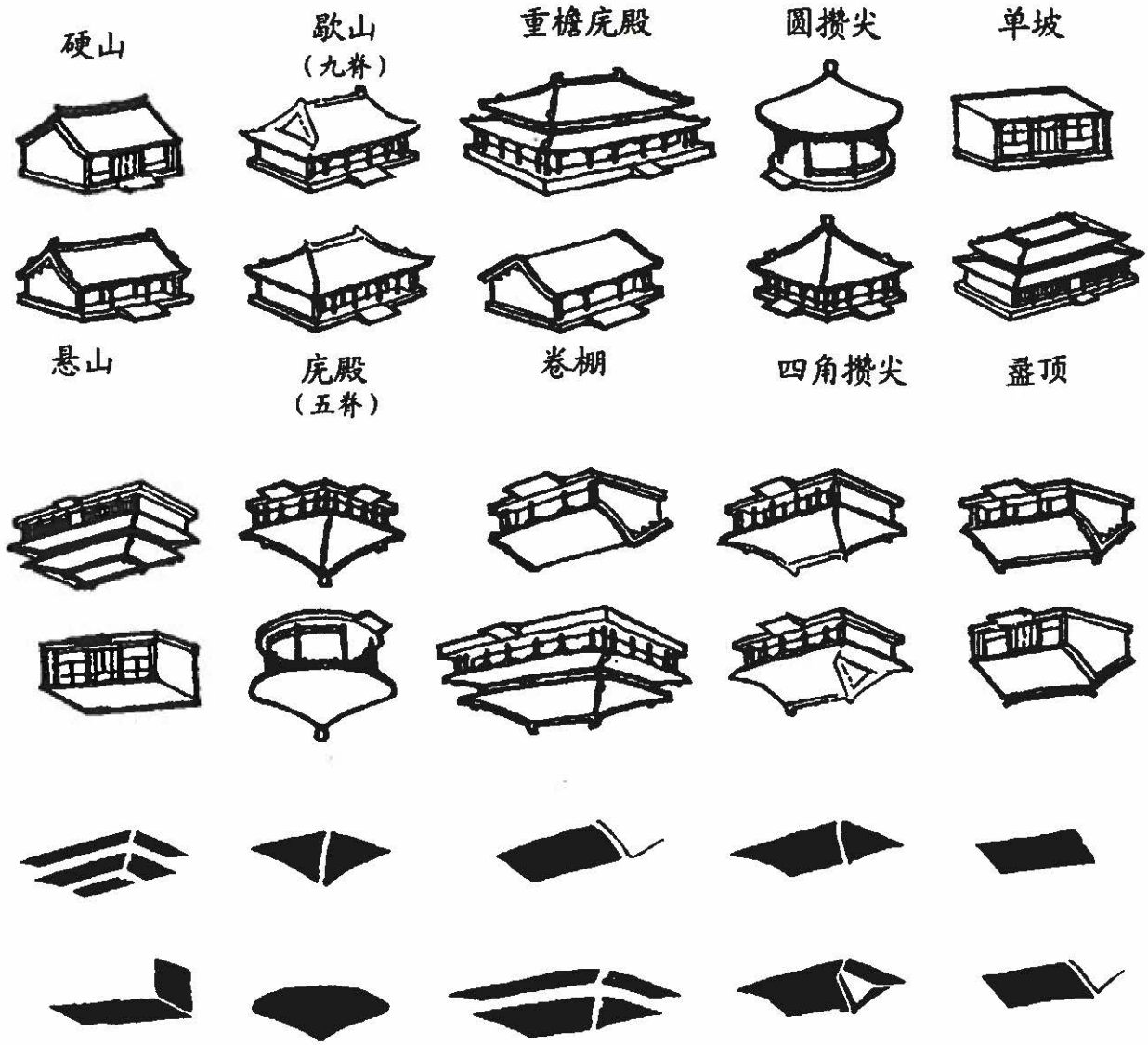


Spatial Relationships

Element in Chinese painting

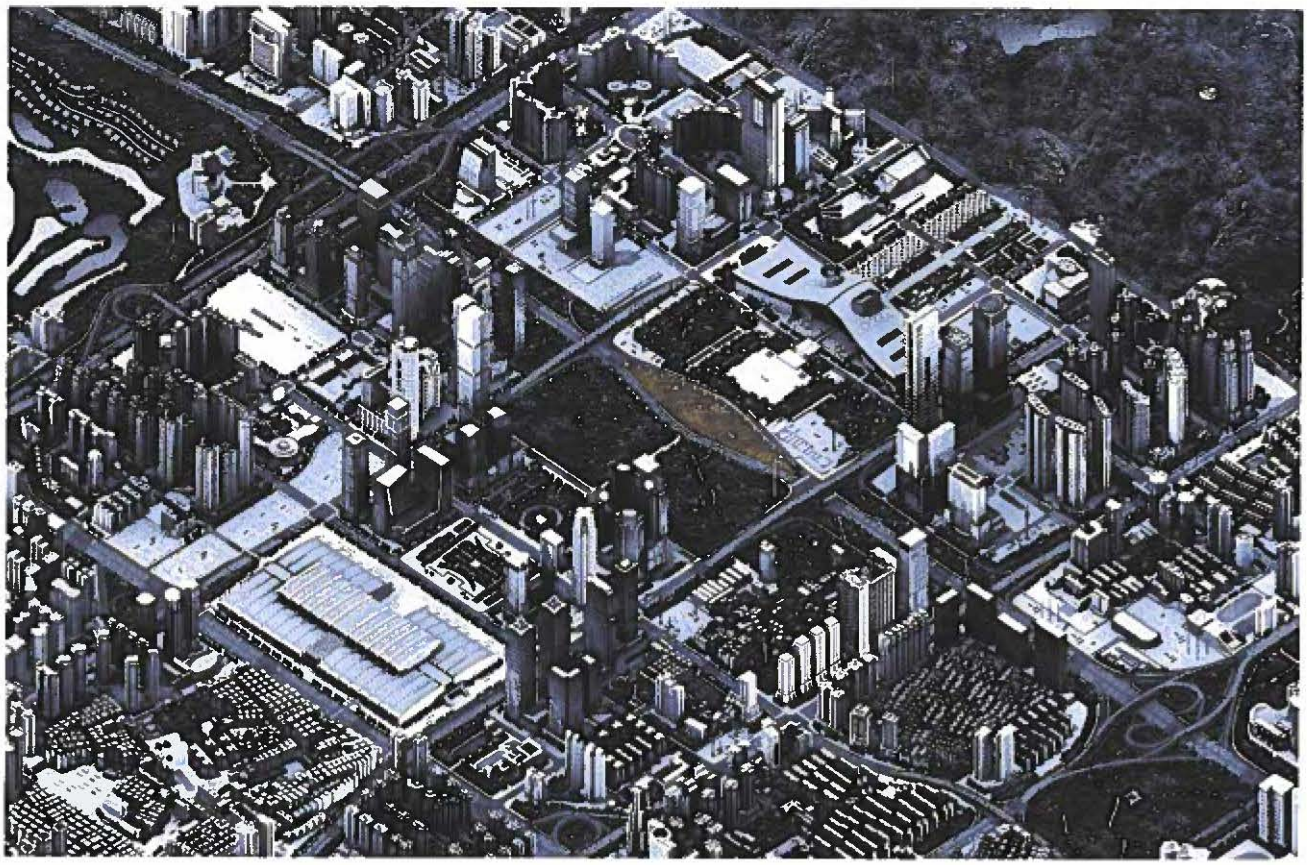


Subvert Chineses Traditional Roof



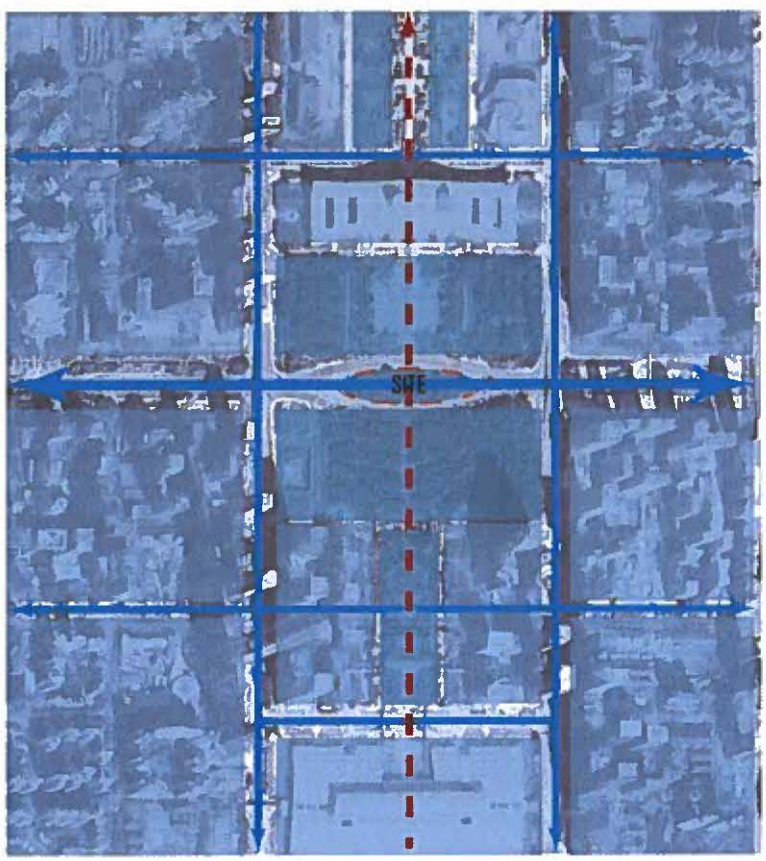
SITE

Shenzhen is one of the fastest growing cities in China. Due to the rapid development, Shenzhen's buildings are mostly western modern buildings, so that it lacks chinese cultural foundation. In addition, Shenzhen has demonstrated China's openness to the outside world, therefore, placing the site in Shenzhen is to showcase China's architectural culture and give it a new cultural foundation.



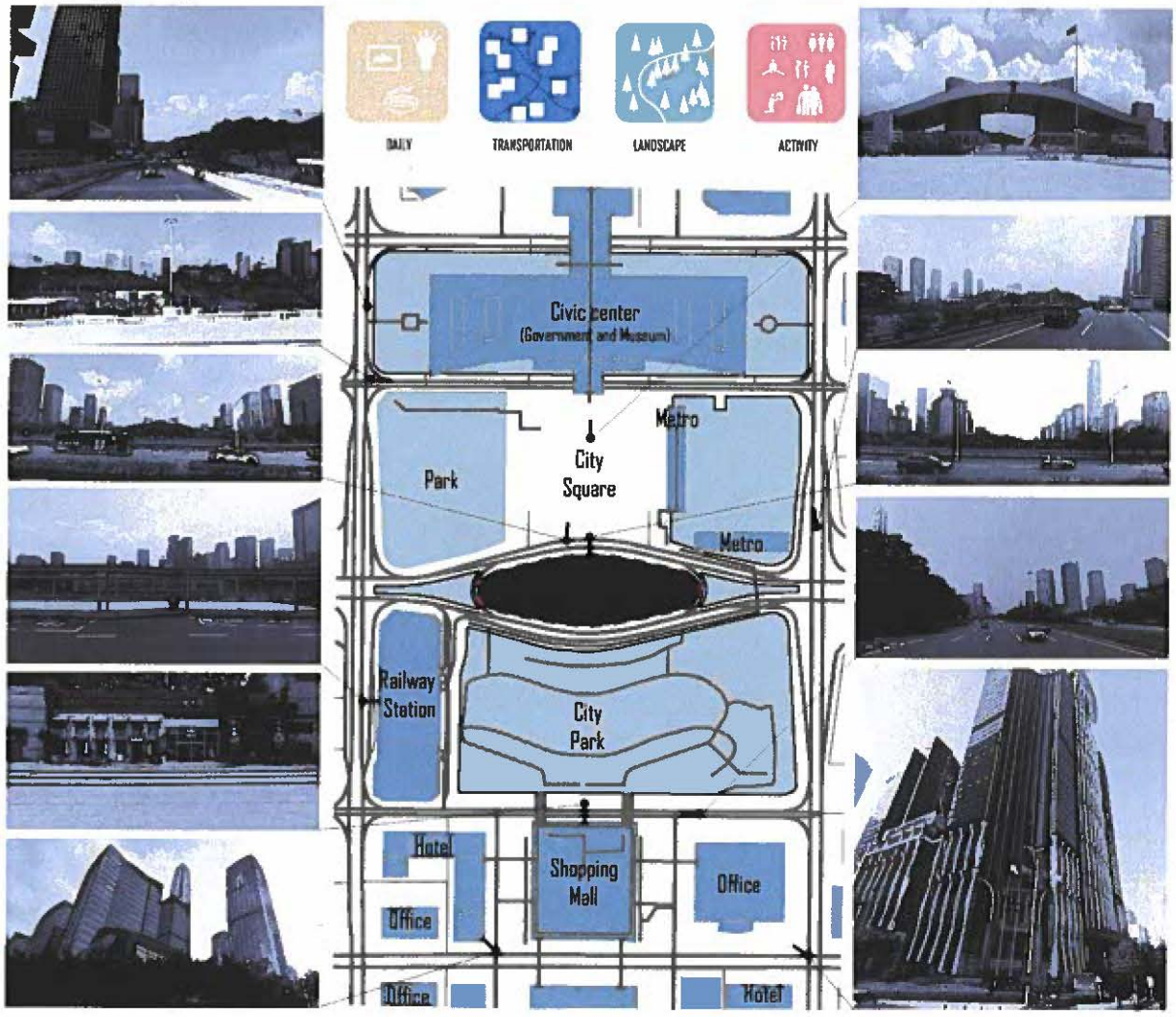
Site is the location of the Shenzhen Civic Center, surrounded by modern buildings. The railway station and the subway station are located in this area. The city with convenient transportation is a typical representative of modern cities.

Site analysis

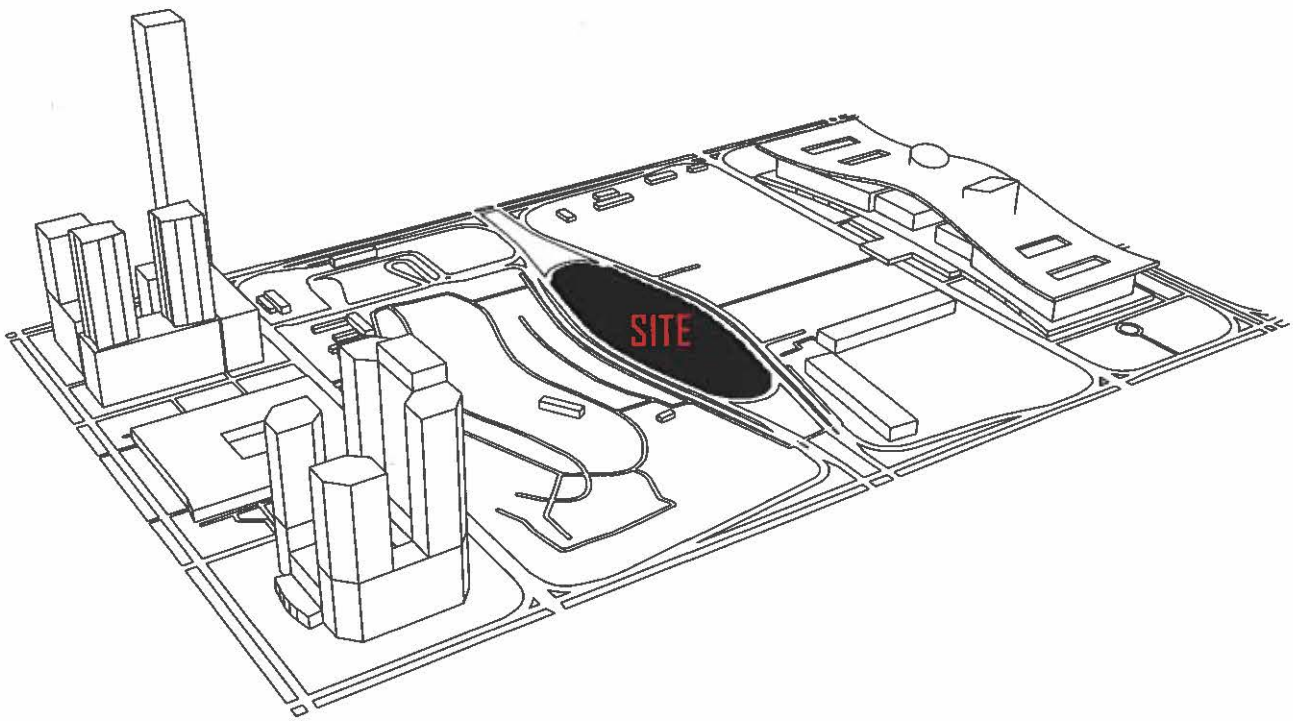


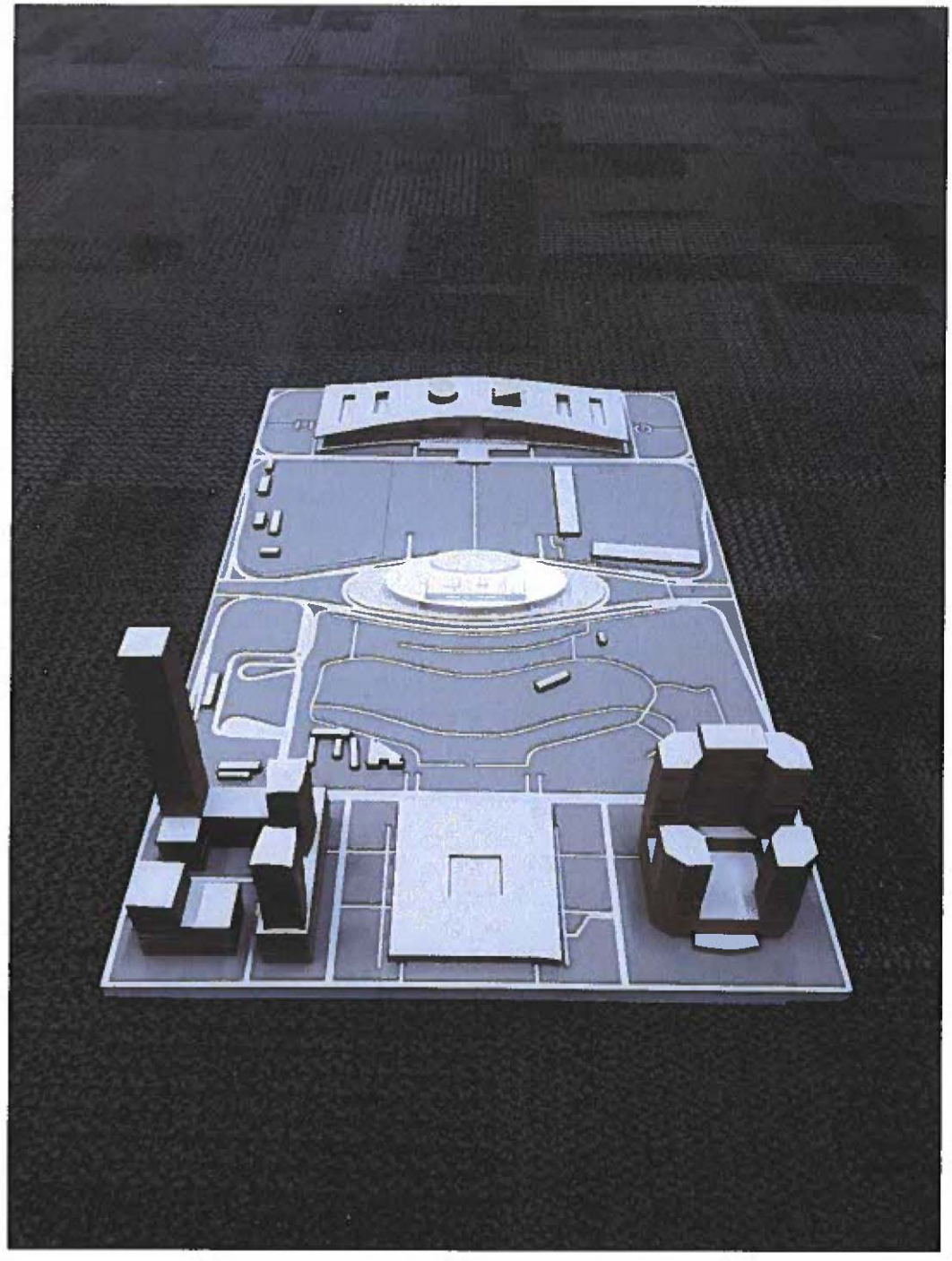
From these diagram, site is located on the middle line of the Civic Center, surrounded by the city's public space, like public squares, city parks, etc. In addition, it is located in the center of the area and is a symmetrical shape that satisfies the axisymmetric style of traditional Chinese architecture.

Surrounding Building



Site Model

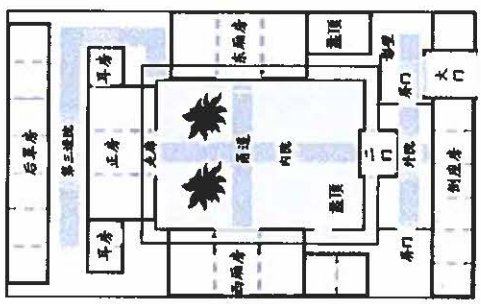


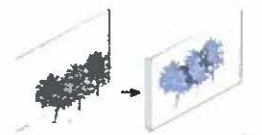


Project

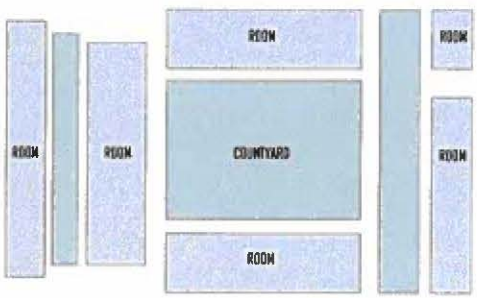
The concept of this project is to imitate the spatial composition of traditional Chinese architecture. Use the building to create the courtyard, The courtyard is not only on the horizontal plane, but also in the vertical direction. The axis part of the building adopts a three-yard space layout of traditional Chinese dwellings to maintain the axis of the city.

Traditional Chinese House Plan

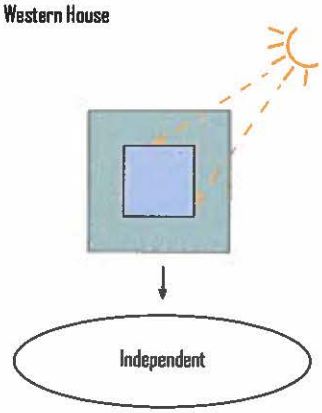




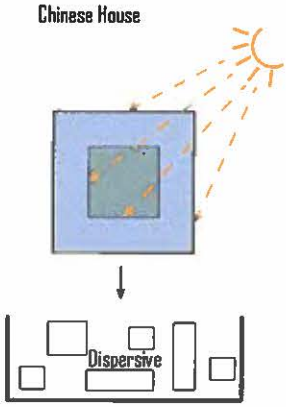
Countyard Orgnization



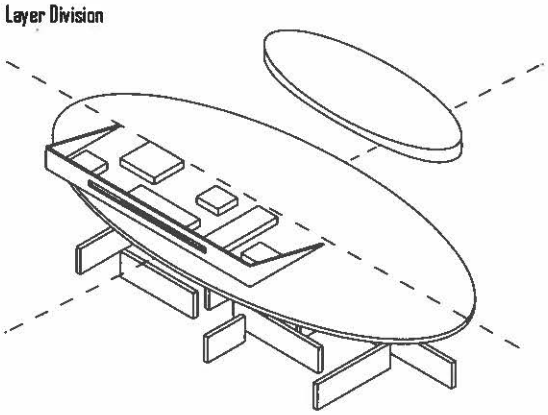
Western House



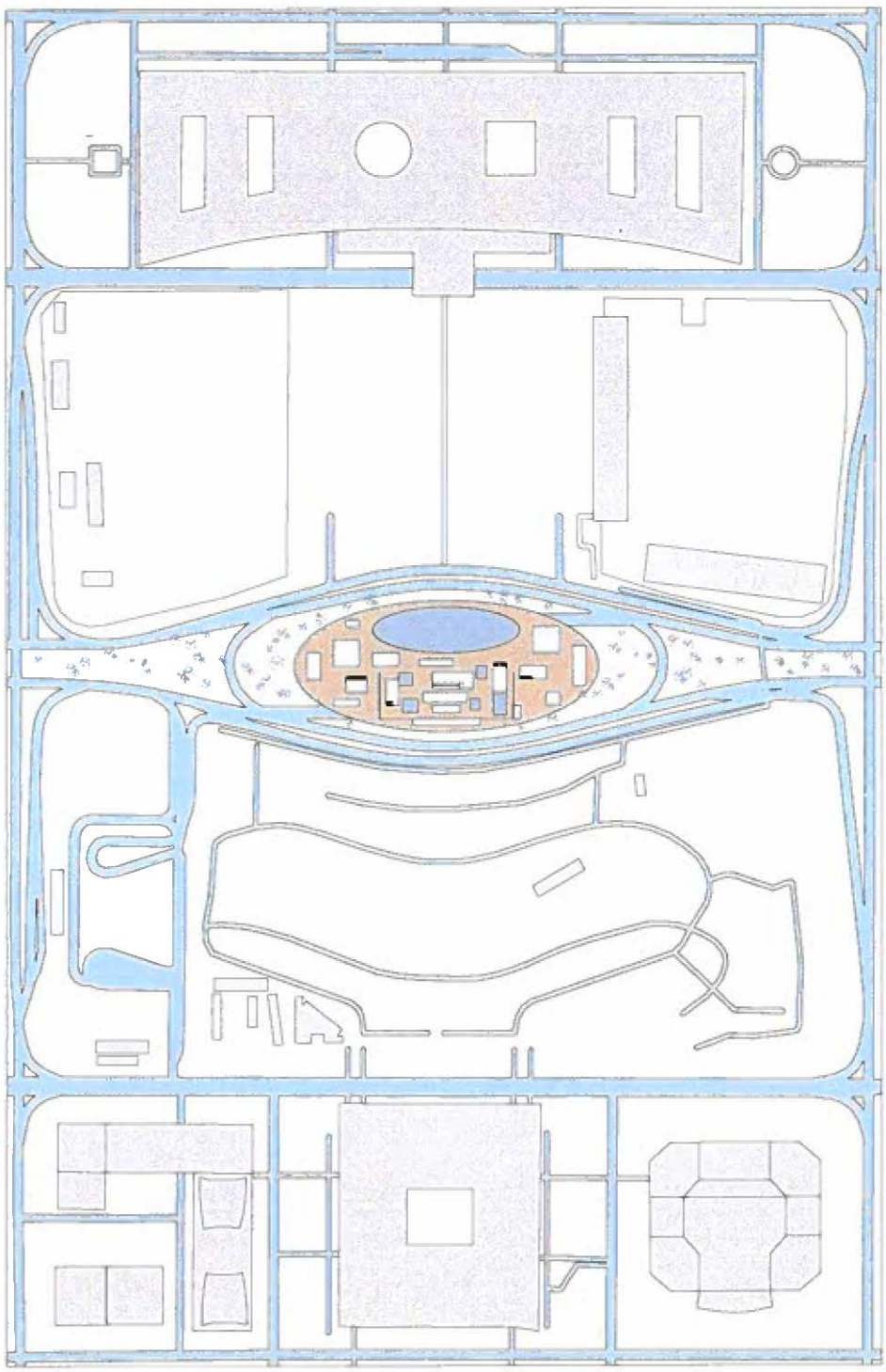
Chinese House



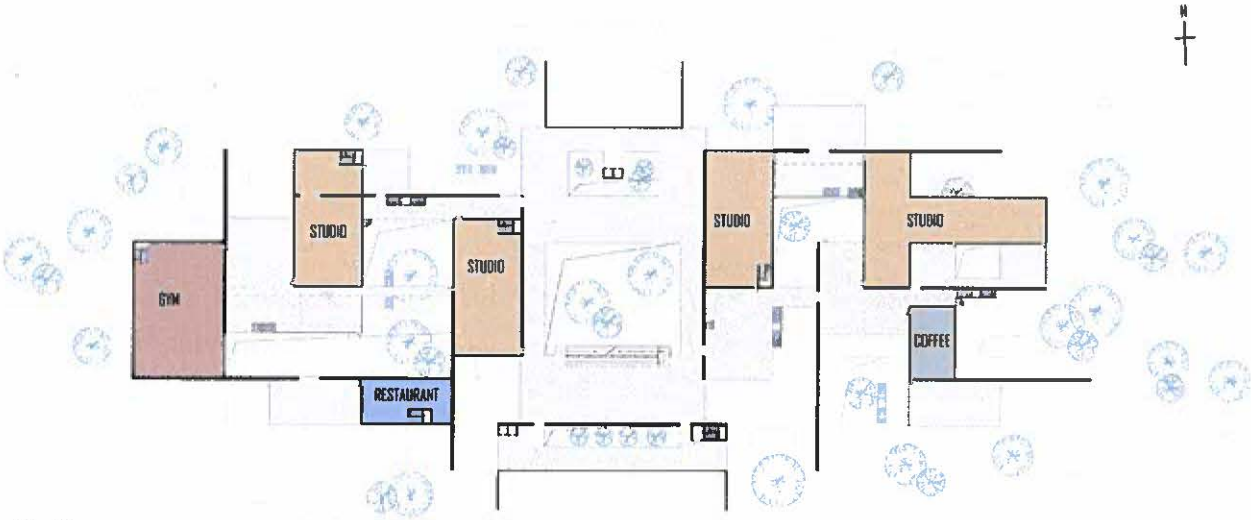
Layer Division



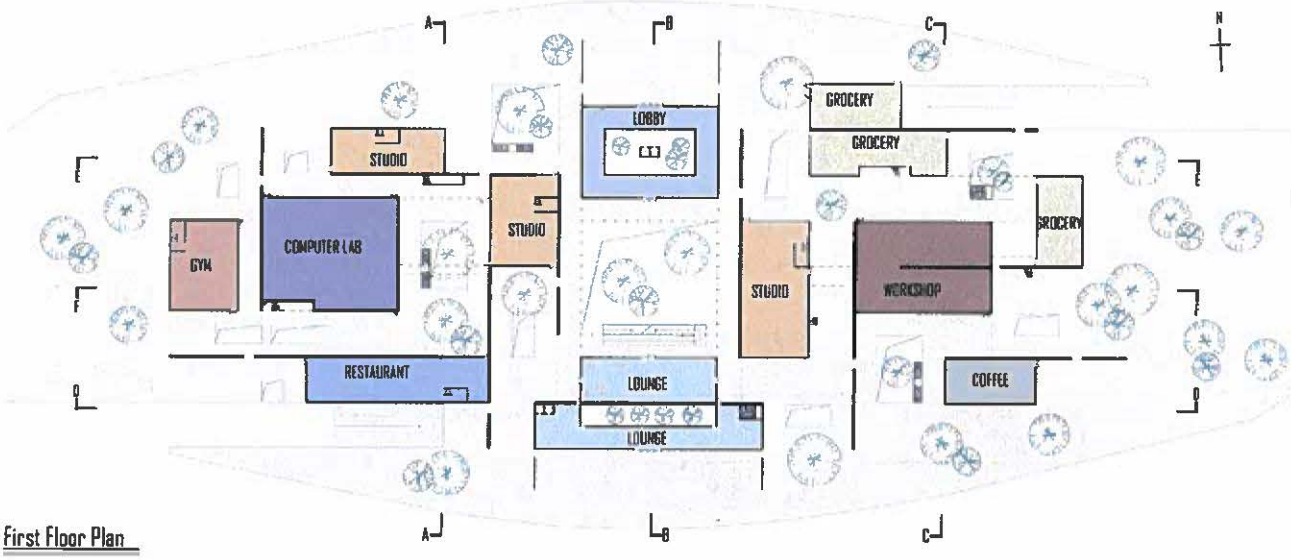
Site Plan



Plan and Function

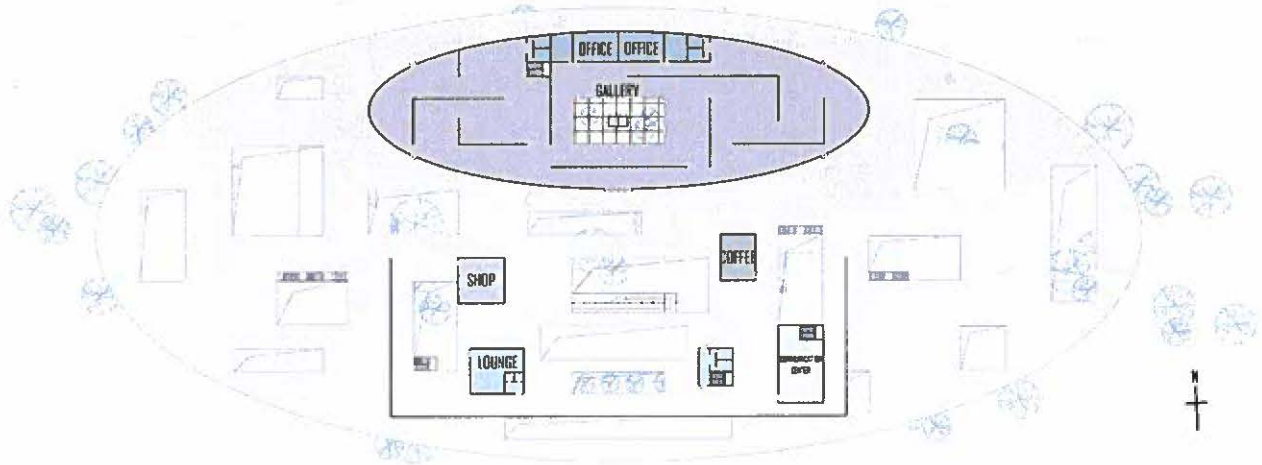


Second Floor Plan

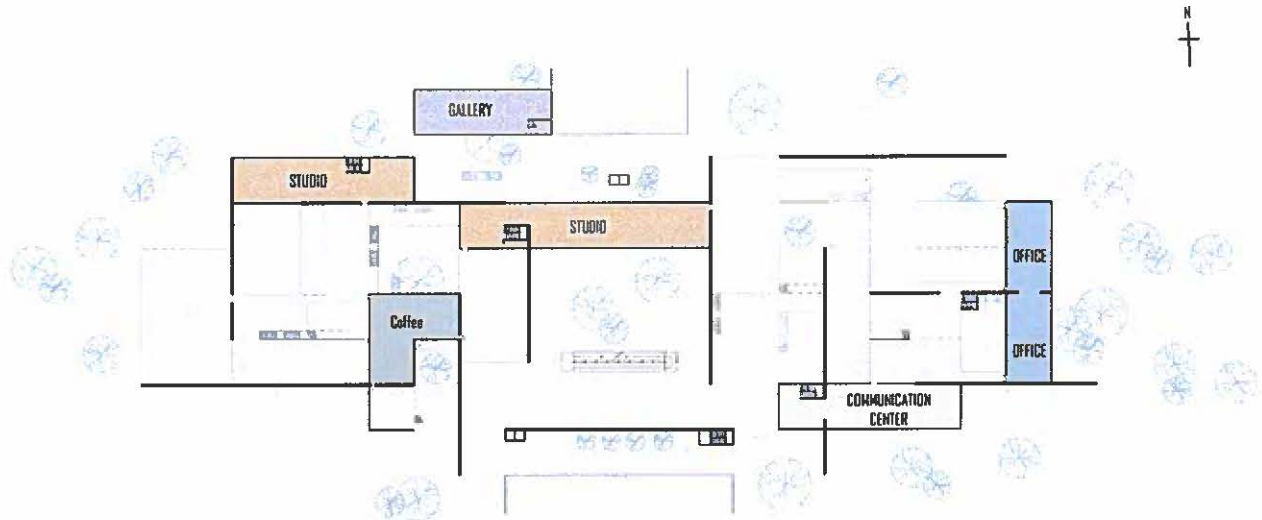


First Floor Plan

Basement Plan

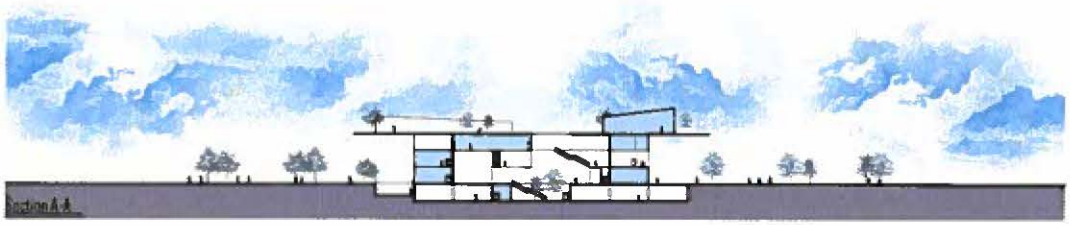


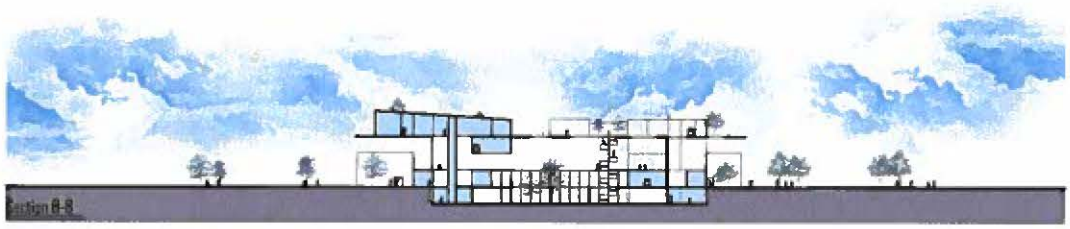
Fourth Floor Plan

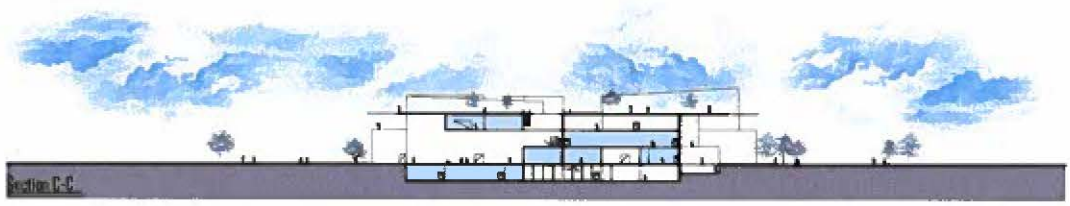


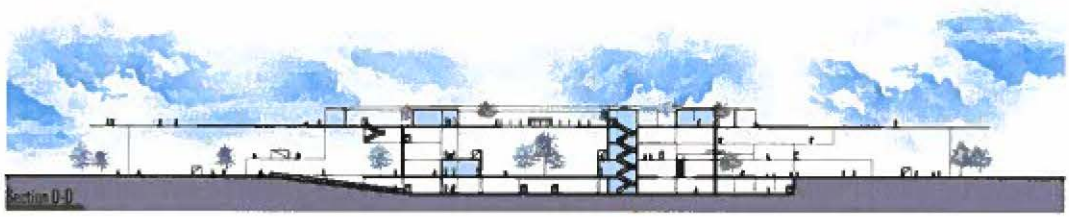
Third Floor Plan

Section


Section A-A


Section B-B


Section C-C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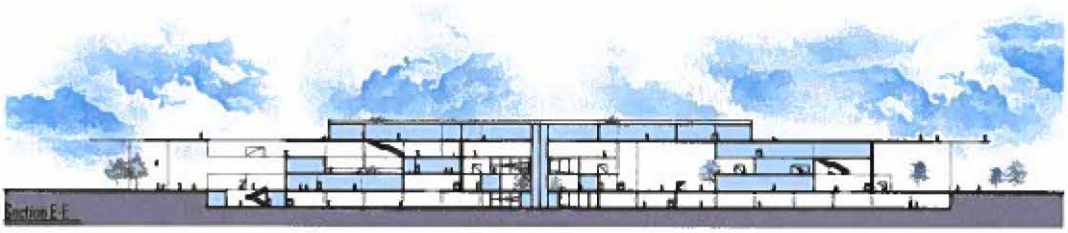
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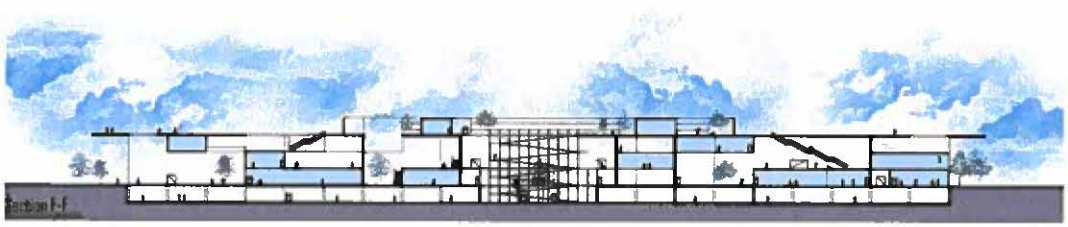
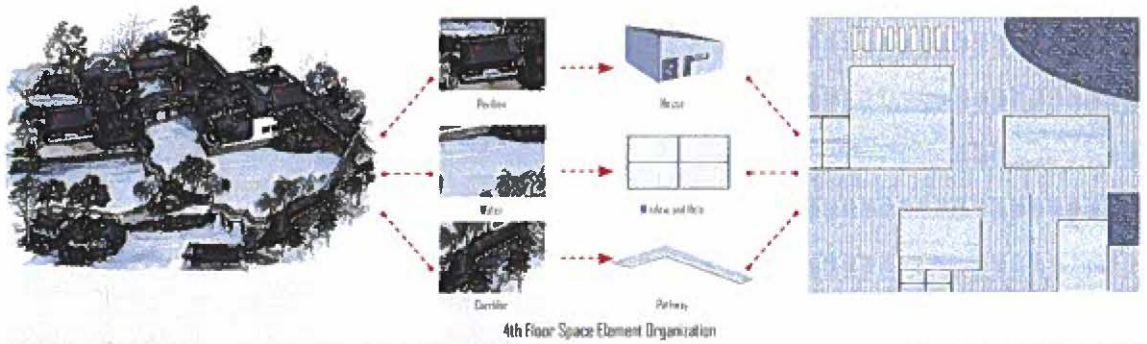
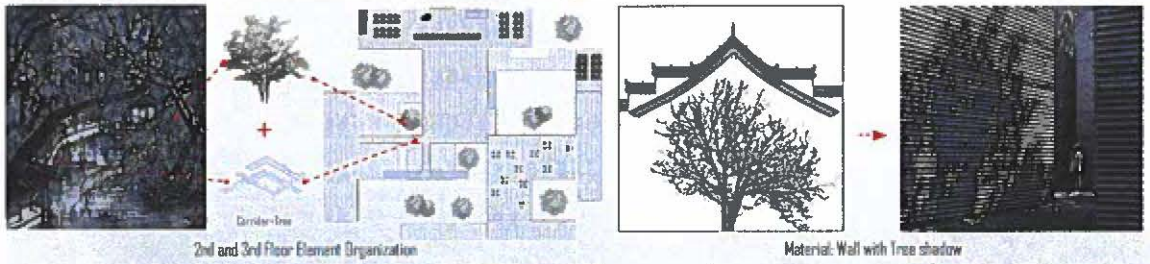

Section F-F

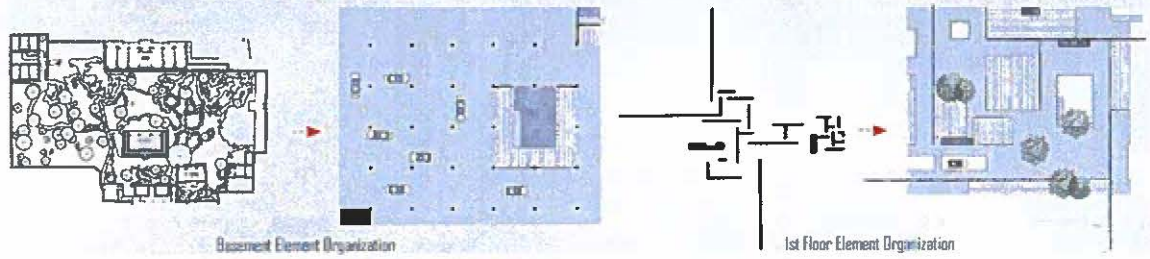


4th Floor Space Element Organization



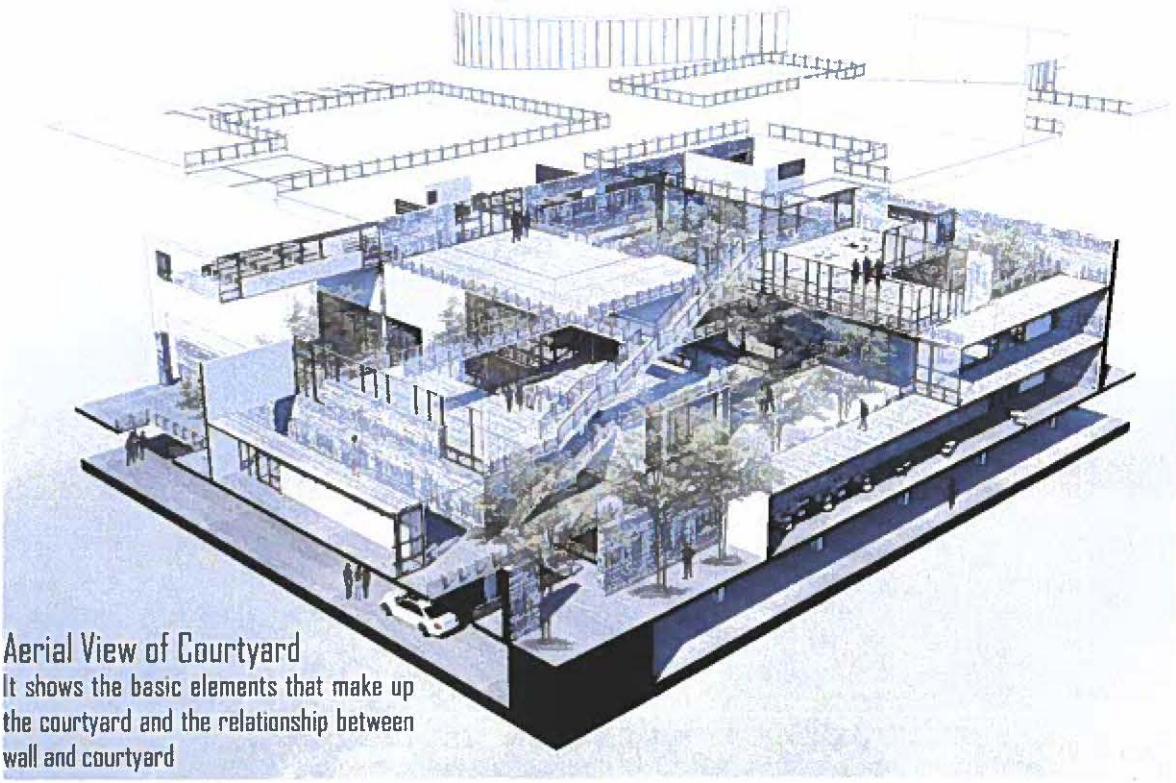
2nd and 3rd Floor Element Organization

Material: Wall with Tree shadow



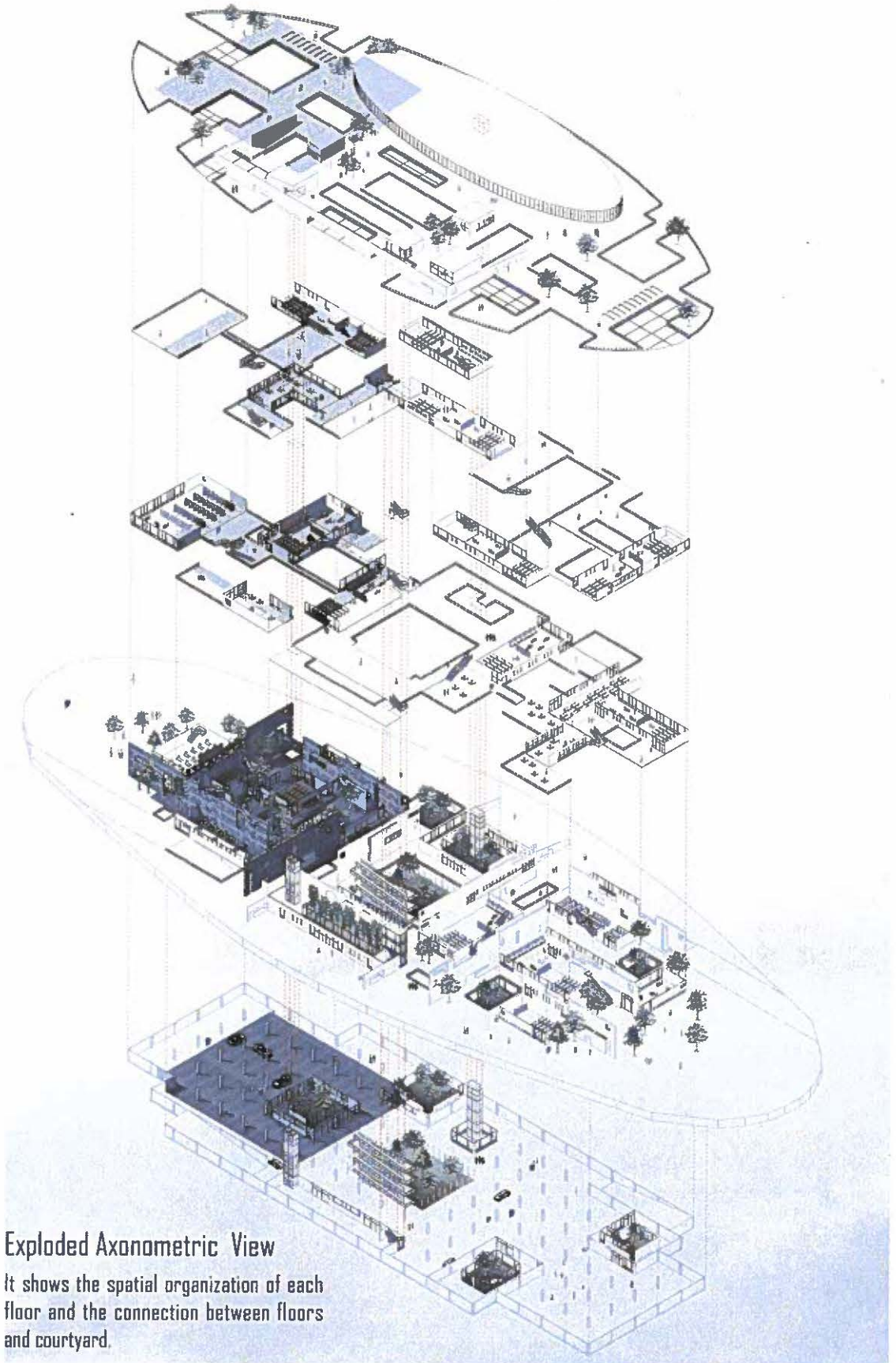
Basement Element Organization

1st Floor Element Organization



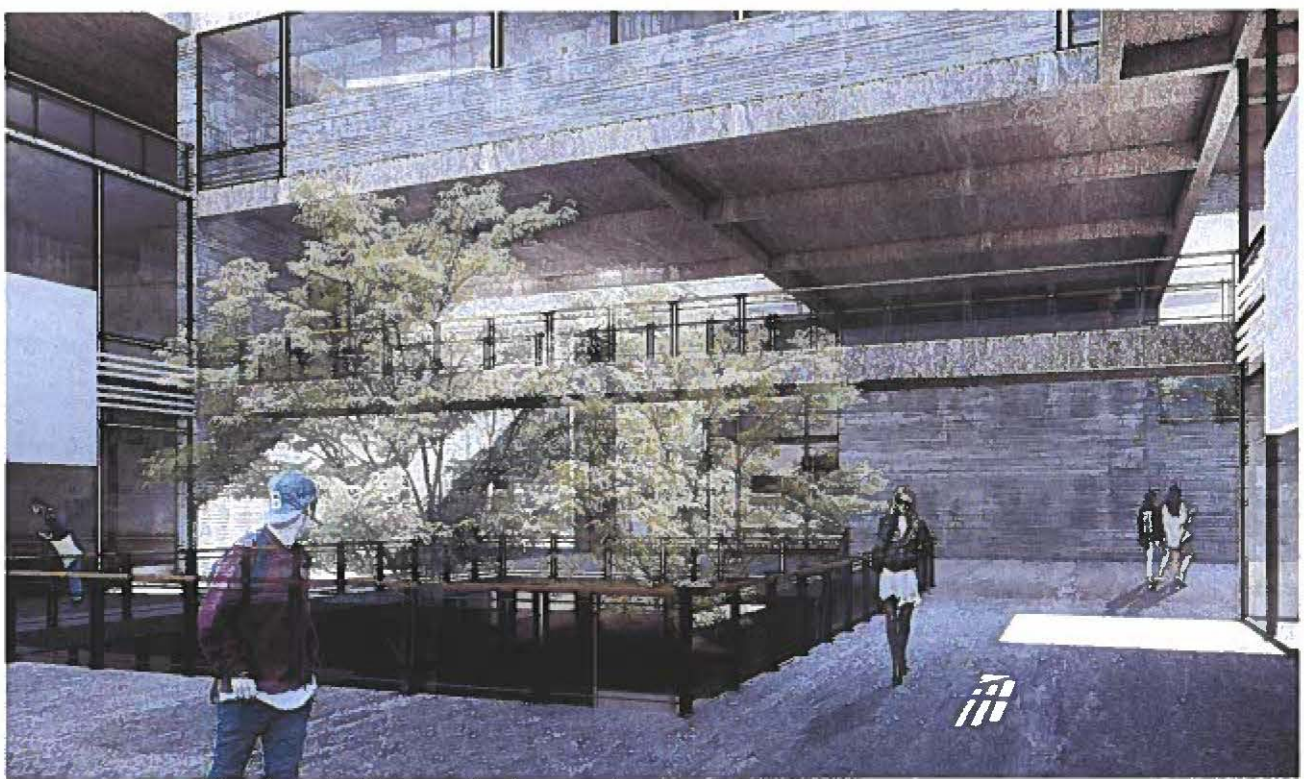
Aerial View of Courtyard

It shows the basic elements that make up the courtyard and the relationship between wall and courtyard



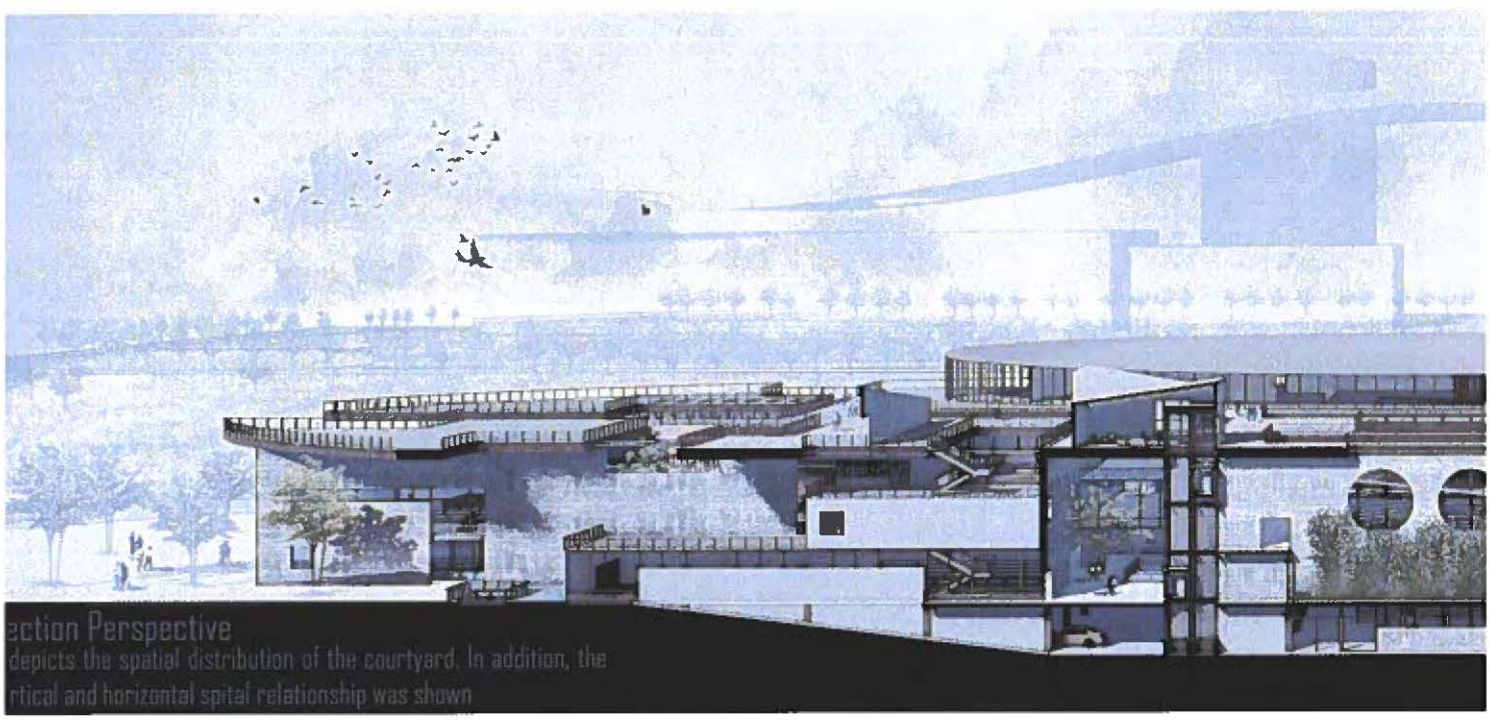
Exploded Axonometric View

It shows the spatial organization of each floor and the connection between floors and courtyard.

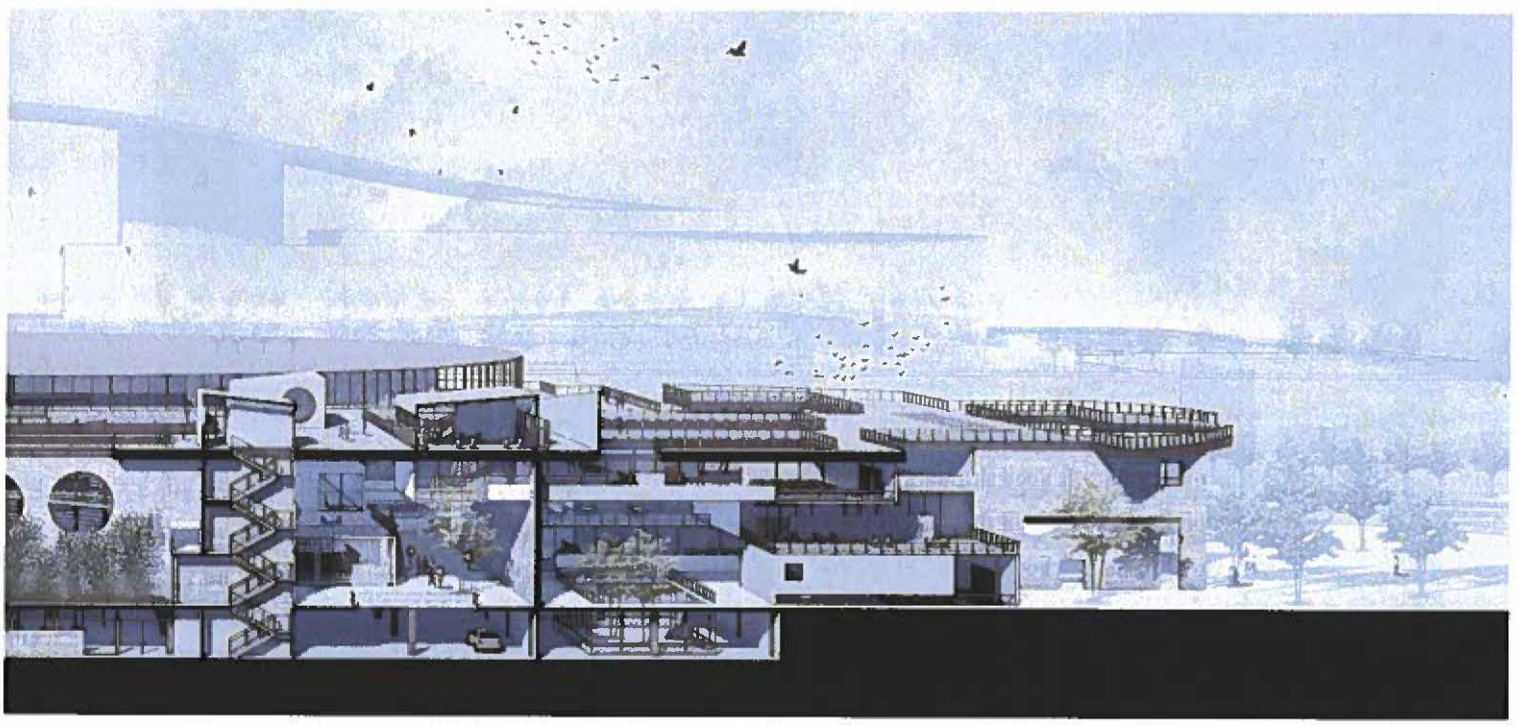


Perspective showing the relationship between wall and courtyard

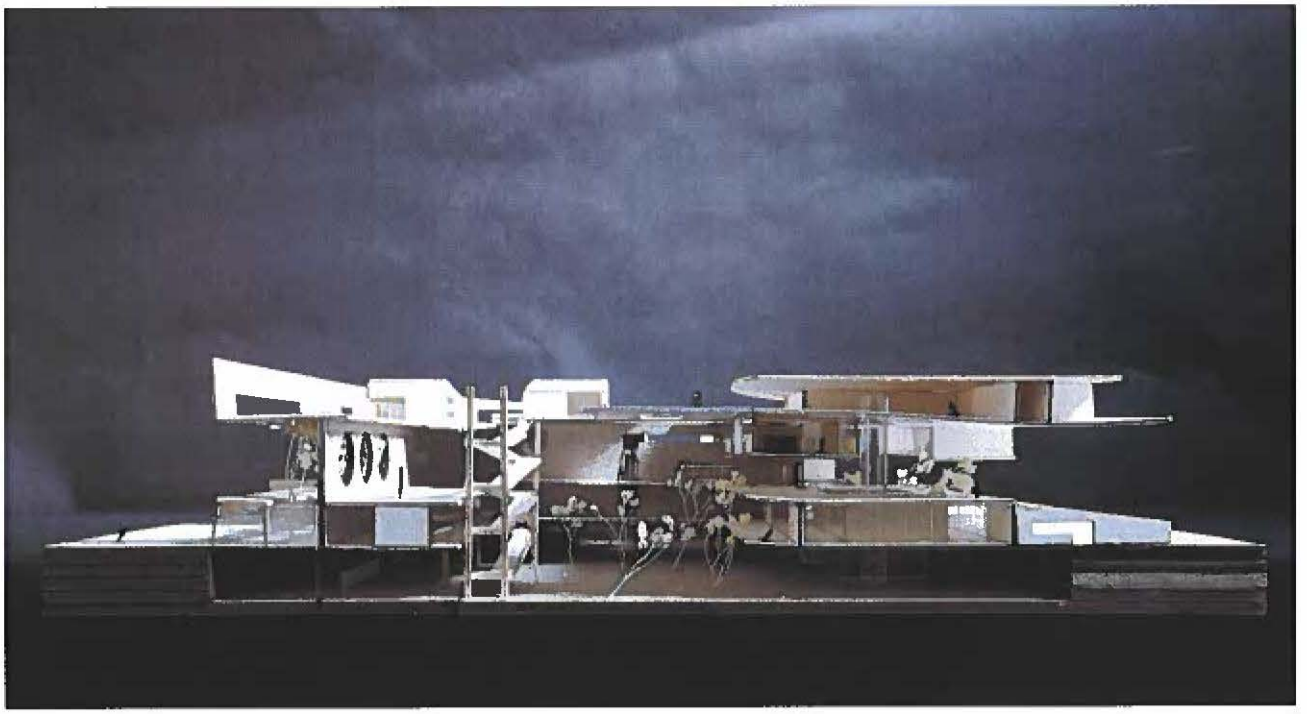
Perspective showing the relationship between different floors and courtyard

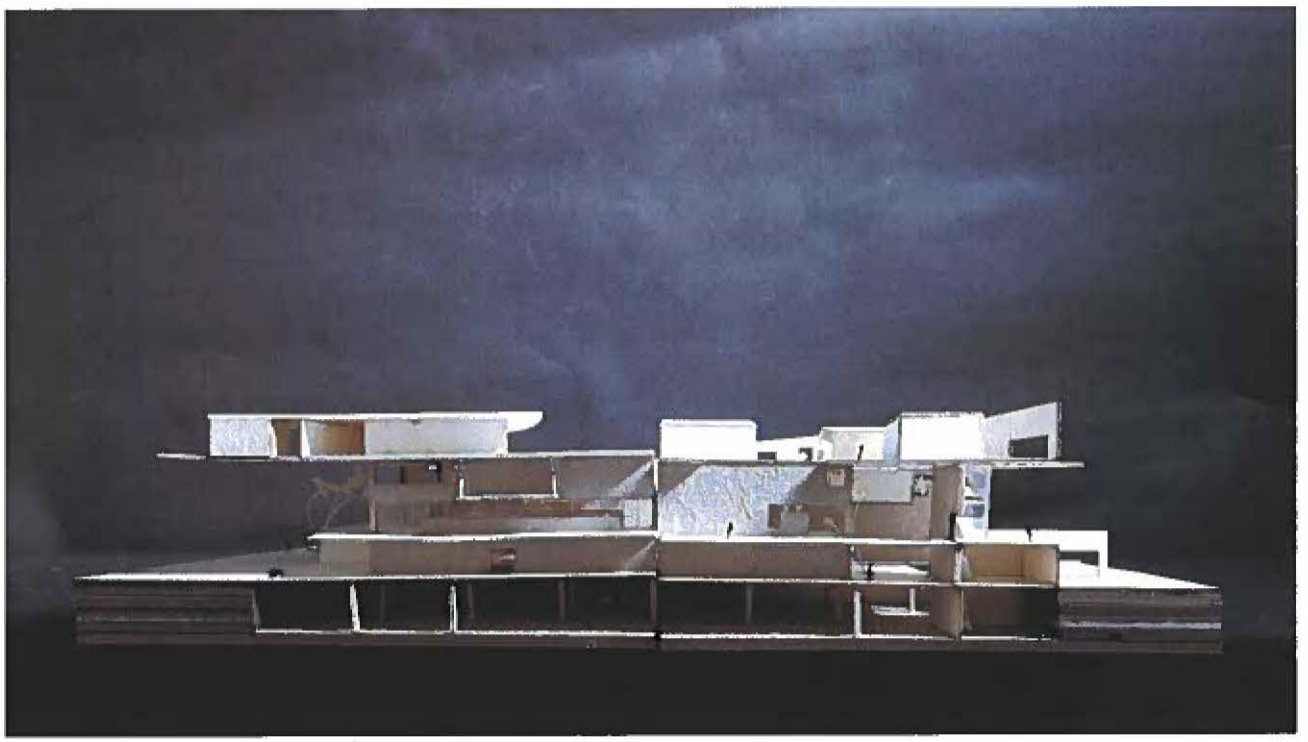


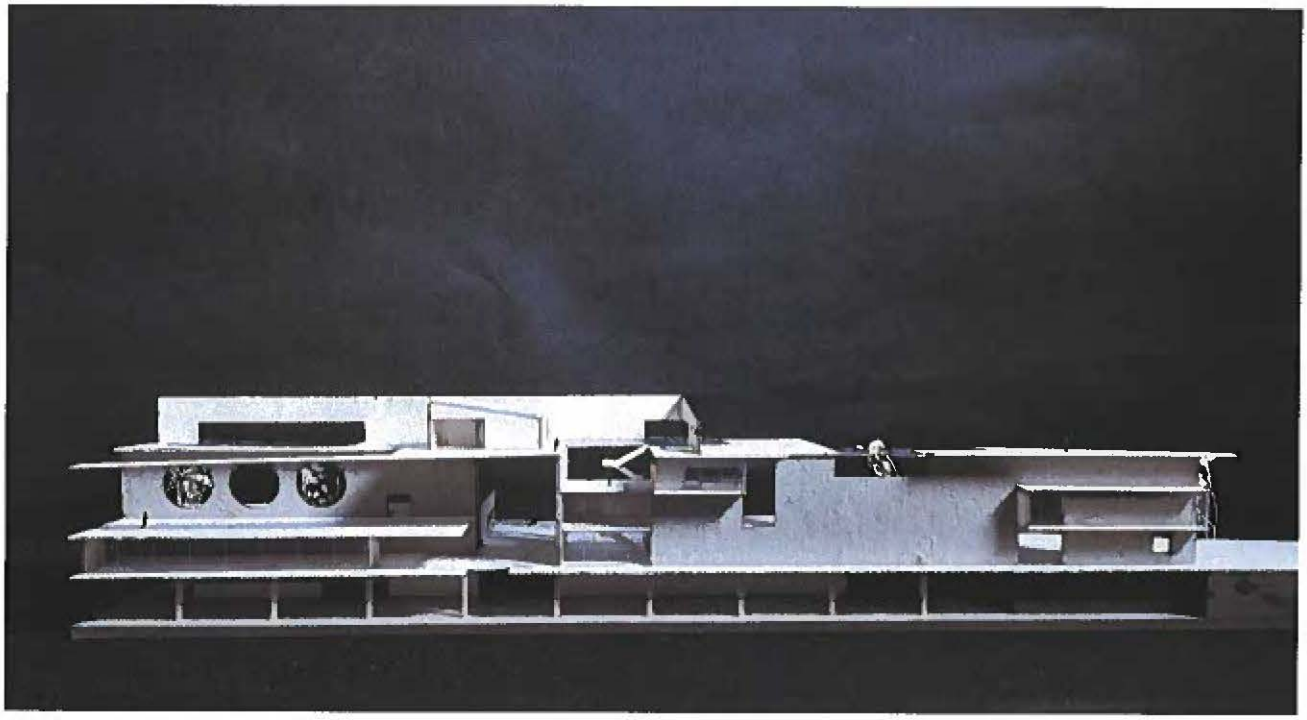
ection Perspective
depicts the spatial distribution of the courtyard. In addition, the
rtical and horizontal spital relationship was shown

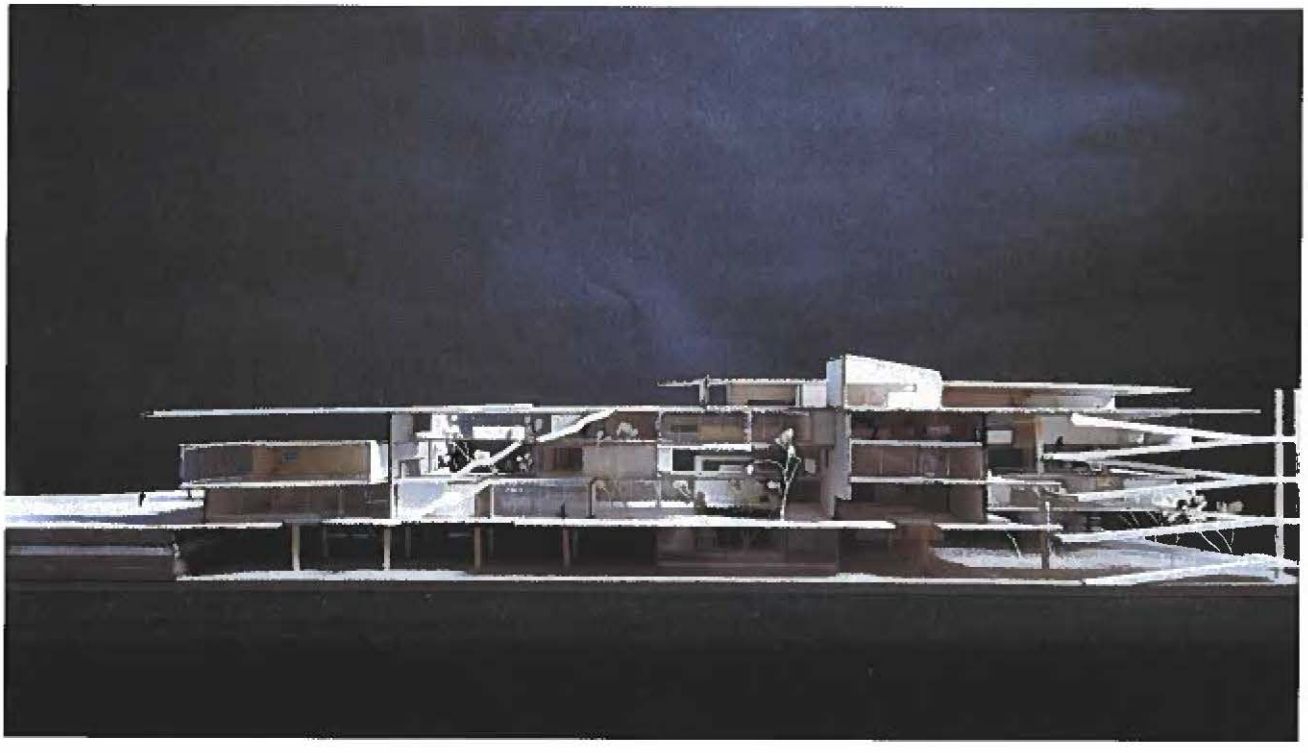


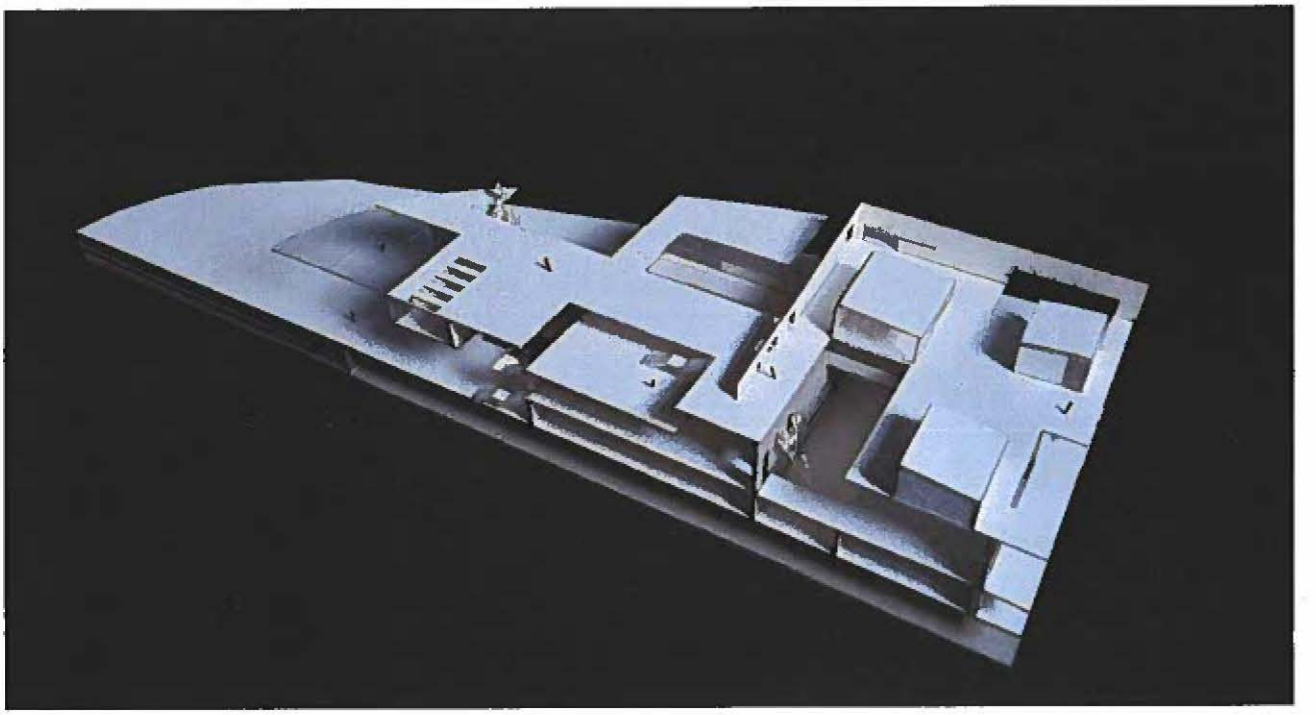
Physical Model Photo

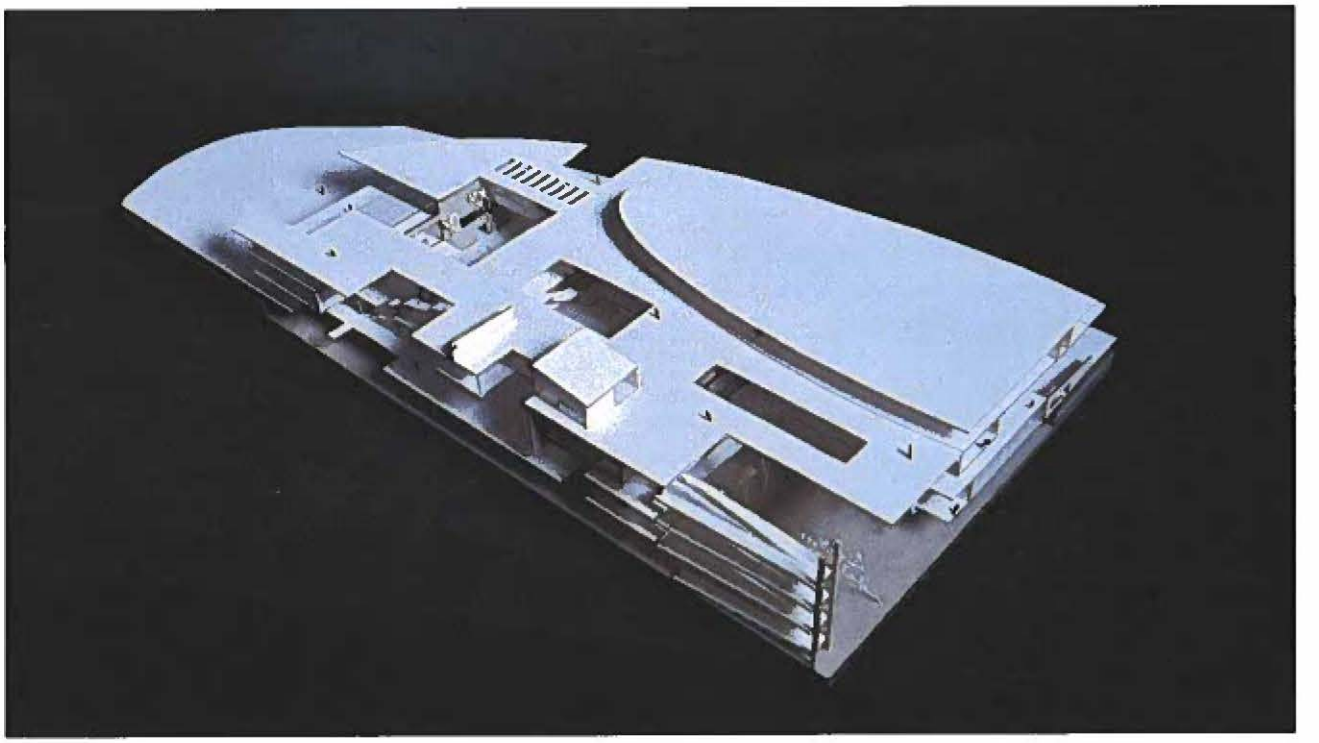


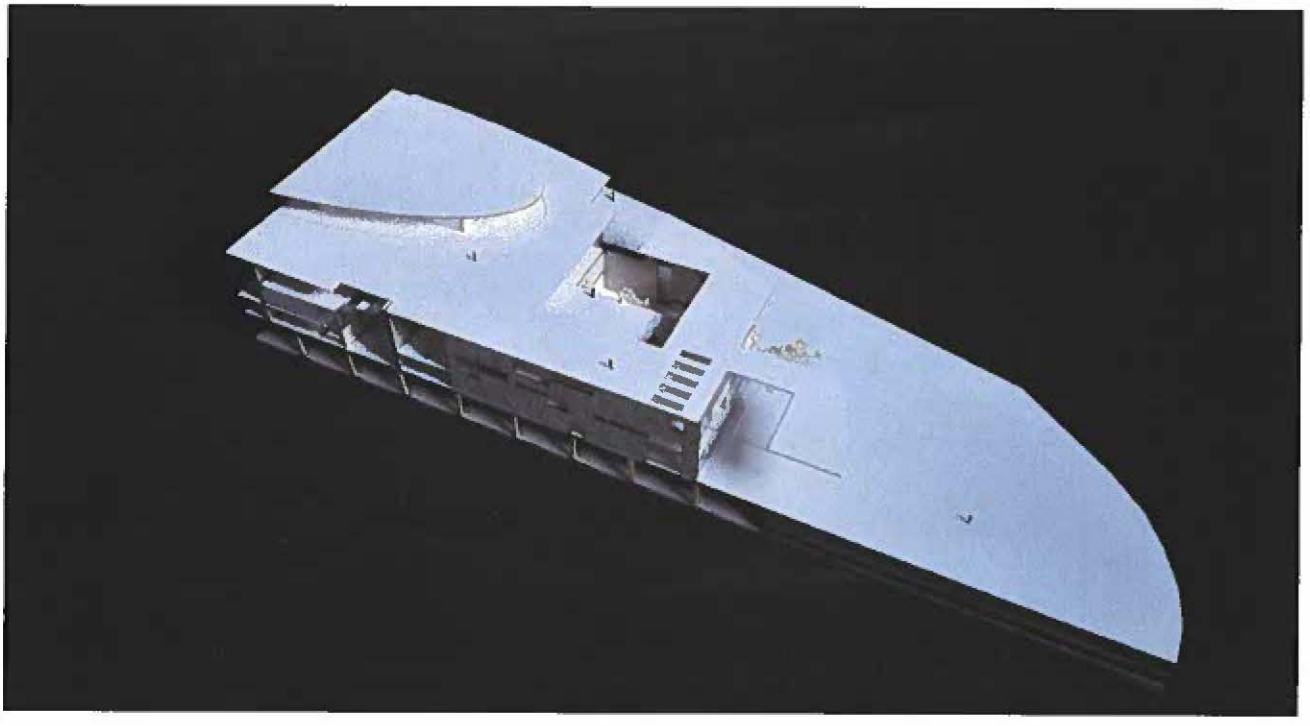


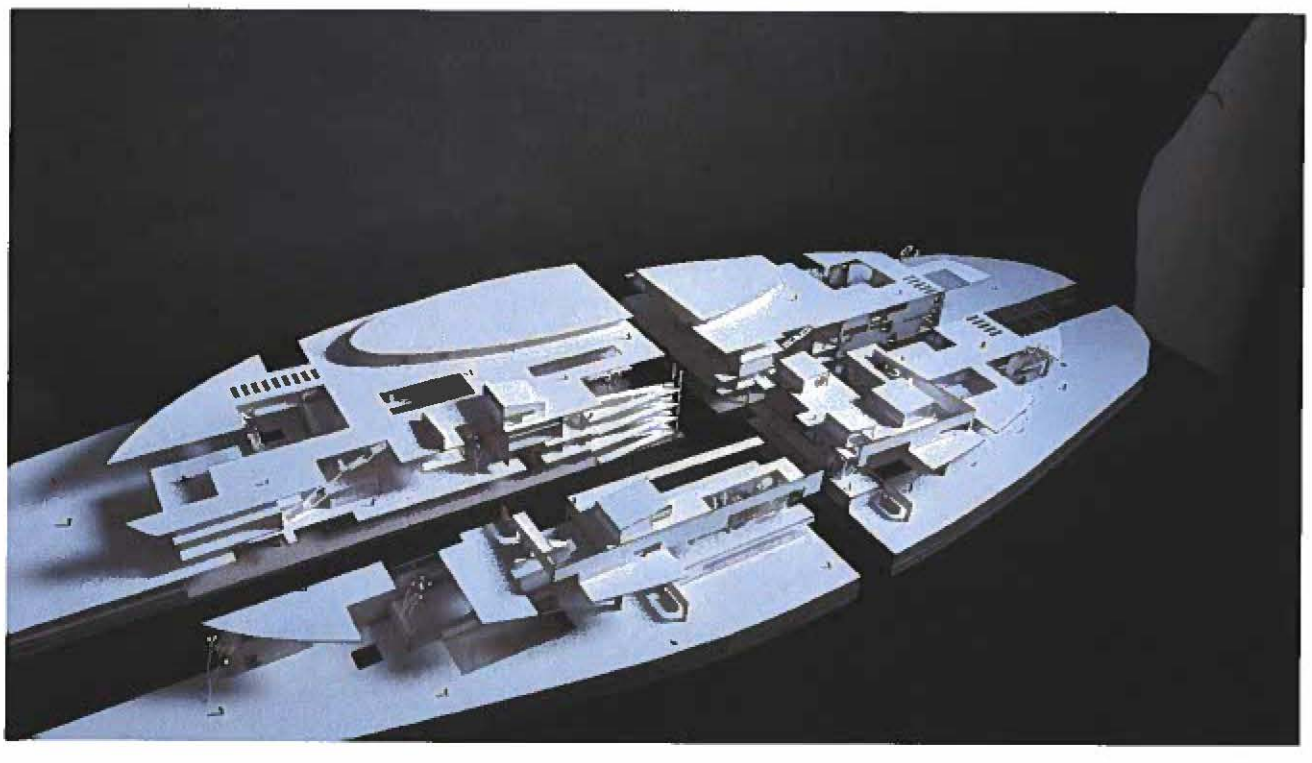


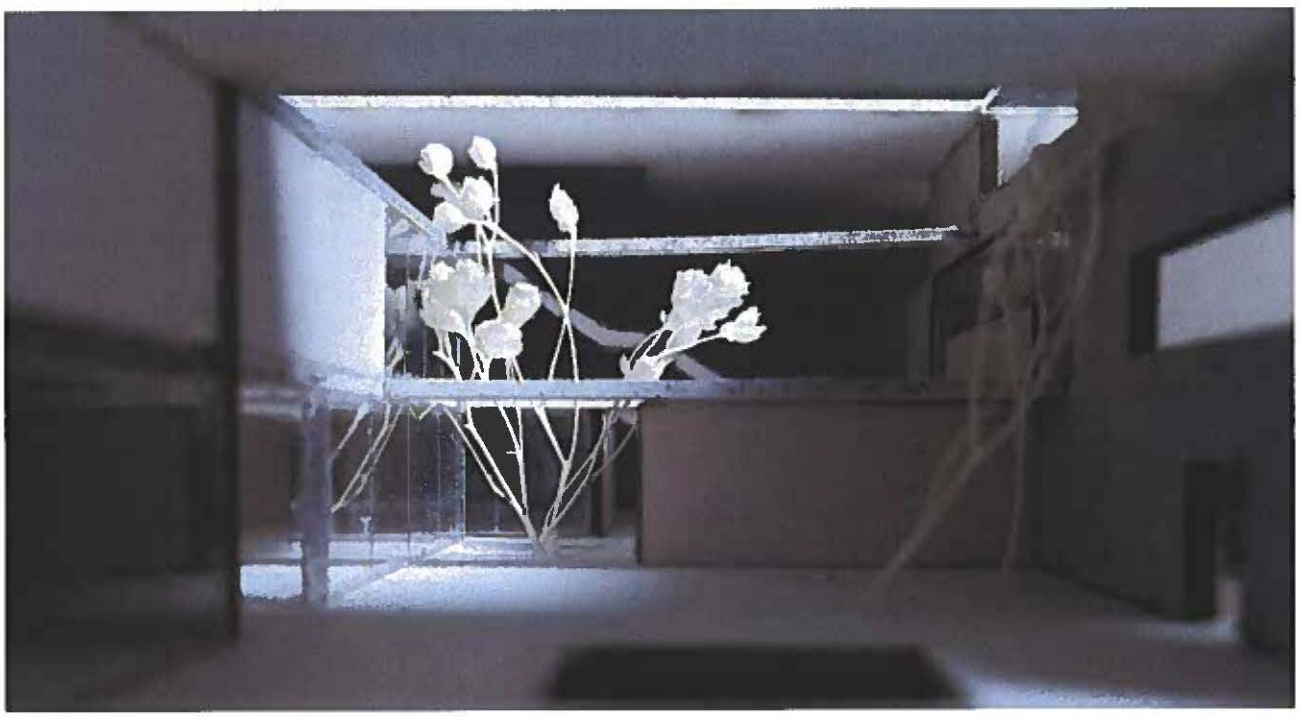


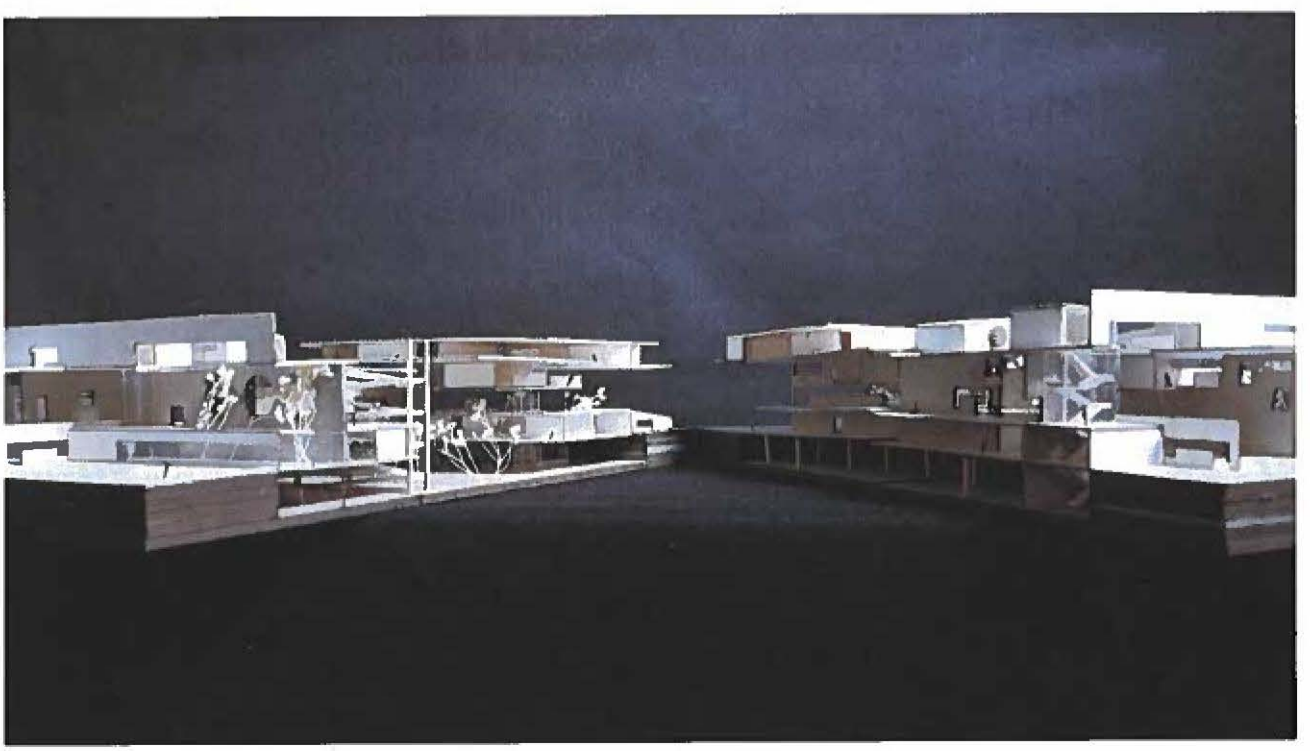


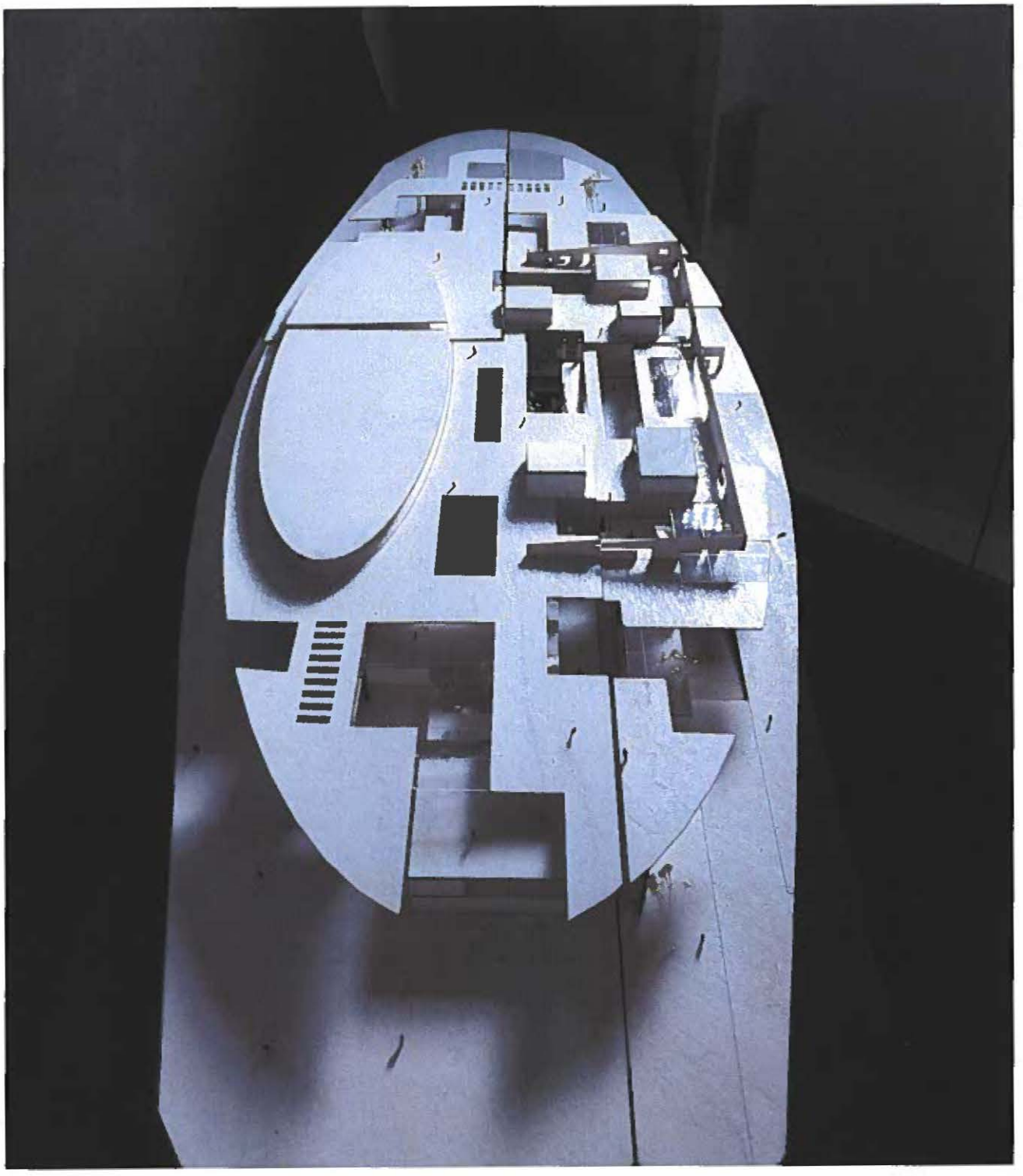












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