

Jiang Wu

## **A CHINESE COMMUNITY CENTER**

How the spirit of Chinese gardens inspires a modern design





A Chinese Community Center

Jiang Wu



# A Chinese Community Center

How the spirit of Chinese gardens inspires a modern design

## Jiang Wu

A design thesis submitted to the faculty of Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Master of Architecture.

Approved by:

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Prof. William Galloway, Chair

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Dr. Joseph Wang

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Dr. James Jones

June, 2005  
Blacksburg, Virginia, U.S.A.

## Acknowledgements

### **To my wife**

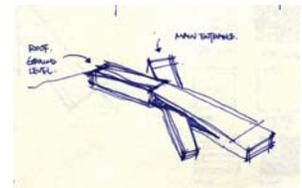
who has always offered  
her love, thought and support  
towards me

### **To my parents**

who taught me  
the true value  
of success  
and the responsibility  
as an architect

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## Abstract



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Emerging more than 3000 years ago - an era of *hermit culture* in China - private gardens played an important role in the development of Chinese culture. In this thesis, the essence of Chinese private gardens, especially the principles of their spatial organization, is used to direct the design.

In a Chinese garden, the aim of spatial design was to create an experience of variety and change in a highly limited space. Gardens normally were made up of a series of spatial units, each with its own function and distinguishing characteristics through skilled manipulation of spaces, materials and plants.

This Chinese Community Center was designed for the *Association of Chinese Students and Scholars*, the largest international organization on the campus of Virginia Tech. As the joining of the eastern and western culture, the building was designed by syncretizing the spatial organization of Chinese gardens and the form and material of western modern architecture.

In my design, three units were introduced into the building. As to the spatial layout of the building, the garden was an open space; the exhibition area was enclosed; and the entrance corridor unit was partly open and partly enclosed as a transition. Three units organized the inter-penetrative spaces, integrating spatial units of different types and forms, and achieving diversity, contrast and harmony.

Perforated aluminum panels with Chinese patterns were introduced into the entrance area to create a semi-open space, which gave the impression of Chinese architecture and culture identity. The method of the borrowing of scenery was also introduced in this unit. From the framed gate at the entrance, the balcony at the end of the building was connected visually with the beginning. At this point, the perforated panels contrasted with the solid concrete wall, symbolizing the contrast between tradition and modernity in time and space. Also, follow-

ing the principle of Chinese gardens, two choices of touring the building were provided to visitors at the entrance: by entering the hall of the building or by going down to the garden directly by way of the wood stairs.

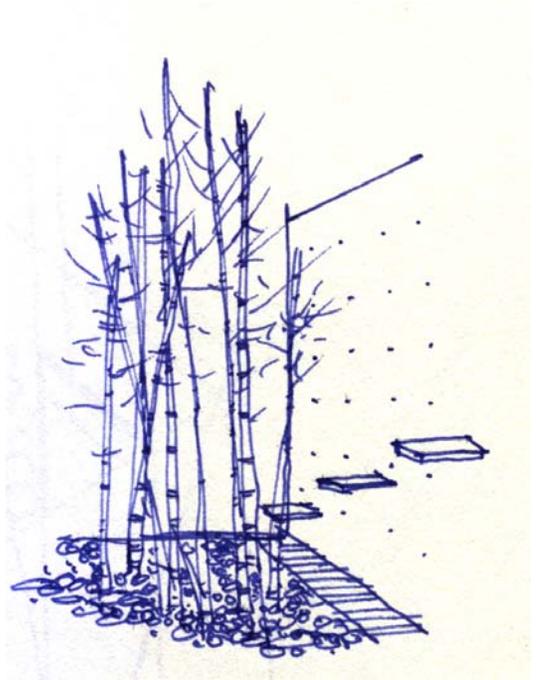
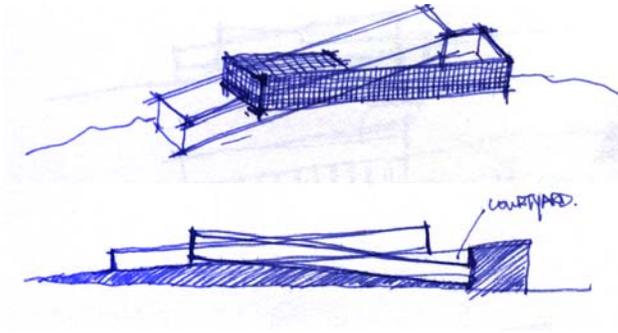
The enclosed concrete unit served as the exhibition area, introducing Chinese culture and architecture to visitors. An interior bamboo garden was arranged in the middle of the unit, connecting the lower and upper levels. The color and the fragrance of bamboo were borrowed from the nature, being the focus of the whole unit. The two-story high tea area faced the triangular bamboo garden outside, conveying a quiet feeling. Staying in the modern space with traditional Chinese culture and plants will be a great feeling for visitors, touching the spirits of antiquity and today at the same time.

The open garden space in the center connected and separated the enclosed unit and semi-open unit. Because water in a garden was the artistic simulation of natural lakes in the basic concepts of Chinese gardens, a shallow water pond was arranged in the garden close to the main hall of the building, occupying one corner in the garden. A triangular bamboo garden occupied another corner, leaving the central part for activities.

Looking at the design as a whole, the paradox is that the three units were spatial divisions on the one hand, and at the same time spatial linkages on the other. Out of this complexity, the visitors will be delighted by the changing views as they stroll from one part of the building to another.

Key words:  
Chinese gardens, community center, diversity, contrast, harmony

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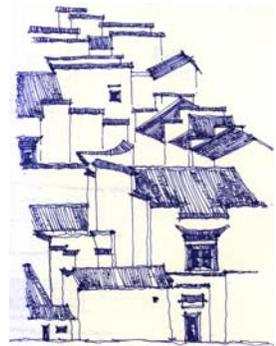


Basic Concept

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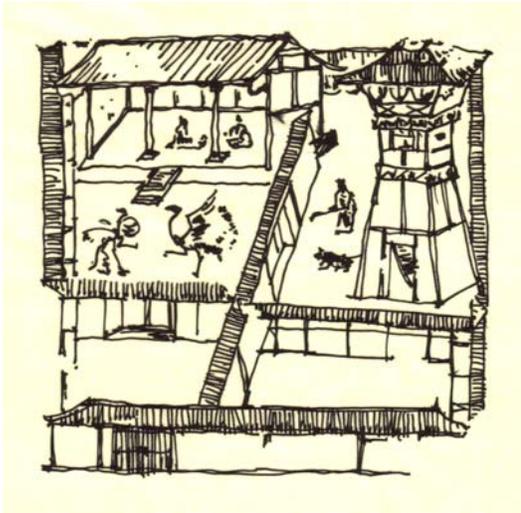
## The Chinese Private Garden



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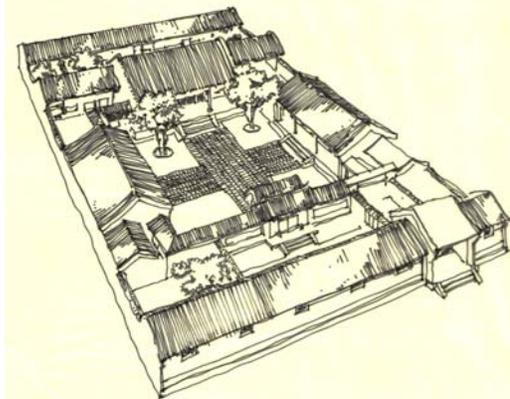
In the Chinese tradition, *home* and *garden* are always mentioned together in the area of architecture and culture, which means both home and garden are necessary for daily lives. The garden is the center of the home, surrounded by buildings. It becomes a unique combination: garden-centered social life.

The image below is from a pictorial brick made in the Han dynasty unearthed in Sichuan. From the picture, we can see that the social life happens in different gardens or courtyards. On the left, there are front and back courtyards. Two people sit face to face on the floor of a building adjacent to the back courtyard. On the right, the front courtyard is for the kitchen, and the back one is for service and a security guard.



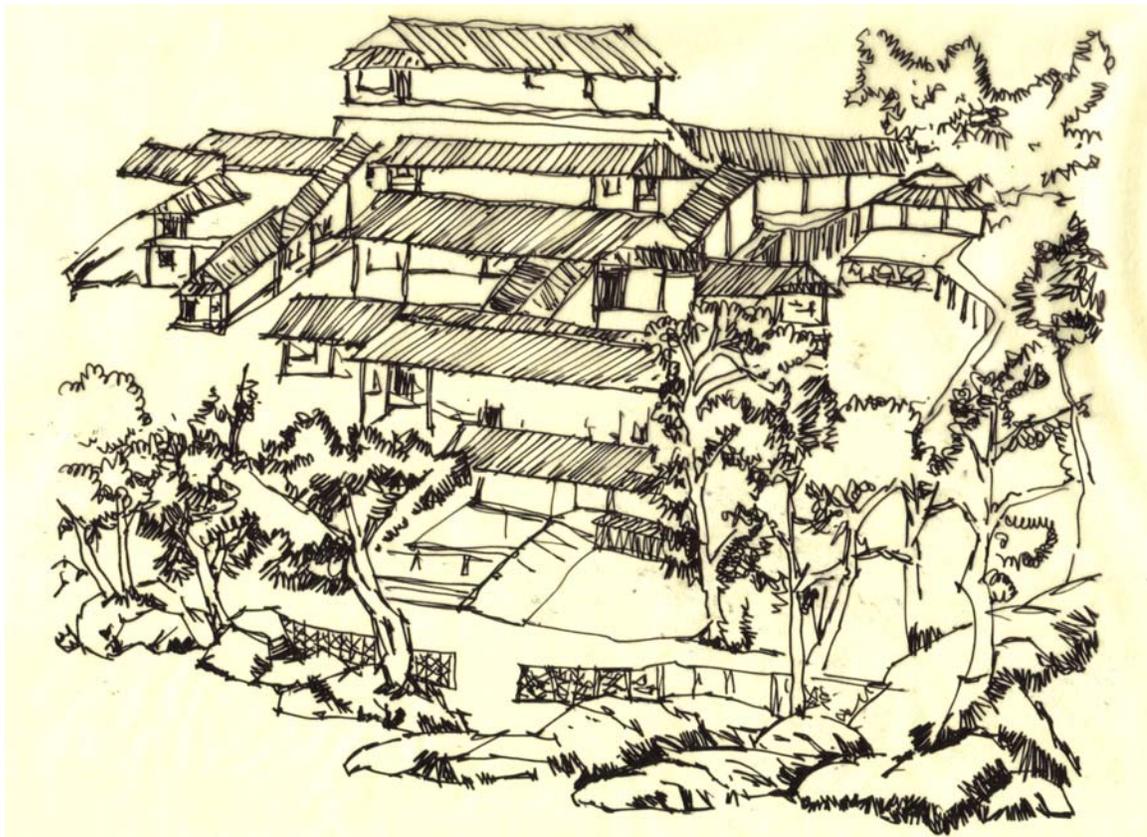
Pictorial Brick, West Han Dynasty (202 B.C.)

The Beijing *Si He Yuan* house, also called *Four in One*, is an example of Chinese vernacular dwellings. Under the Chinese ancient patriarchal rule, houses and gardens are symmetrically arranged along the north-south axis. The garden is the center of the building. It is enclosed by the main building on the north and wing rooms on the east and west. All rooms are connected by verandas. The garden provides the place for social lives, adjusting the micro-climate in summer and winter.



*Si He Yuan*, Ming Dynasty (1368 - 1644)

In a Chinese garden, the aim of spatial design is to create an experience of variety and change in a highly limited space. Gardens normally are made up of a series of spatial units, including open, semi-open and enclosed spaces, created through skilled manipulation of spaces, materials and plants.

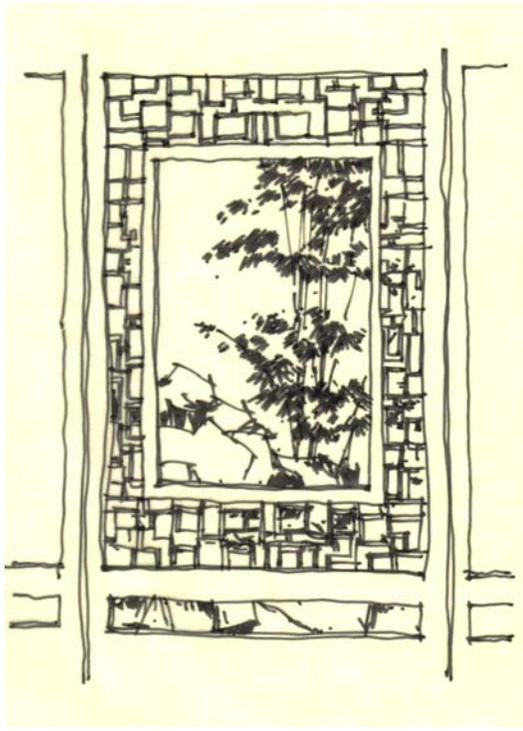


Chinese Traditional Painting, Tang Dynasty ( A.D. 618 - A.D. 907)

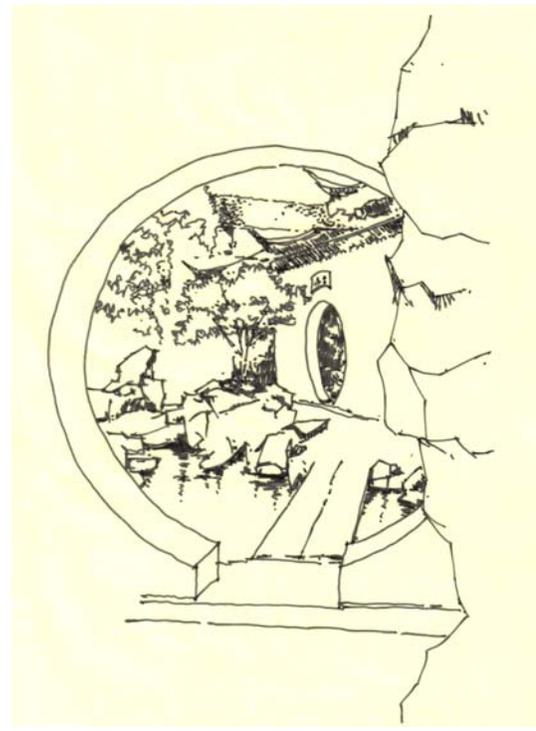
### Framed Views

The borrowing of scenery is one of the most important methods in Chinese garden design. Views can be borrowed from inside and outside.

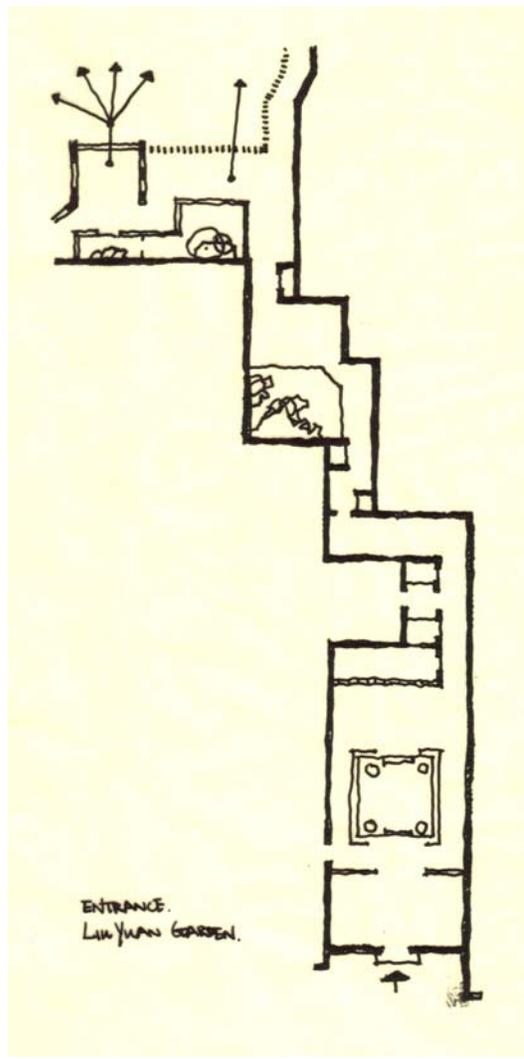
The left picture is a sample of a framed window. Rocks and bamboo are borrowed from outside for sensing the nature. The image at right is in the Yi Pu Garden. From the entrance door, views are directed through several small gardens, to increase the depth of the scenery.



Dian Chun Yi, Wang Shi Yuan, Suzhou (A.D. 1174)



Yu Ou Men, Yi Pu Yuan, Suzhou (A.D. 1541)



The Entrance Path, Liu Yuan Garden (A.D. 1573)

## Contrast

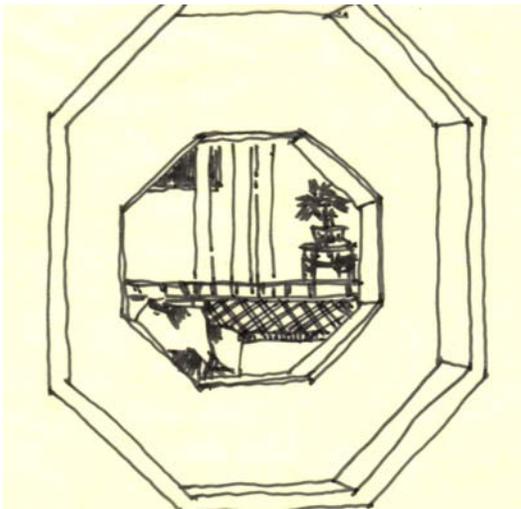
Contrast is an important principle of garden design. Feeling changes in very limited space.

This plan is the entrance sequence of Liu Yuan garden. It is a classical example of spatial contrast in Chinese gardens. The two drawings on the next page will give two different feelings about the space. One is from Gu Mu Jiao Ke; the other one is from the small open space nearby.

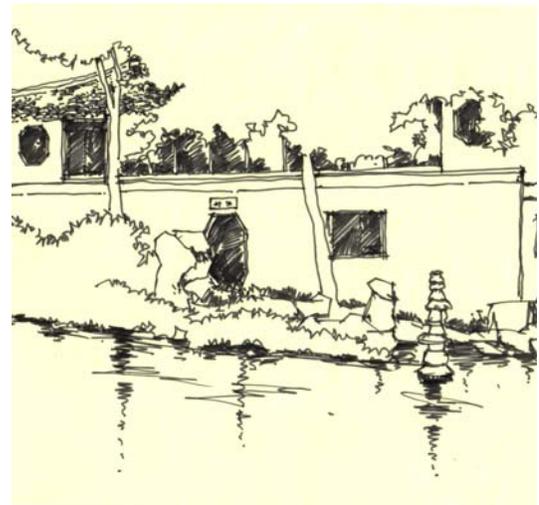


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The left image is from Gu Mu Jiao Ke. From the framed window, you can only see a bit, but never see the whole scenery. Then you are directed to a small open space (right picture), from which the whole garden appeared. Views change following the change of observation point. Before unveiling a beautiful open space, a closed space is arranged as a contrast.



Window Without Casement, Liu Yuan (A.D. 1573)



Qu Yu Lou, Liu Yuan Garden (A.D. 1573)

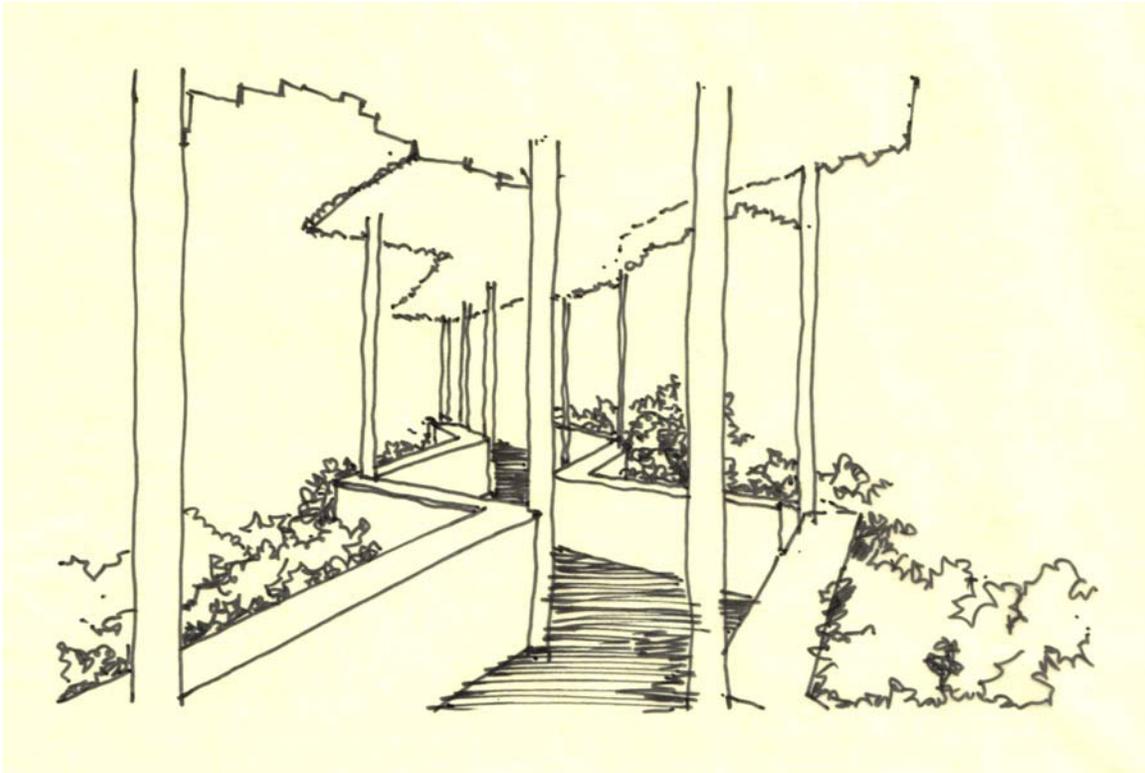
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### Lang (Corridor or Covered Pathway)

A zigzag corridor has two functions. One is to connect one place with another. The other is to create small garden spaces.

Some of the corridor is built against the wall, and some extends to other spaces, courtyards and gardens, in order to form the variety of garden shape, flowers and rocks existing between the corridor and the wall.

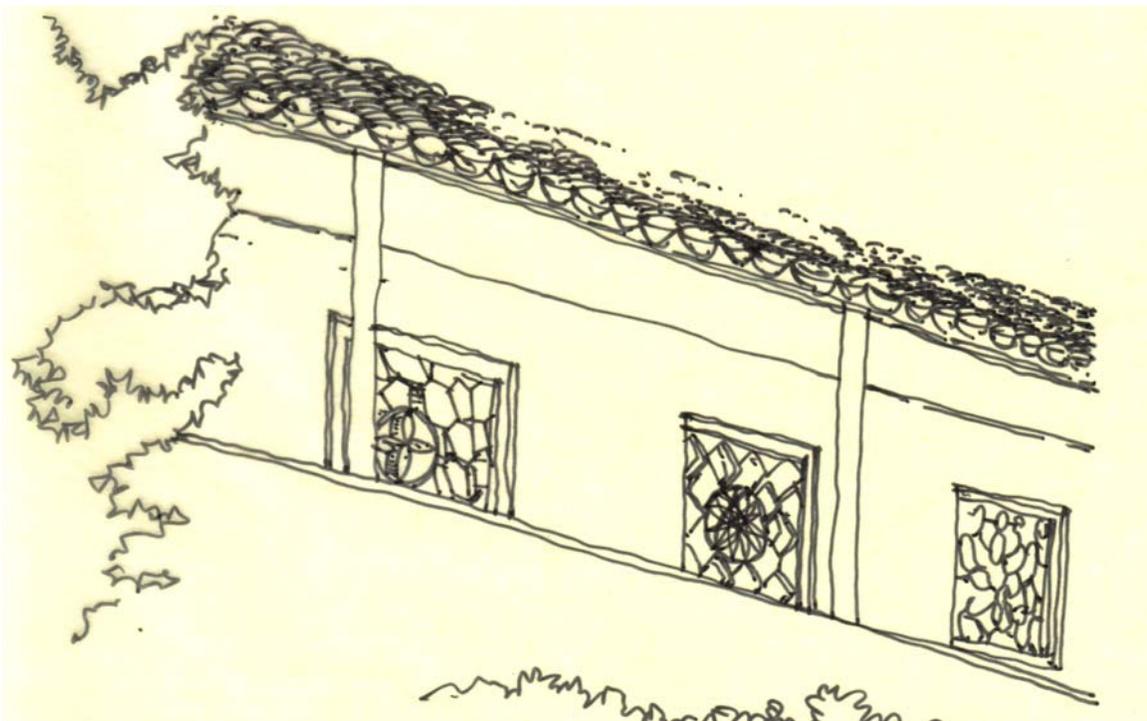
Along the meandering corridors, various sceneries are arranged to increase the space in the limited area, extending touring time at the same time. This is one of the frequently used methods in the craft of Chinese gardens.



Lang, Liu Yuan Garden (A.D. 1573)

### Tracery Windows in Gardens

Open tracery windows are used to break the blankness of walls in Chinese gardens. Through the small openings of windows, views of visitors are directed to other sceneries or gardens behind the wall. They are hints and transitions when transferring from one space to another. Sceneries in adjacent gardens are borrowed from each other and functioned as backgrounds each other to increase the diversity of garden spaces.



Winding Roofed Walkway, Zhuo Zheng Yuan Garden (A.D. 1509)



Bamboo

## Bamboo

Bamboo is one of the most important elements in Chinese gardens. Bamboo is the symbol of Chinese culture and life; and also is the symbol of strength and flexibility. Bamboo is the condensation of Chinese culture. In Chinese traditional poems, songs, paintings, crafts, architecture and gardens, bamboo is widely used. Taking example from Chinese traditional paintings, what artists describe is not only to imitate tangible objects, but also to express thought and emotion. Bamboo is used because bamboo is hollow, symbolizing the Chinese spirit of humility.

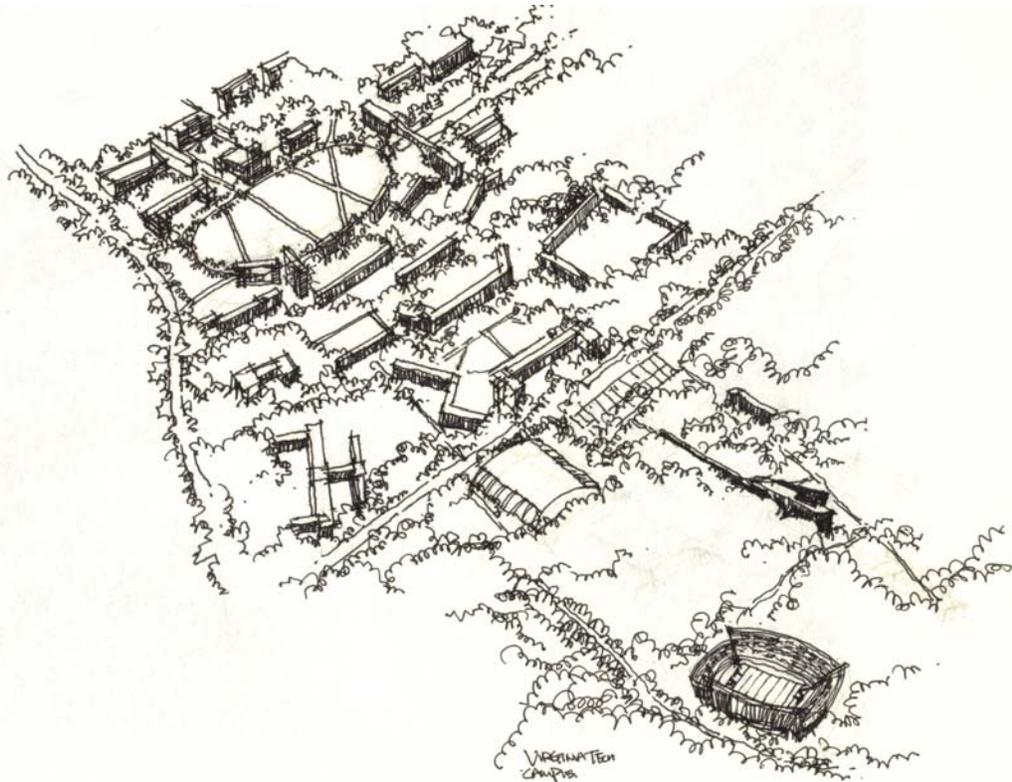
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## The Site

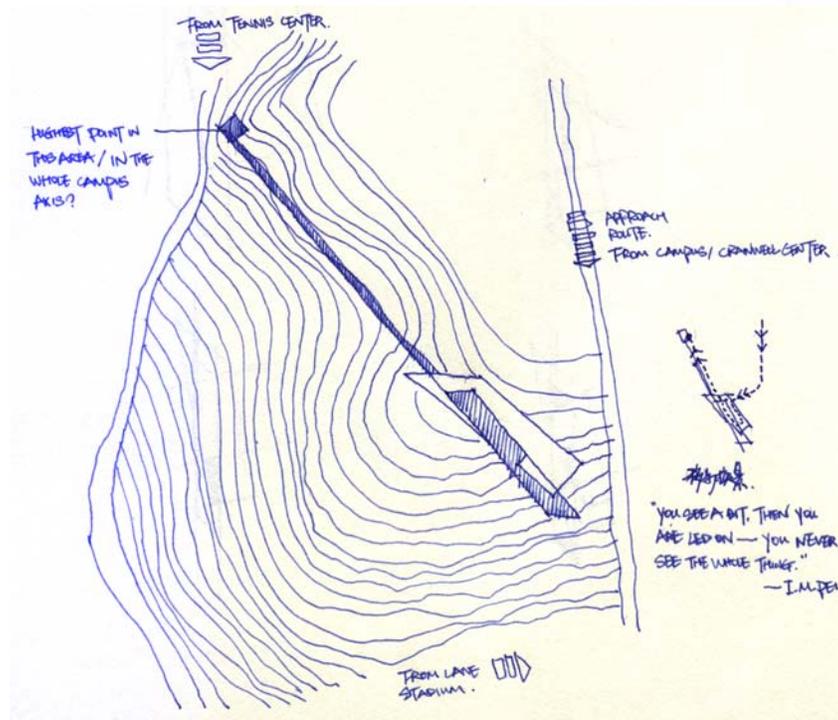
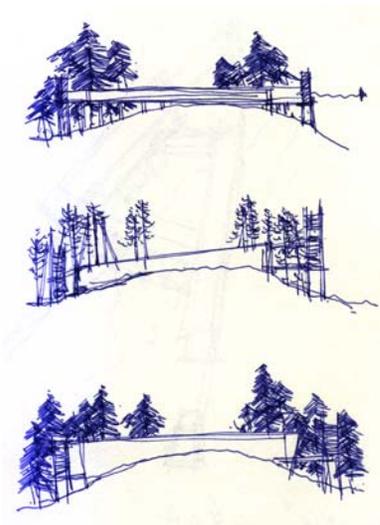


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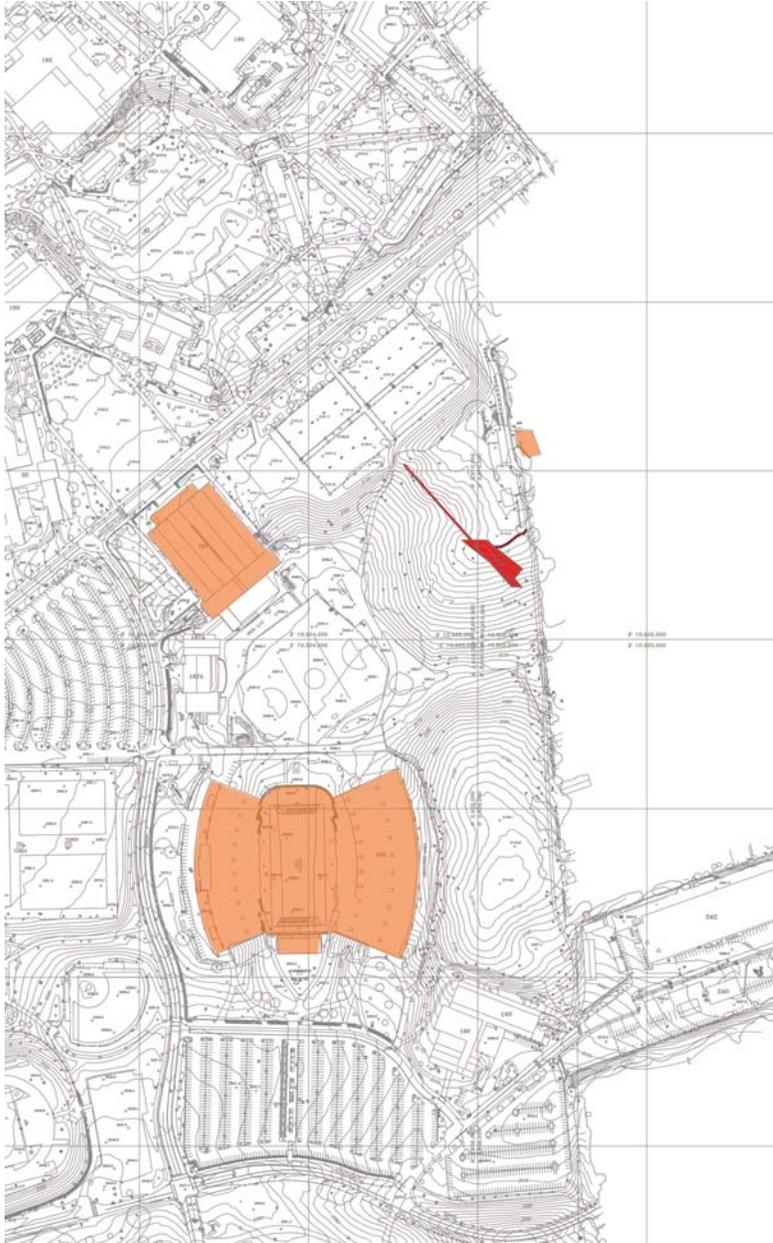
The site is located at the southeastern edge of the Virginia Tech campus in Blacksburg, Virginia. The *Cranwell International Student Center*, which is the service center for international students in Virginia Tech, is on the northeast of the site. Lane Stadium is on the southwest of the site. A small path connects the stadium and the site. Another existing road connects Washington Street and Southgate Drive, just passing the site.



Virginia Tech Campus



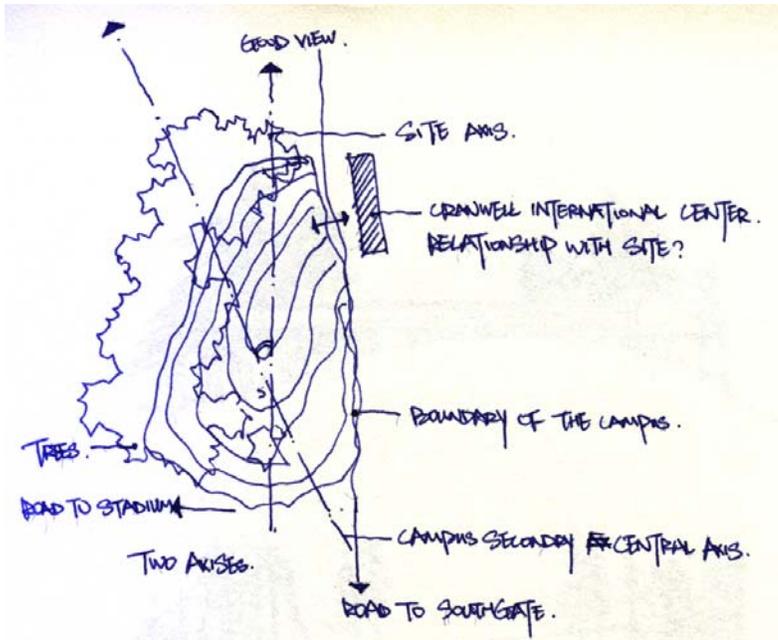
The Analysis of the Site



The Site



Views around the Site



Views From the Site



## The Project



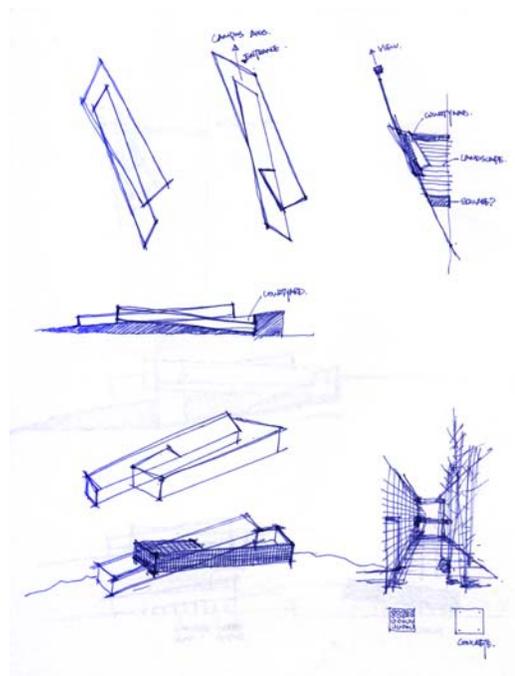
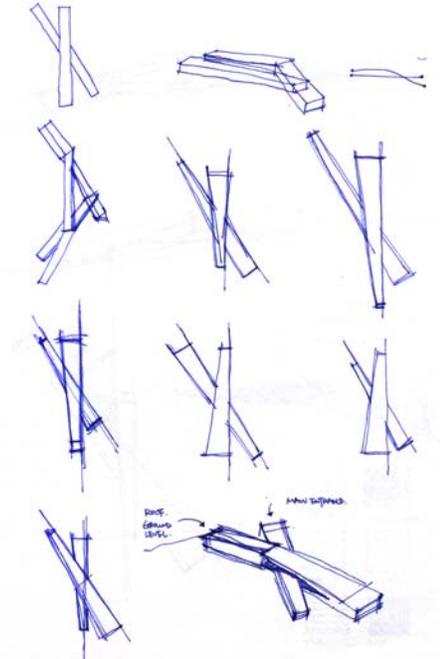
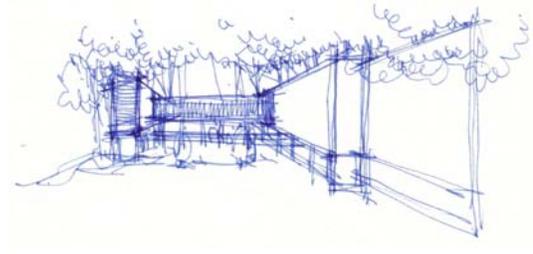
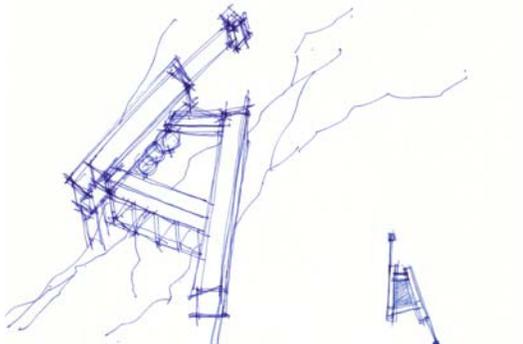
The *Association of Chinese Students and Scholars* is the largest international organization on the campus of *Virginia Polytechnic Institute and State University*. There are over 900 Chinese people working and studying at Virginia Tech and neighboring areas.

A new Chinese Community Center would serve two purposes. The first one is to provide a place for Chinese students and scholars to meet together. The other one is to provide a place to introduce Chinese culture and tradition to people from other countries. The community center includes an exhibition area, meeting rooms, offices, and a Chinese tea corner.

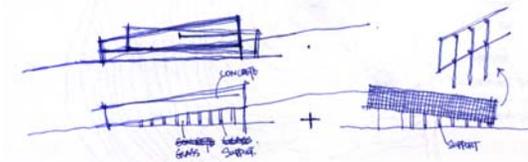
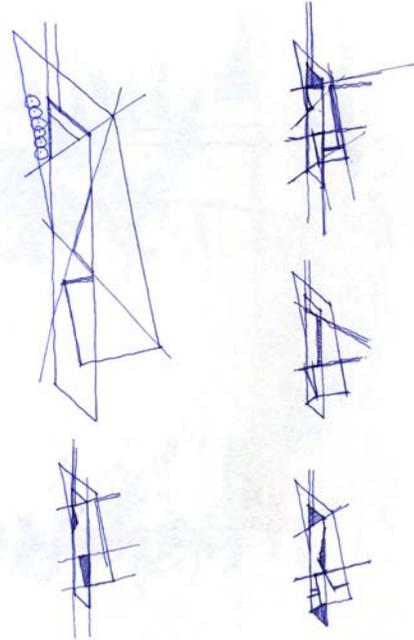
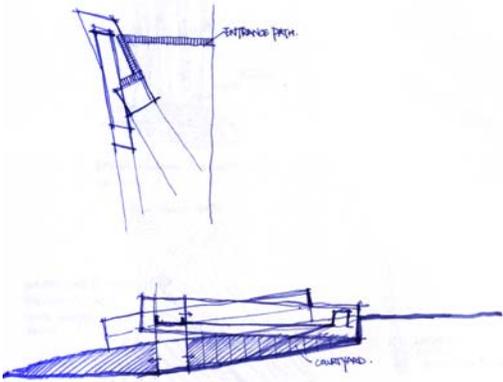
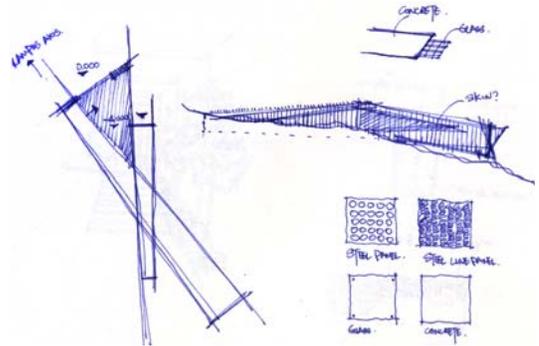
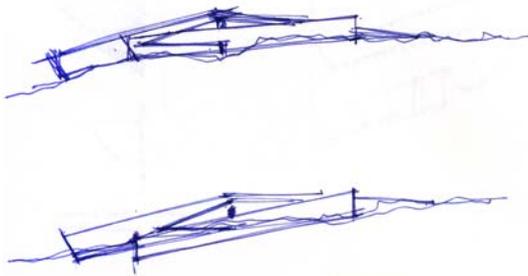
This community center is very close to the *Cranwell International Student Center*. As a result, parts of social functions could transfer from the Cranwell Center to the Chinese Community Center, to provide more space.



Activities organized by *Association of Chinese Students and Scholars*



Concept Sketches



Concept Sketches



Concept Model

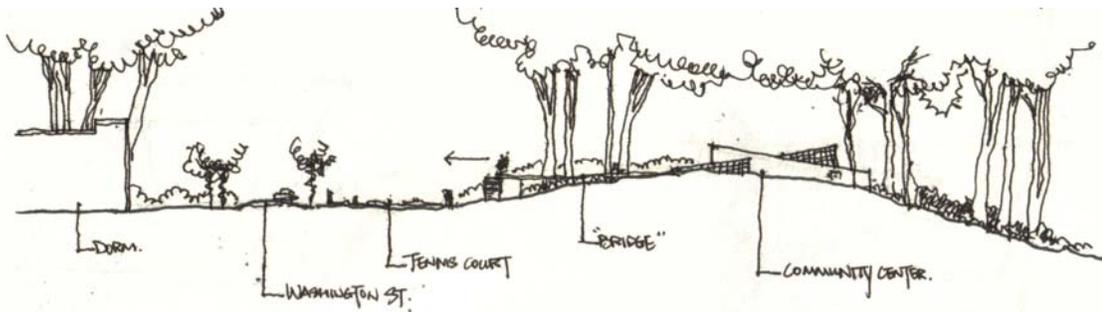


Site Plan

North

A bridge is designed as an extension of the building. The bridge appears to disappear in the trees. At the end of the bridge, there is a small path connecting the bridge and the tennis court. So the bridge provides another choice to approach the building.

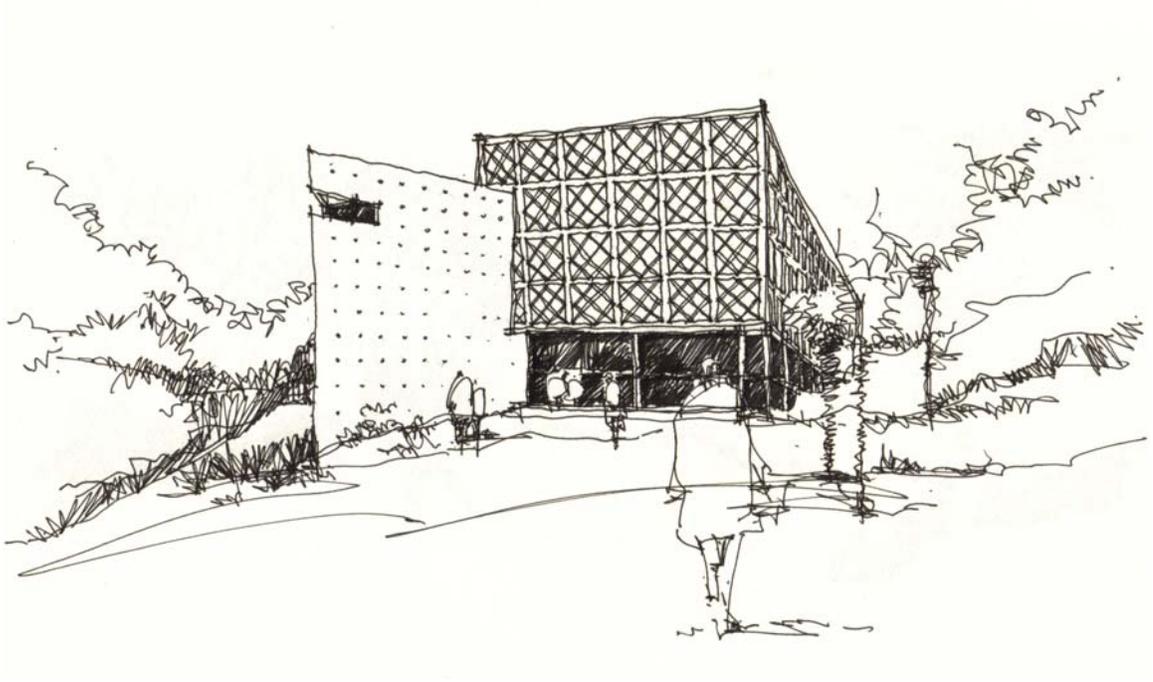
Because the building is located close to the top of the hill, views over the tennis court and Washington Street toward Lee Hall can occur. At this point, the view from the bridge is another extension for the building.



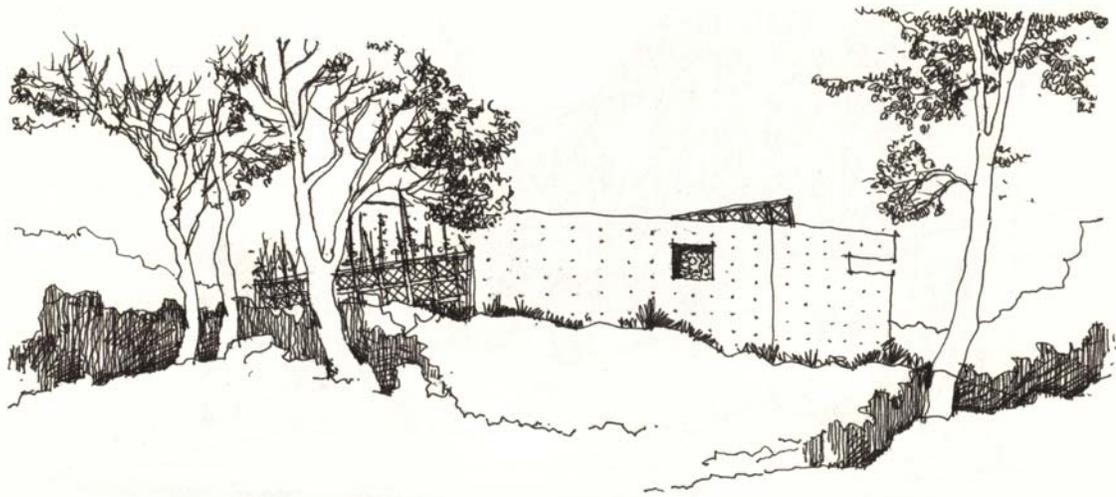
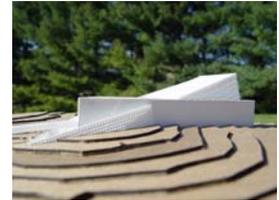
View from the Bridge



Approaching from the North/East



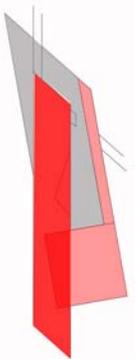
Approaching from the South



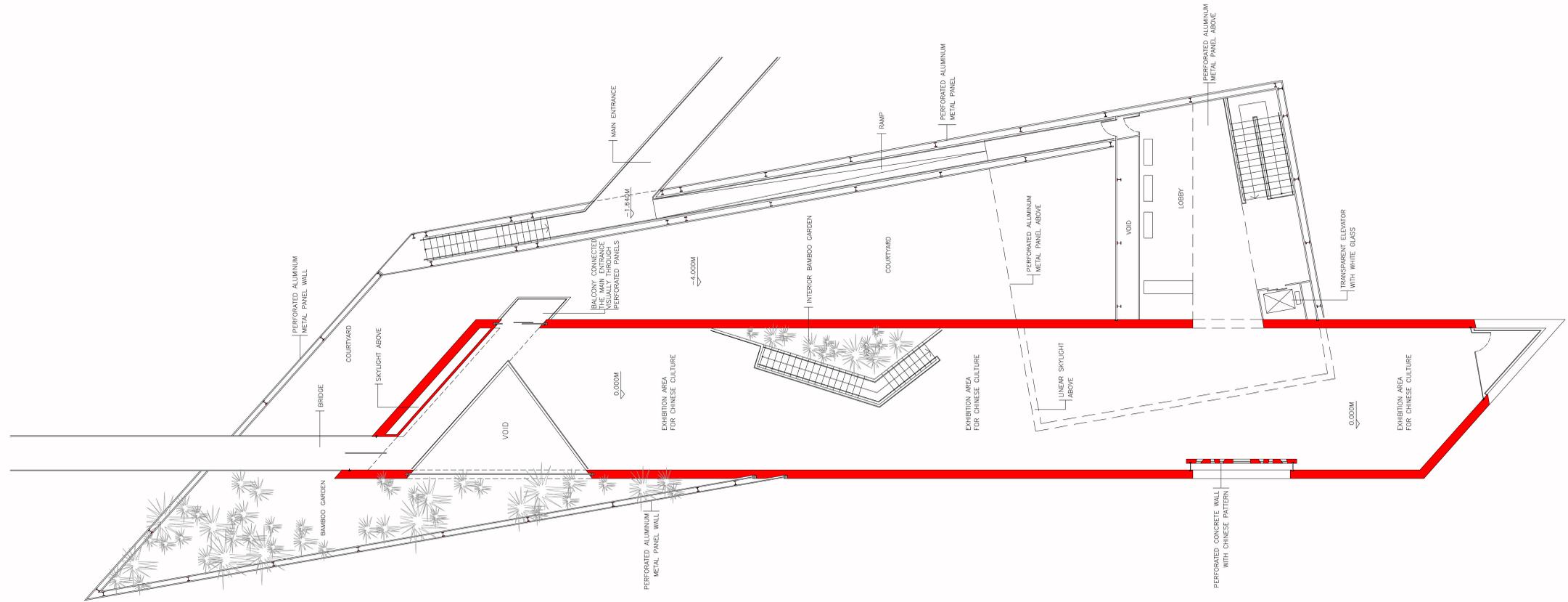
Approaching from the West



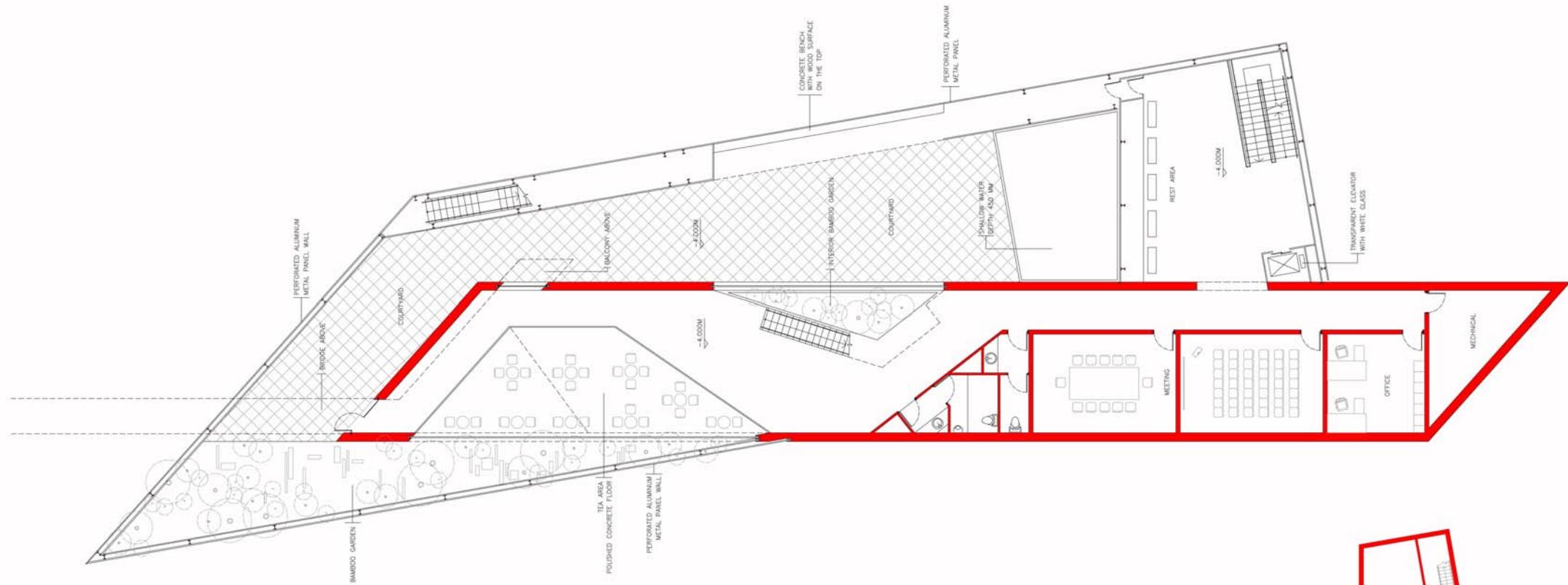
As to the spatial layout of the building, the garden is an open space; the exhibition area is enclosed; and the entrance corridor unit is partly open and partly enclosed as a transition. Three units organize the inter-penetrative spaces, integrating spatial units of different types and forms, and achieving diversity, contrast and harmony.



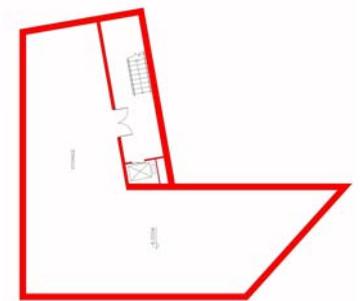
3 Zones: Open, Semi-open and Enclosed Areas



Plan: Upper Floor



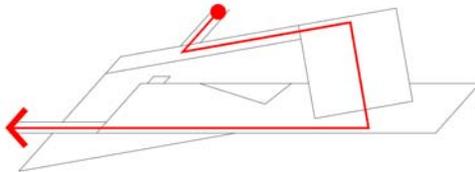
Plan: Lower Floor



Plan: Basement

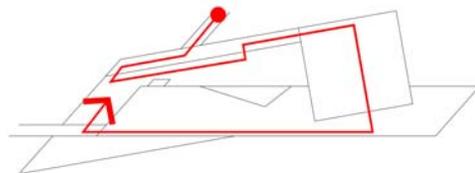


## Two Routes through the Building



### Route 1: Upper Floor

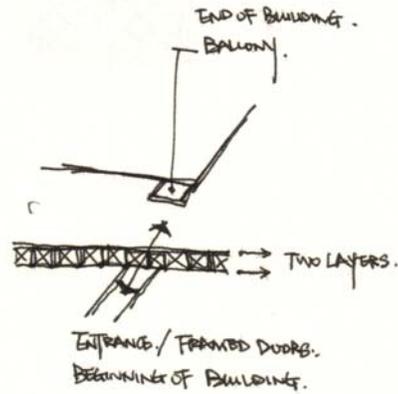
Framed Gate Entrance - Ramp - Main Entrance - Lobby (Upper Floor) - Exhibition Area - Interior Bamboo Garden (Stair to Lower Floor) - Bridge Over the Garden



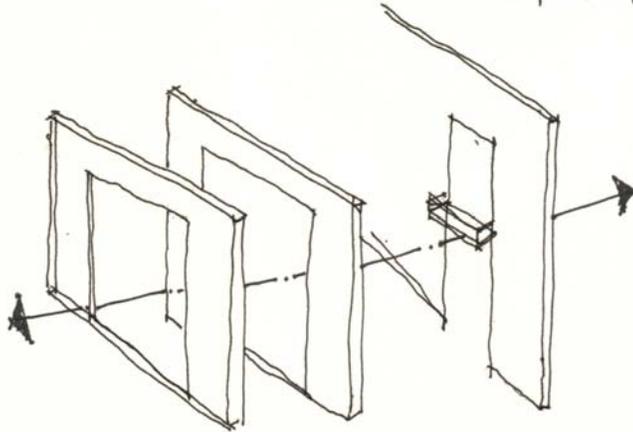
### Route 2: Lower Floor

Framed Gate Entrance - Stair to Lower Floor - Garden - Shallow Water - Corridor (Lower Floor) - Rest Area - Meeting - Interior Bamboo Garden (Stair to Upper Floor) - Tea Area - Bamboo Garden



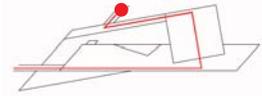


THROUGH SEVERAL LAYERS.  
CREATING THE DEPTH OF SCENERY.

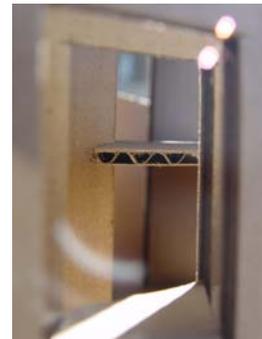


Framed Gate Entrance

Route 1



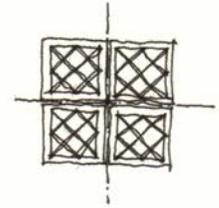
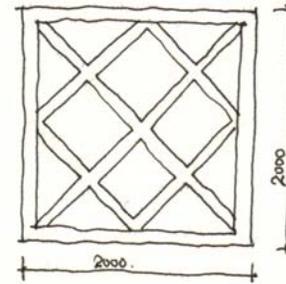
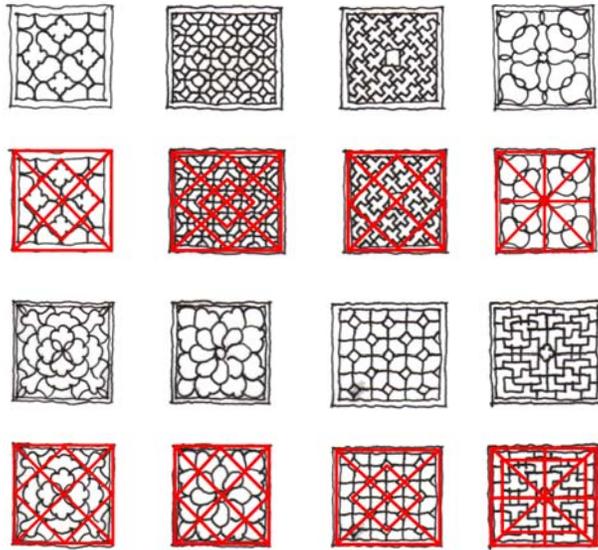
The depth of the scenery is created by views through several layers.



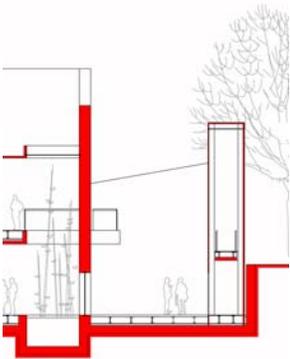
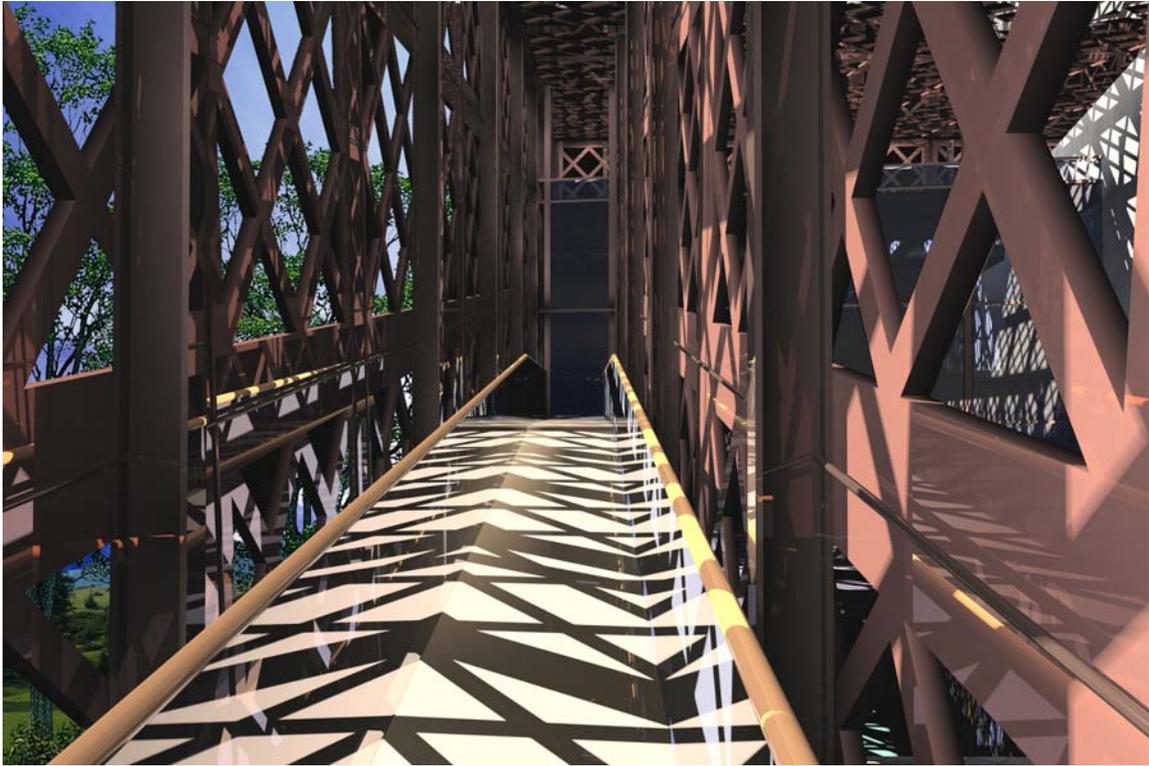
The perforated aluminum panels with Chinese patterns are introduced into the entrance area to create a semi-open space. The method of borrowing of scenery is also introduced in this unit. From the framed gate at the entrance, the balcony at the end of the building is connected visually with the beginning. At this point, the perforated panels contrast with the solid concrete wall, symbolizing the contrast between tradition and modernity in time and space.



Framed Gate Entrance

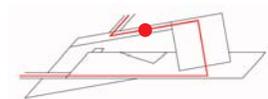


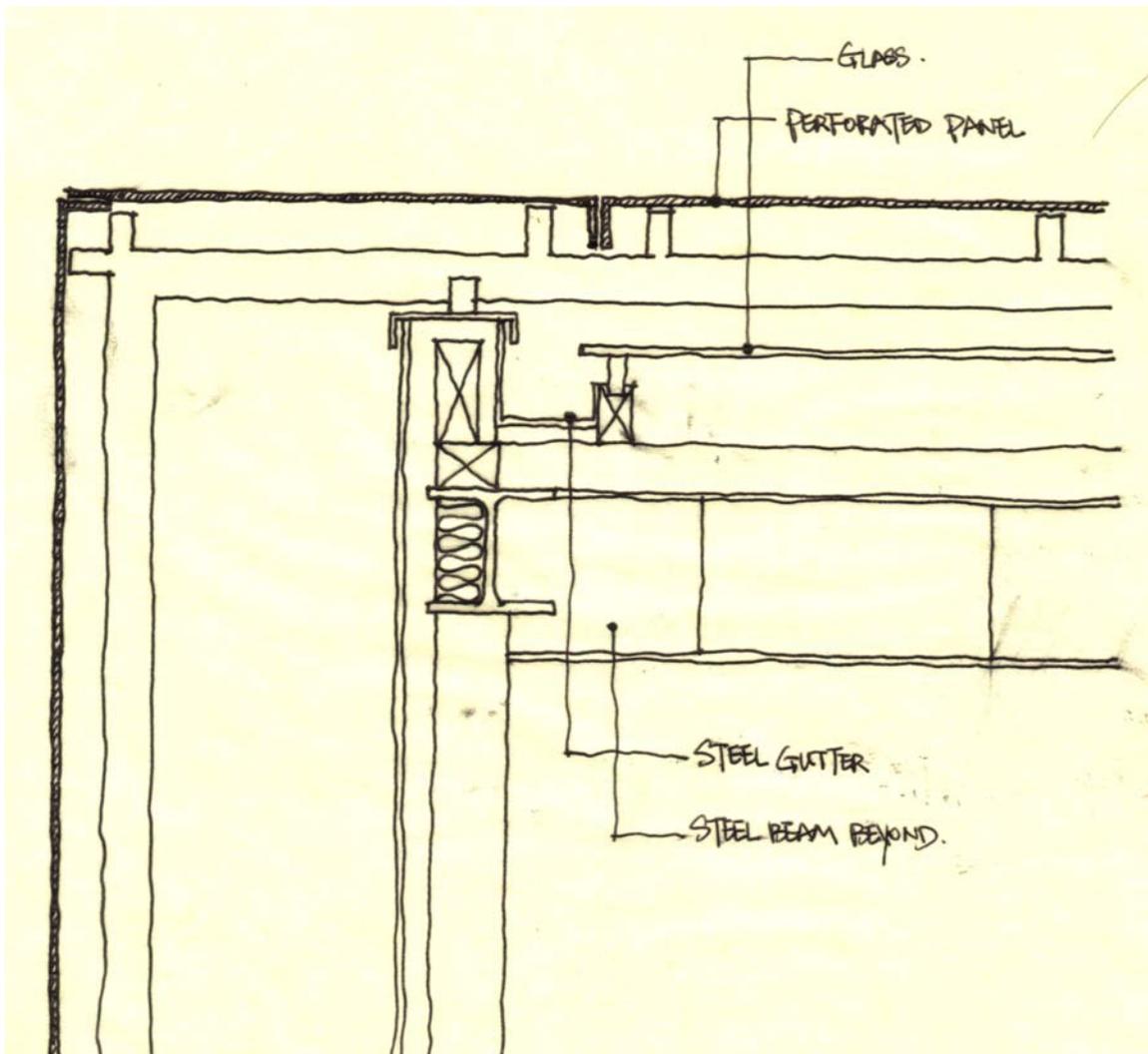
The idea of the panels comes from the tracery windows in Chinese gardens. The pattern of the panels is abstracted from the traditional patterns.



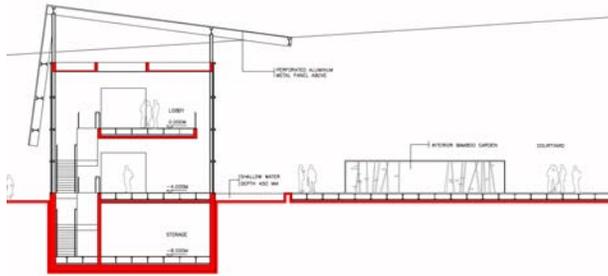
the Ramp

The ramp is a transition space between the framed gate and the entrance. In this long, narrow and high corridor, spaces complete the first transition from open outside to semi-open inside, from bright to shadowy. At the same time, this narrow corridor is a prelude of the sunny open space that follows - the lobby on the upper floor.

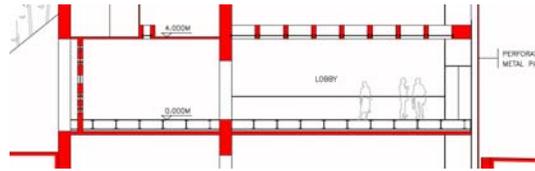




Panels Meet the Roof

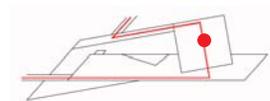


Lobby (Upper Floor), Screen Wall



When entering the entrance hall, visitors are directed by the screen wall and the skylight above. The pattern on the screen wall is a Chinese dragon pattern. In the afternoon, the sunlight comes into the building through it. Beautiful shadows cast on the floor.

From the hall, visitors can also see the whole garden. Because they came from a narrow corridor space, this garden space appears more spacious. This is due to spatial contrast.



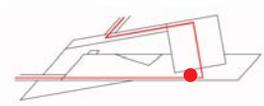


Garden as Viewed from the Lobby (Upper Floor)

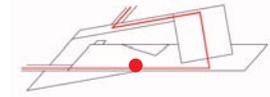
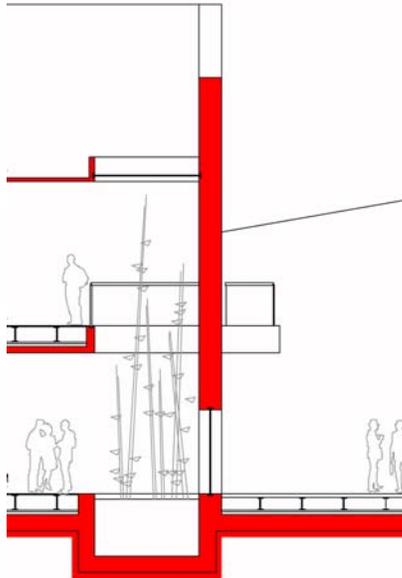




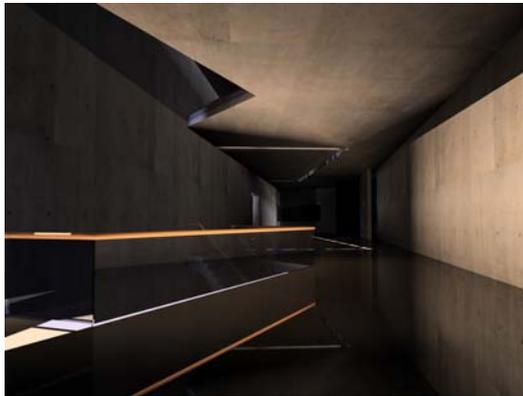
The enclosed concrete unit is the exhibition area, introducing Chinese culture and tradition to visitors. The linear skylight above implies the other volume above, which is composed of perforated panels.



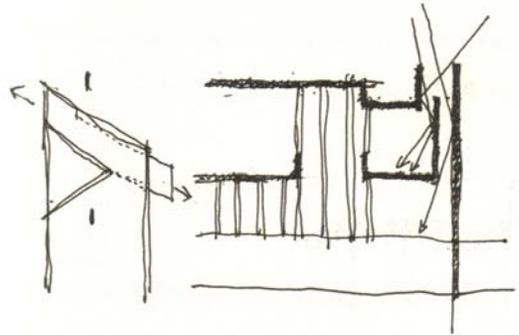
Exhibition Area



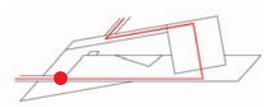
The stair and the concrete wall are used to enclose a triangular bamboo garden, with sunlight coming from above. This design method is similar as the way used in the Liu Yuan garden. In the Liu Yuan garden, small gardens were created by the corridor and the wall, to provide spaces for plants and rocks.



Interior Bamboo Garden (Stair to Lower Floor)

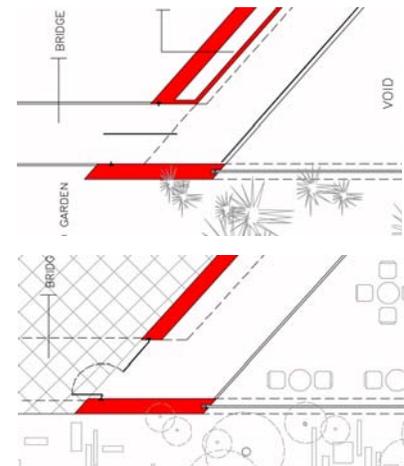
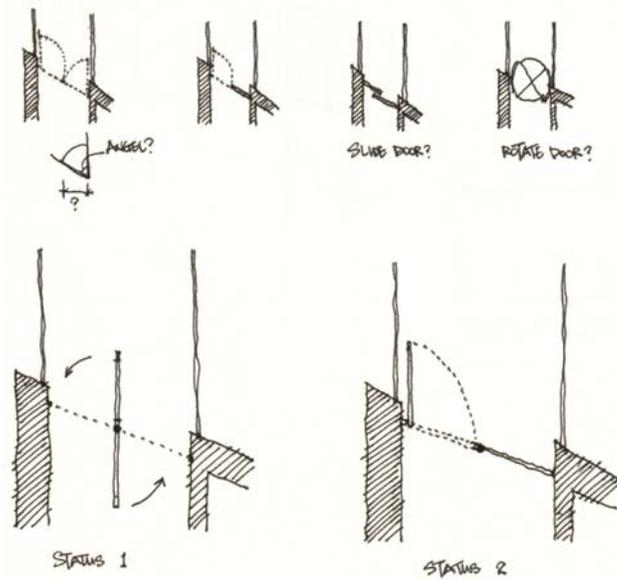
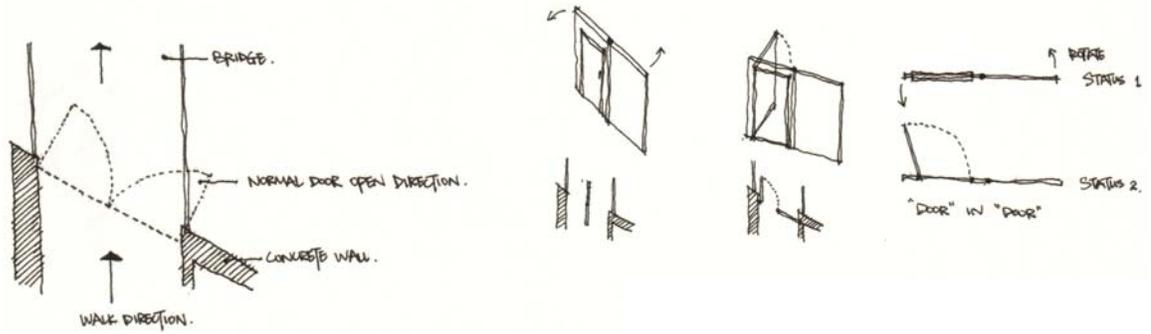


Interior Bamboo Garden (Stair to Lower Floor)



Look inside the Building on the Bridge

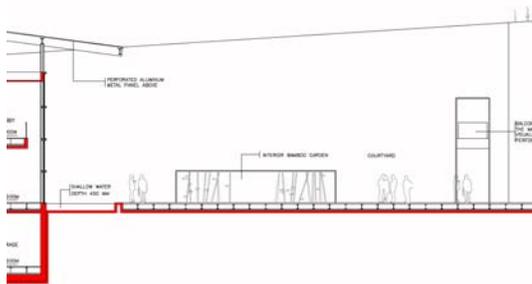
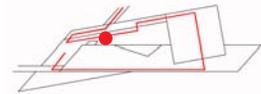
the Sequence of the Space



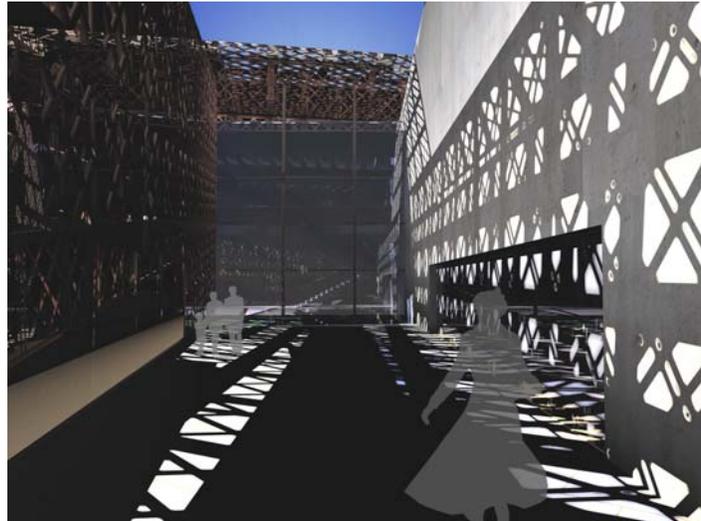
the Door connecting the bridge



## Route 2

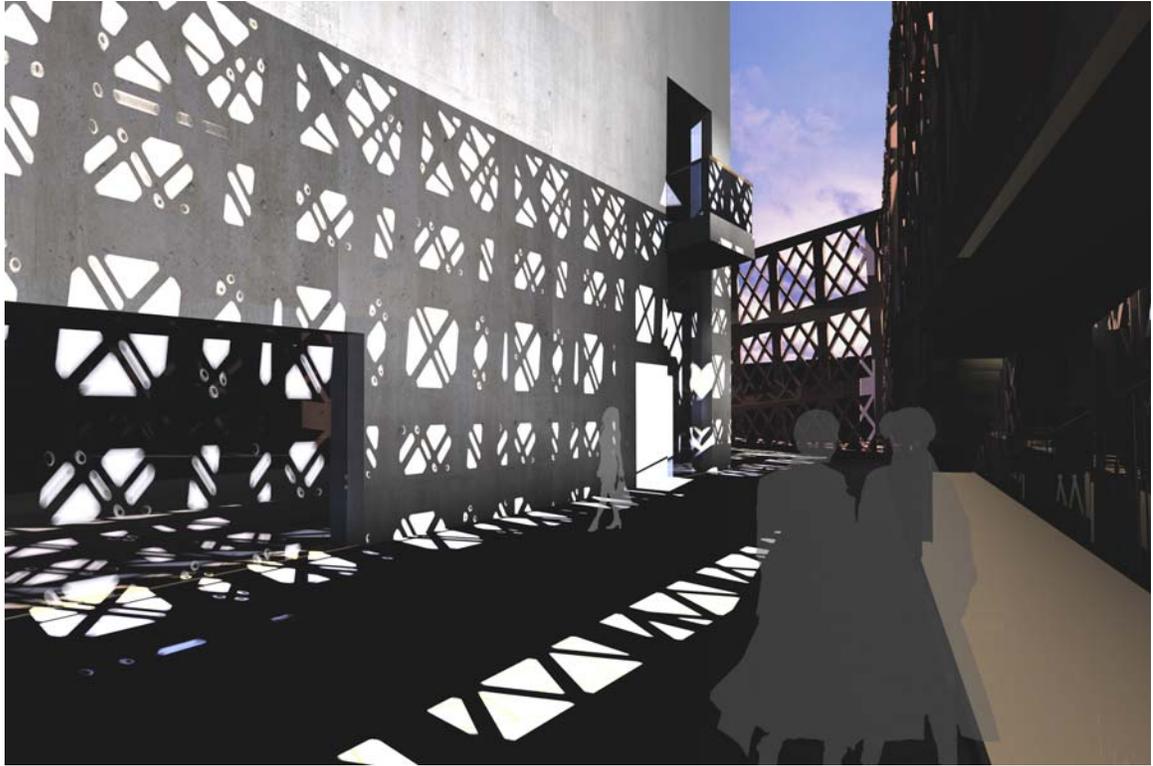


When coming into the building, visitors can enter the central garden directly by turning right and descending the stair. The open garden space in the center connects and separates the enclosed unit and semi-open unit. Because water in gardens is the simulation of natural lakes in the basic ideas of Chinese gardens, a shallow water pond is arranged in the garden close to the main hall of the building, occupying one corner in the garden.

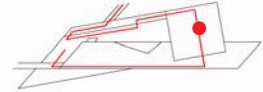


the Garden

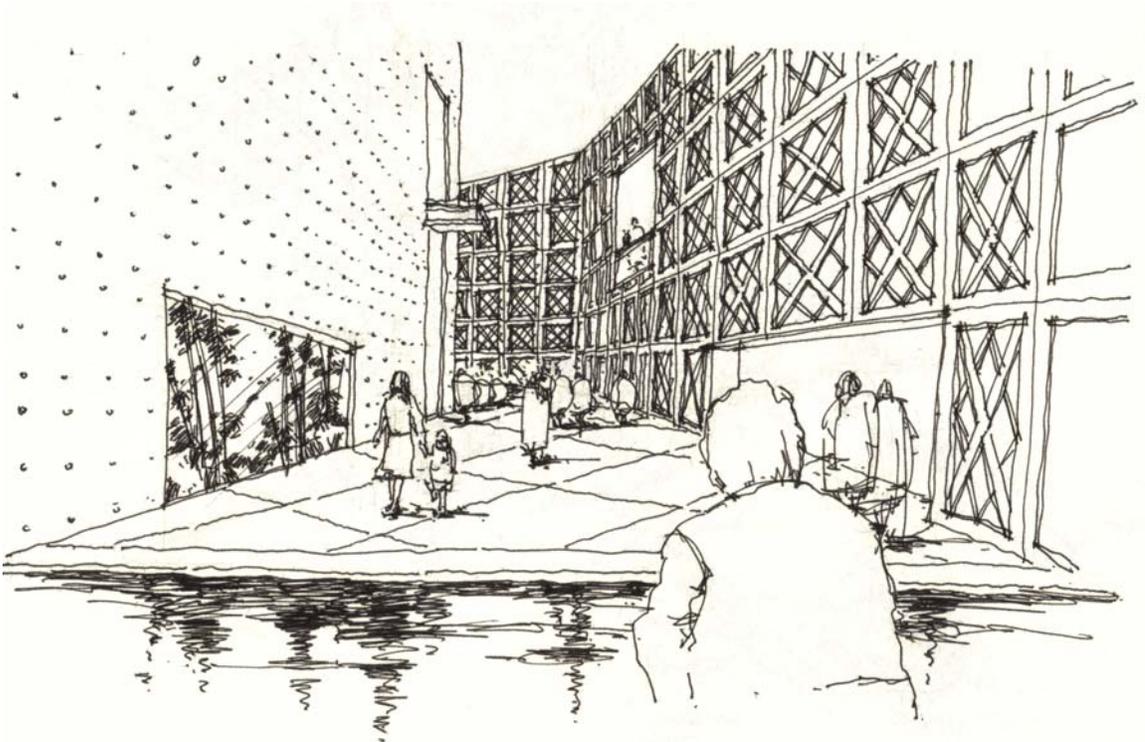




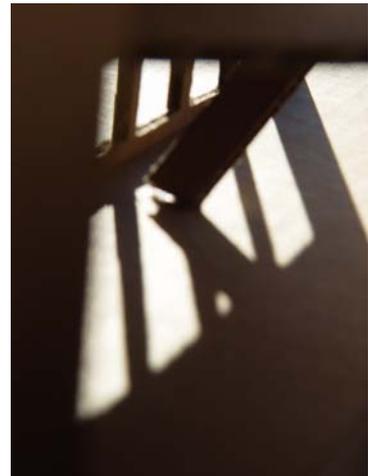
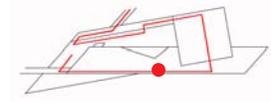
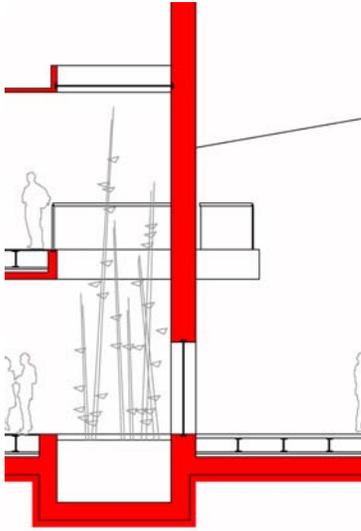
The shadow patterns on the surface of the concrete wall let us recall the memory of the Chinese garden. Perforated panels are not only a symbol, but also a shading device. The concrete wall is designed as a background. Shadows change following the time and season.



Standing in front of the water pond, visitors can see the contrast between the perforated panels corridor and the concrete wall, the relationship between the interior bamboo garden and the opening on the corridor, and the relationship between the balcony and the framed entrance gate.

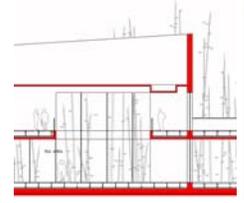
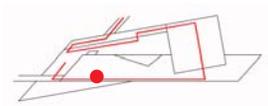
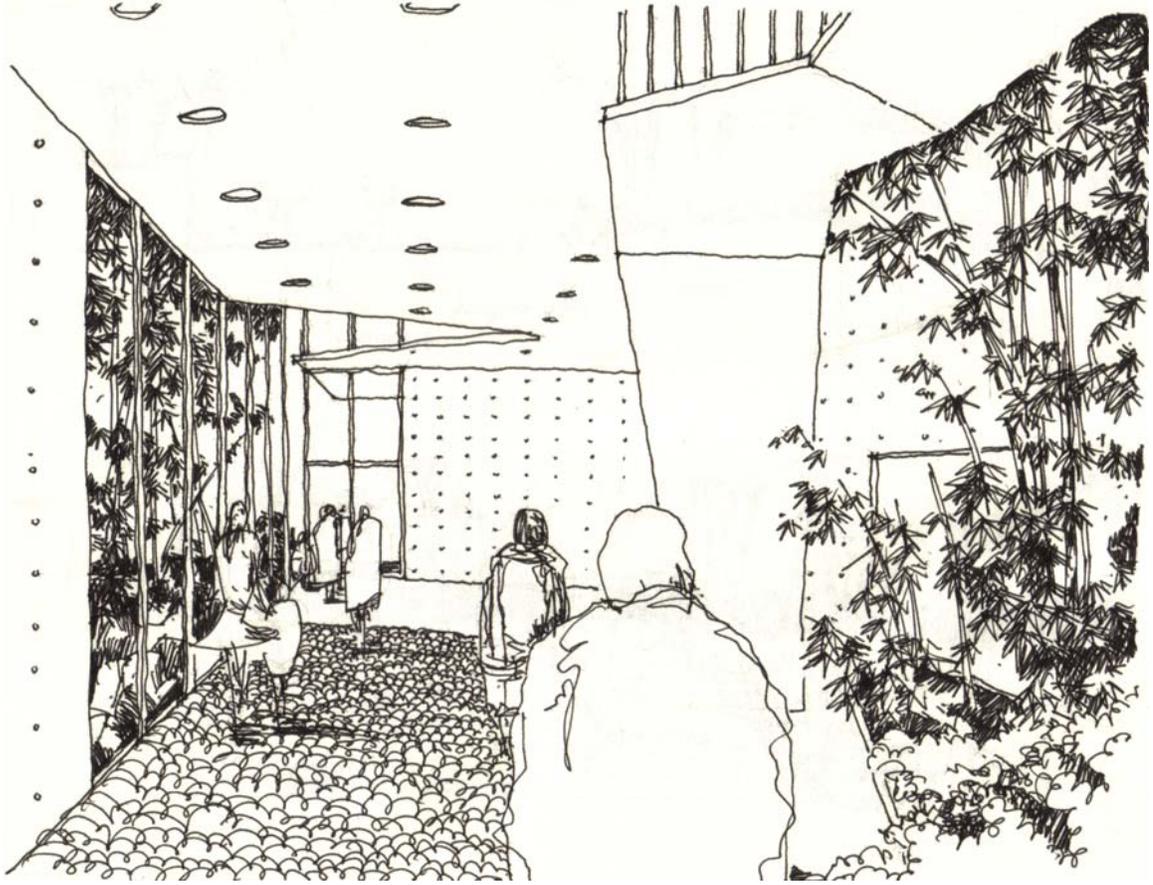


Rest Area (Lower Floor), Shallow Water and Garden

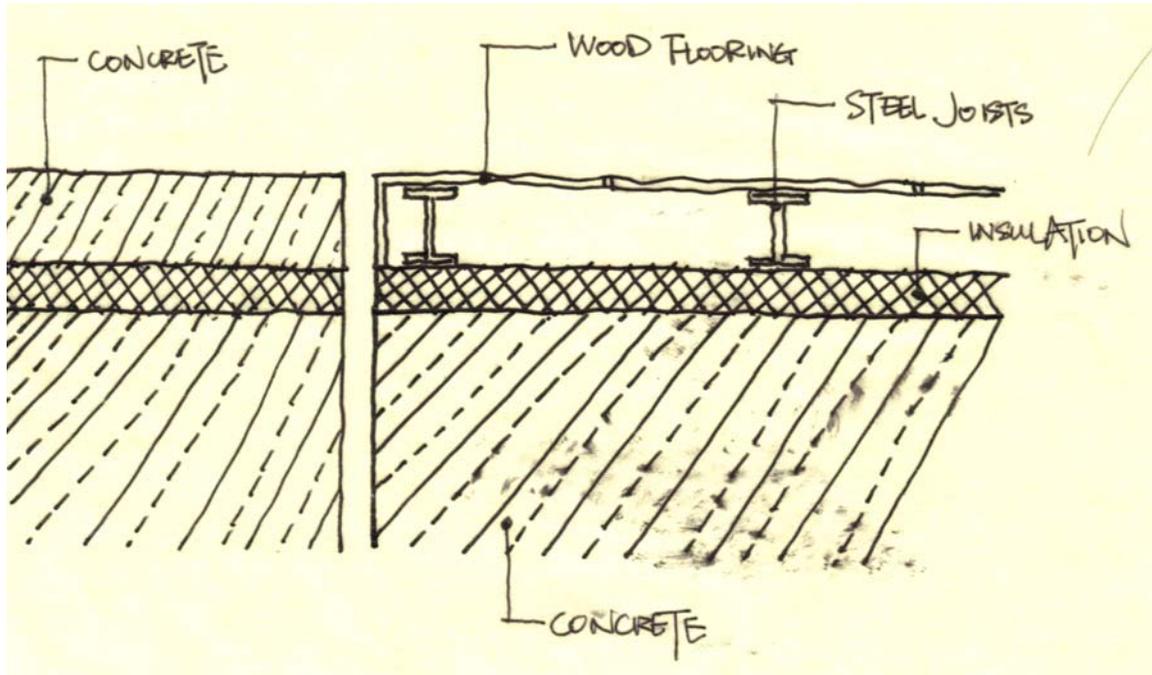
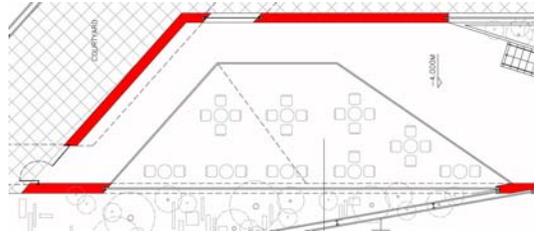


Interior Bamboo Garden (Stair to Upper Floor)

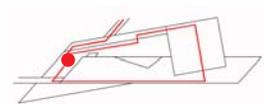
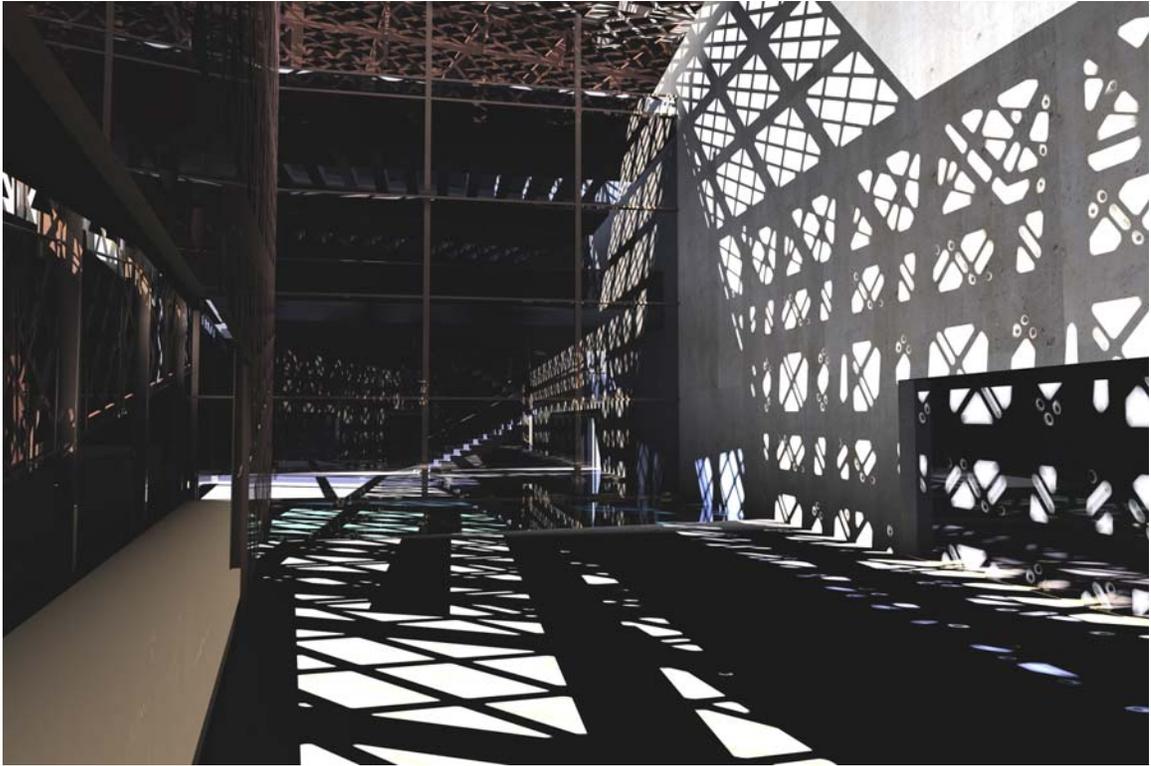




Chinese Tea Corner

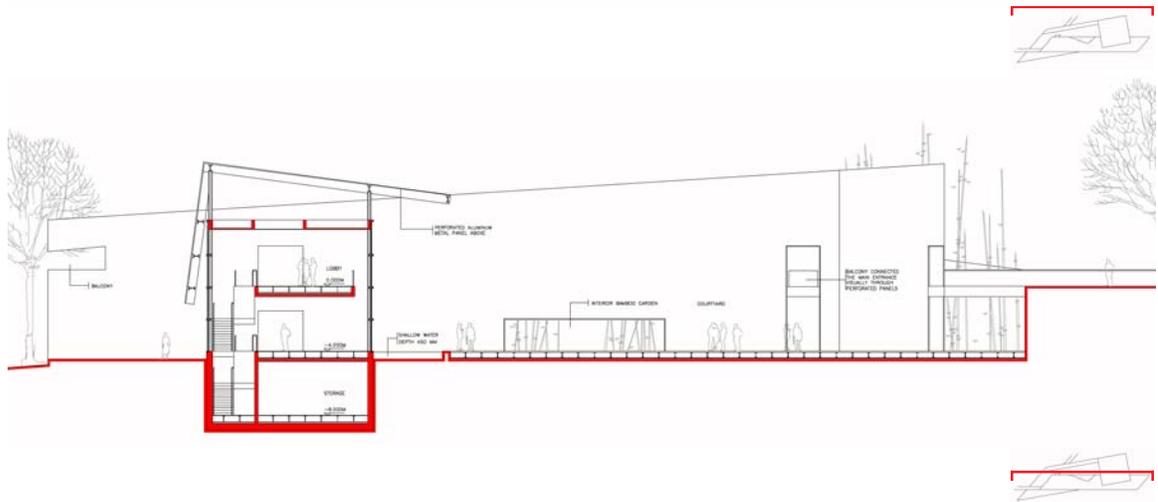
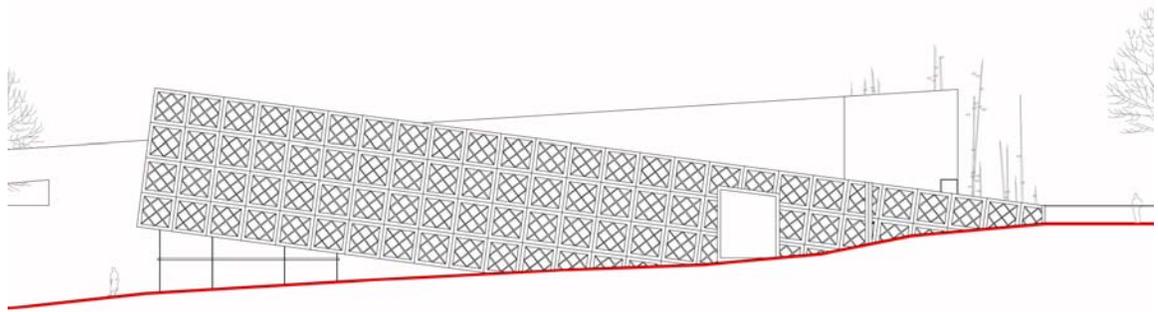


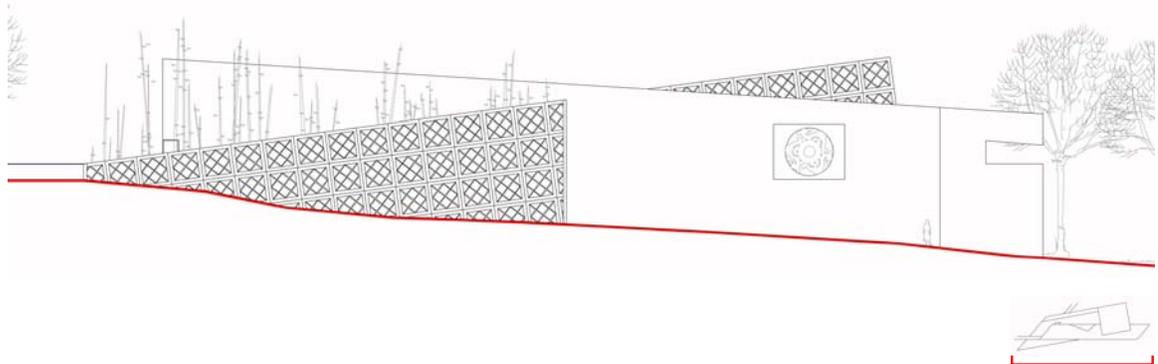
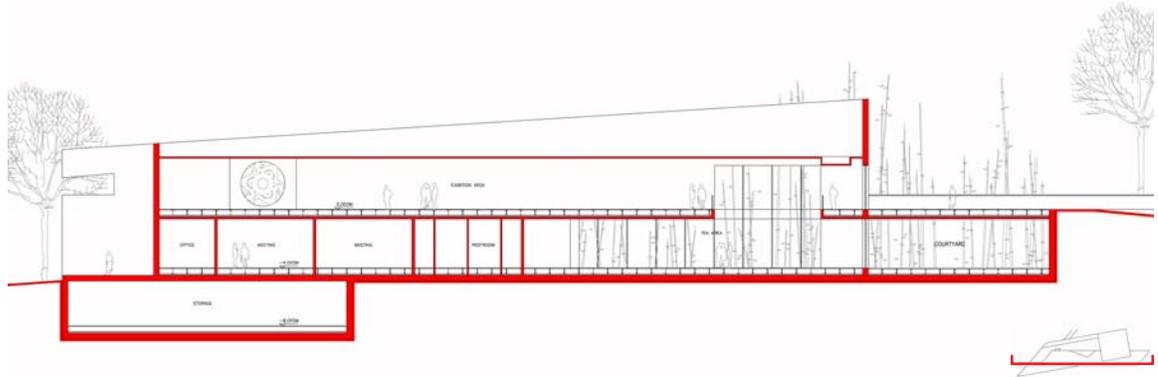
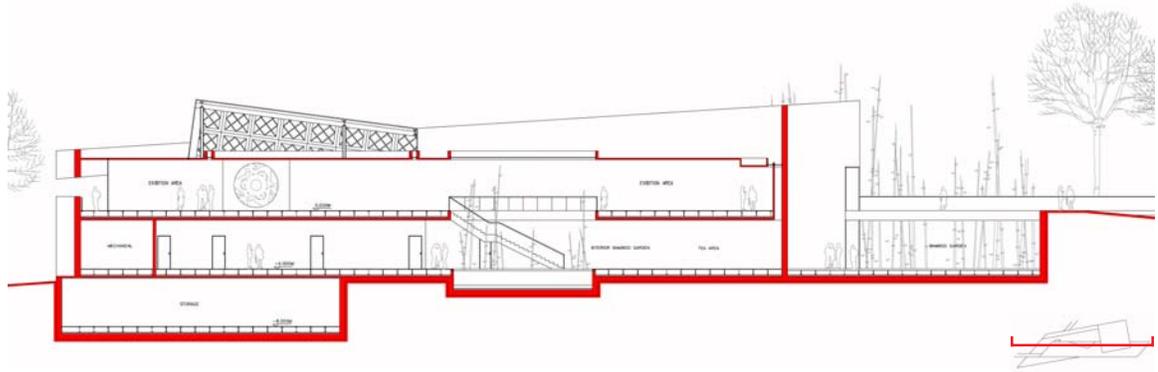
Wood Meets Concrete on the Lower Floor

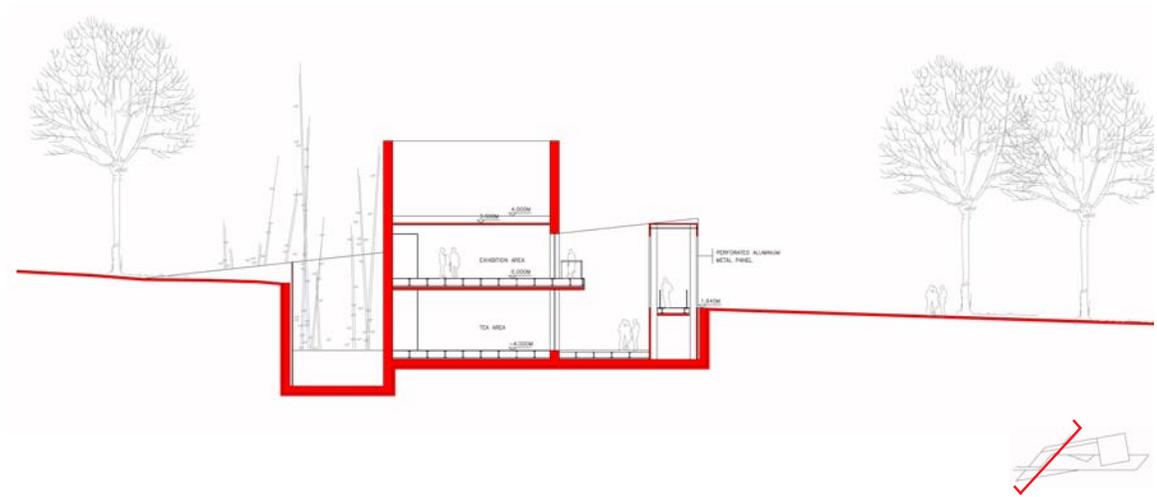
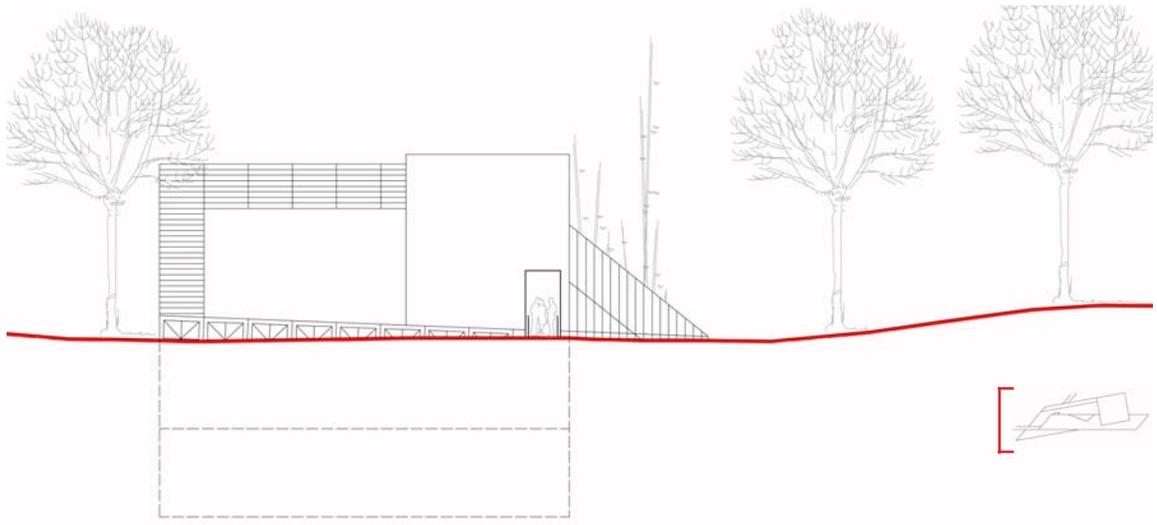


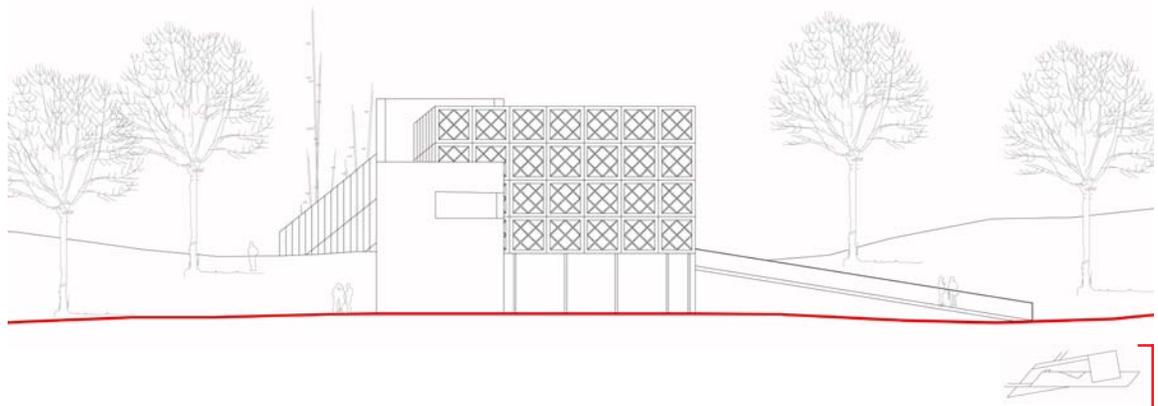
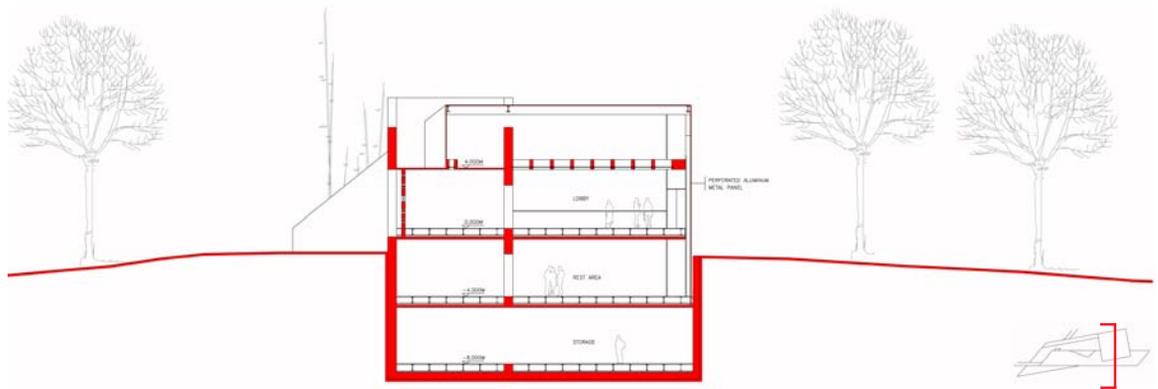
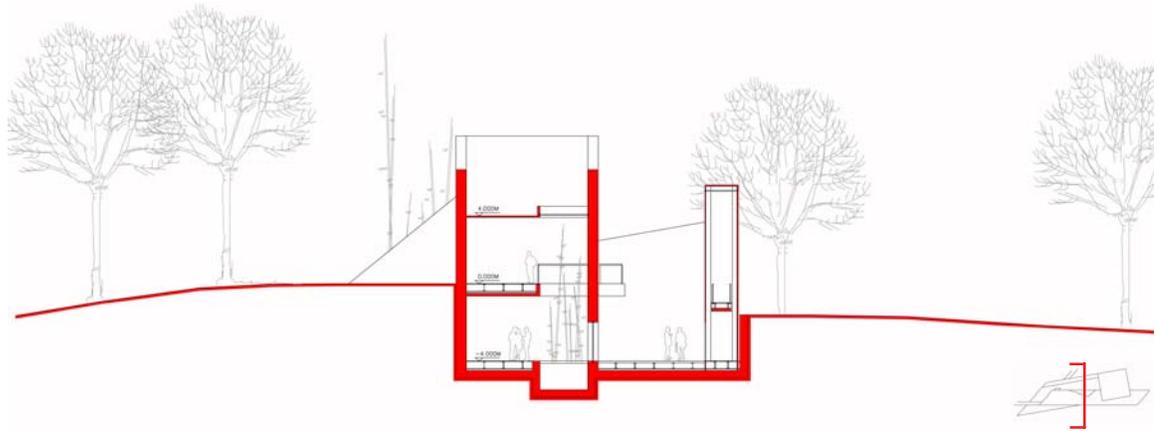
Garden

From the beginning to the end of the building, one follows an endless, circular route.



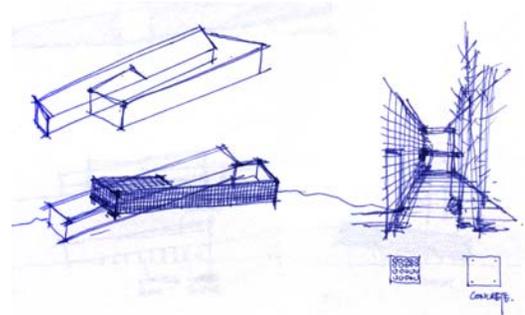






## Conclusion

Chinese gardens are expressions of a centuries-old history and culture. The combination of natural experiences and particular ideas in the craft of Chinese gardens created beautiful scenery no less than nature itself. The spirit and experience exist not only in ancient gardens, but also in modern architecture. My thesis is an attempt to find these particularities in a modern building. Although Chinese gardens and western modern architecture appeared different, the spatial quality and experience were undeniable similar. This spirit and experience are eternal and essential in design.



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All photographs and drawings by Jiang Wu

## Curriculum Vita

Jiang Wu

### Education

**Virginia Polytechnic Institute and State University,**  
Blacksburg, Virginia, U.S.A.  
Master of Architecture, August 2005

**Chongqing University,** Chongqing, P.R.China  
Bachelor of Architecture, June 2000

### Professional Experience

**RTKL Associates Inc.,** Washington, D.C., U.S.A.  
Intern Architect, from July 2005

**Guangzhou Design Institute,** Guangzhou, P.R.China  
Architect, July 2000 - December 2003

**Guangdong Urban & Rural Planning and Design Institute,** Guangzhou, P.R.China  
Architect Assistant, March 1999 - July 1999

### Honors

**Merit Citations,** Leading Edge Competition 2003-2004,  
California, U.S.A., 2004

**First Prize Winner,** Competition of Nanguilu Subway Station,  
P.R.China, 2003

**Third Prize Winner,** Hongshan Hotel, P.R.China, 2001