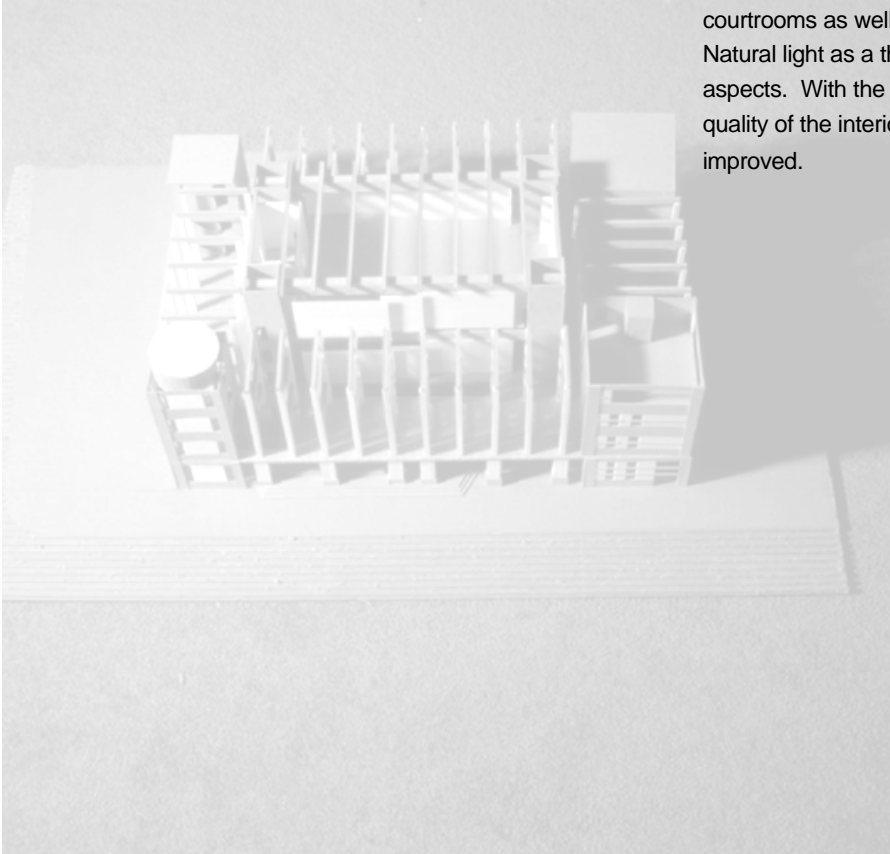
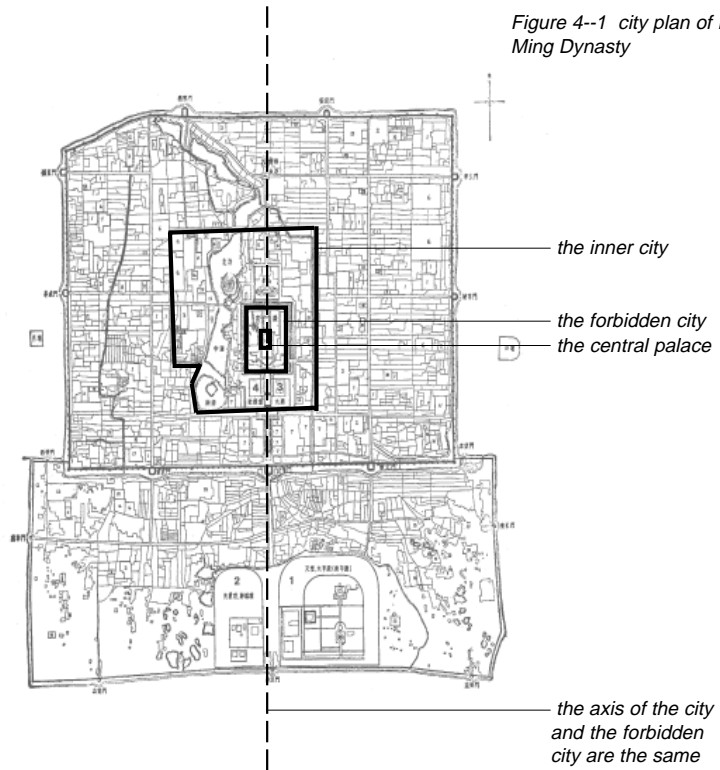


THE COURTHOUSE

Based on the three circulation patterns of different groups of people, space separation in the courthouse divides the entire building into three parts around the courtrooms, with separated entrances from the outside and different approaches to the courtrooms. The structural transition not only reflects the space separation, but also emphasizes the difference of the nature of material and structural form. In terms of approaching to the courtrooms, three groups of people will have various perspectives in entering into the courtrooms as well as in moving from one floor to another. Natural light as a theme is shining through the above three aspects. With the skylights around the courtrooms, the quality of the interior environment of the building will be improved.





Space Separation

The two courtrooms, one on the top of another, are all seated on the main axis of the building and its surroundings. Already ancient Chinese used the axis to emphasize the importance of the palace for their emperor by arranging the most importance place on the main axis of the building and its surroundings (Figure 4--1). In a smaller scale, Louis Sullivan studied the axis and the power of cross of the axes in his decorations and buildings (Figure 4--2,3).

The axis in the courthouse begins at the center of the green space, which is also the connection part of other two civic buildings: the Town Hall and the Police Station. After crossing Washington Street, the axis is defined by the symmetric gateway and flower bed on the square. This axis is established within the building by a symmetrically arranged doorway, lobby and concrete columns, which define the courtrooms. Two courtrooms are the terminate point of the axis (Figure 4--4).

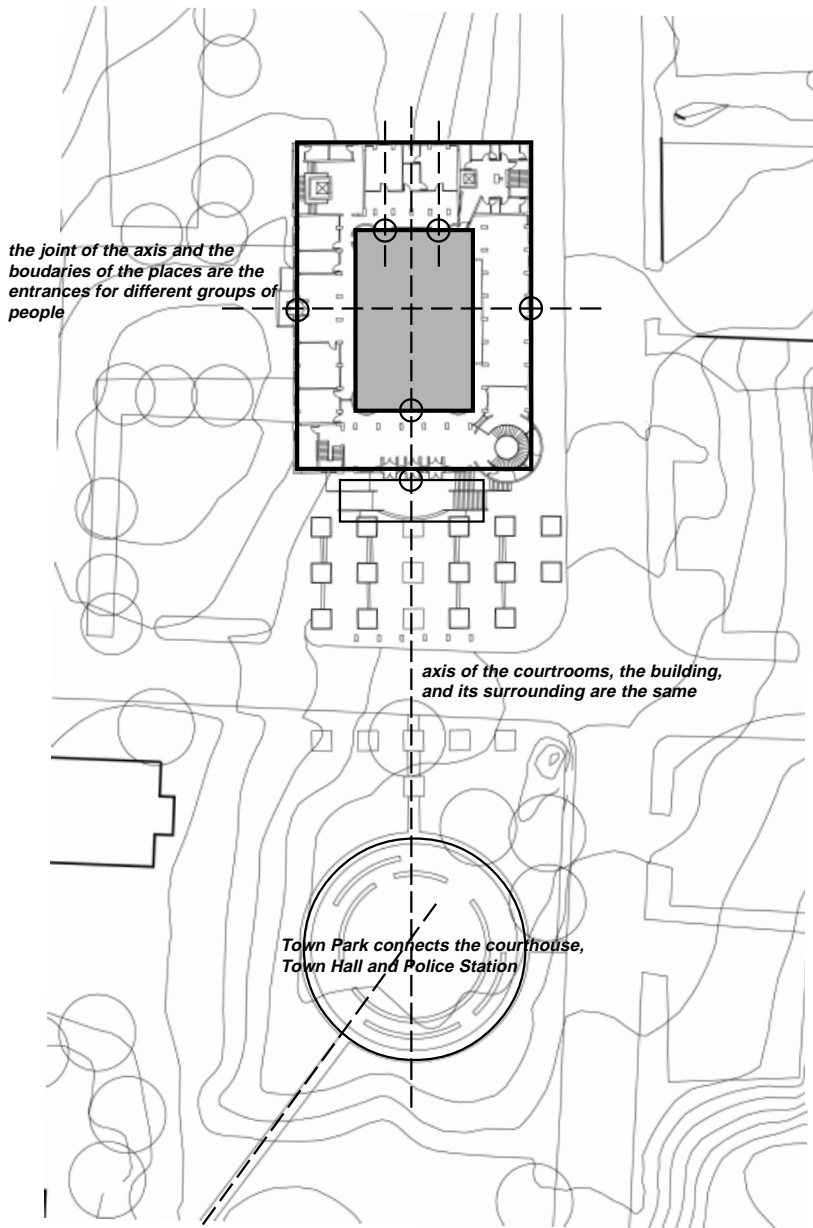


Figure 4-4 master plan analysis -- the axes of the building and the courtyards

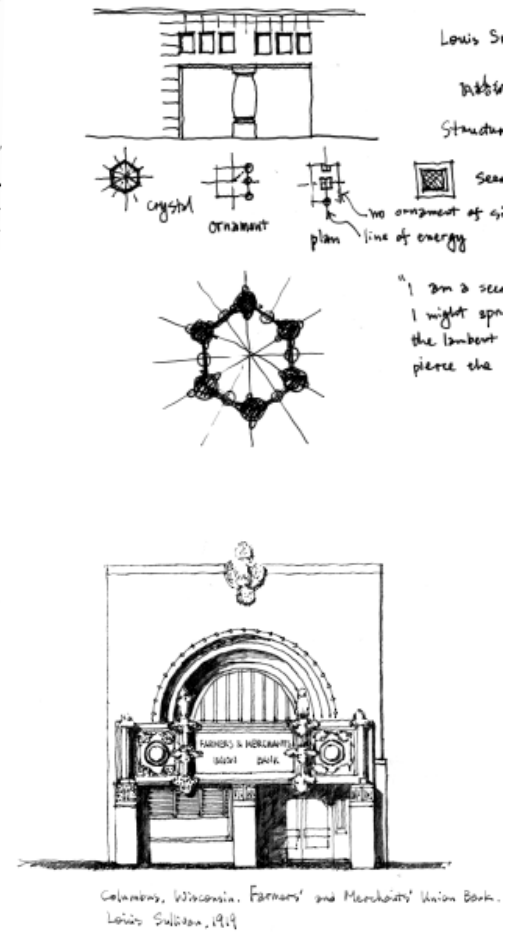


Figure 4-2,3 study sketch of Sullivan's decoration pattern and the power of cross of the axes

<i>courtrooms</i>	<i>580 m²</i>
<i>(total seats</i>	<i>220)</i>
<i>public waiting</i>	<i>1280 m²</i>
<i>offices for juries and staff</i>	<i>970 m²</i>
<i>administration facilities</i>	<i>300 m²</i>
<i>detention facilities</i>	<i>180 m²</i>
<i>total</i>	<i>3310 m²</i>



Figure 4--5 space separation in the courthouse

The concentrically organized spaces emphasize the importance of the central courtrooms. Smaller rooms are gathered around the large central space. The central spaces, two courtrooms, are large enough in size to dominate other spaces in the courthouse (Figure 4--6,7). Two courtrooms are supported by four concrete columns on the corners, with the concrete beam spanning 18 meters in length and 12 meters in width. Other offices and waiting areas are defined by the 3 meters by 6 meters grid system. On the one hand, spaces in the courthouse are divided into three parts: the public waiting spaces, the offices for jurors and staff, and the cells for prisoners, based on the three circulations (Figure 4--5). The principles of served and serving spaces are used in the space separation of the courthouse. Four corner blocks, which are different in structure, are designed as serving spaces for the served courtrooms and offices. They include stairs, elevators, bathrooms, and storage (Figure 4--8).

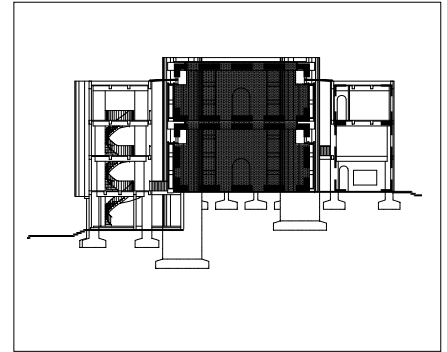


Figure 4--6 central courtrooms and the surrounded small spaces

Figure 4--7 central courtrooms and the surrounded small spaces

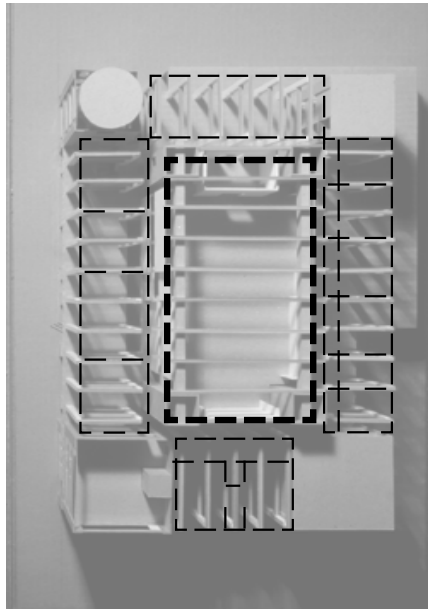
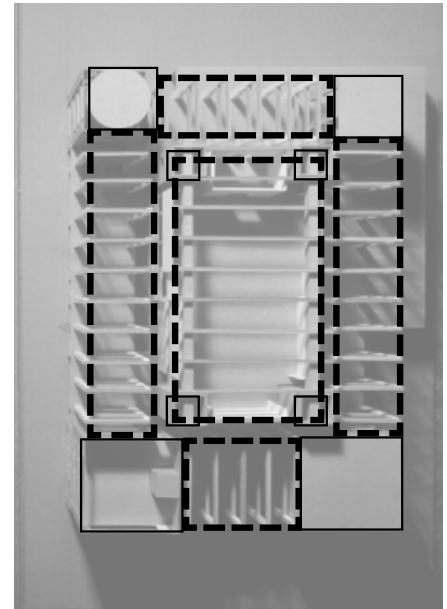


Figure 4--8 served and serving spaces



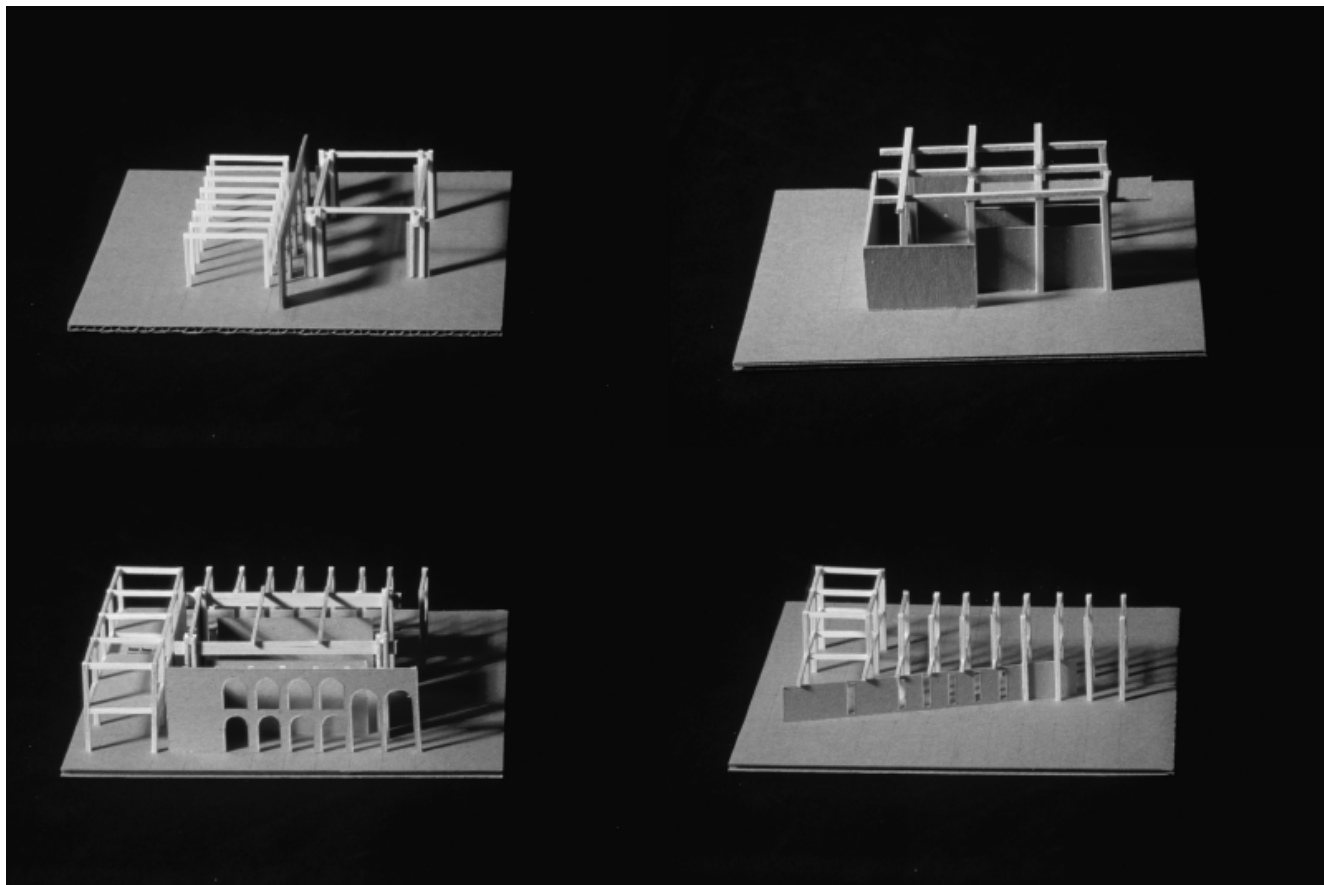


Figure 4--9 structure study models

Figure 4--10 early study about the concrete structure supporting the courtrooms

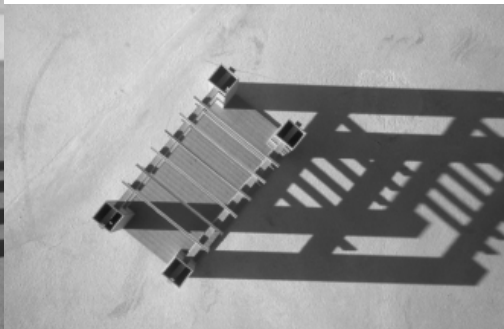
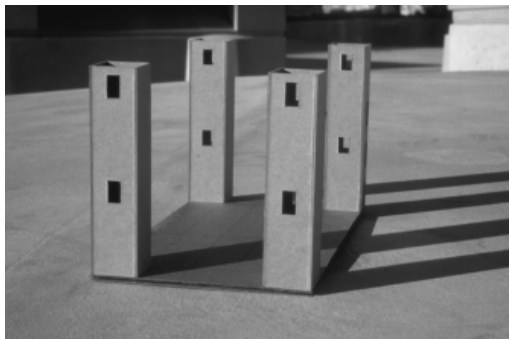


Figure 4--11 concrete structure in the building

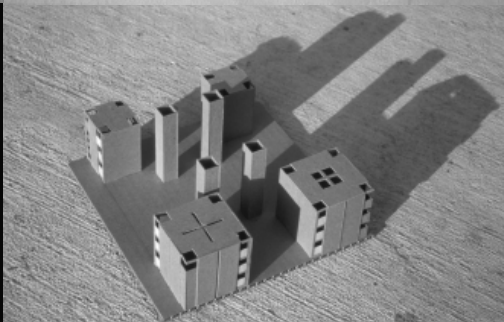
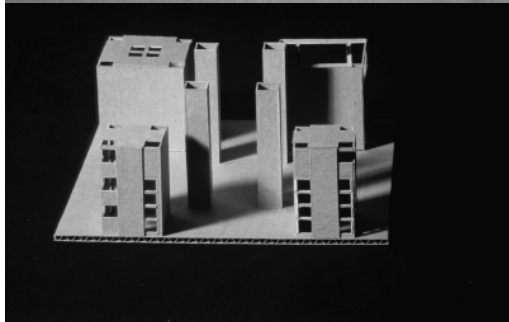


Figure 4--12 brick column structure in the building

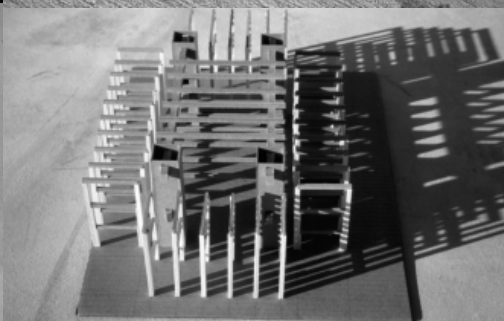
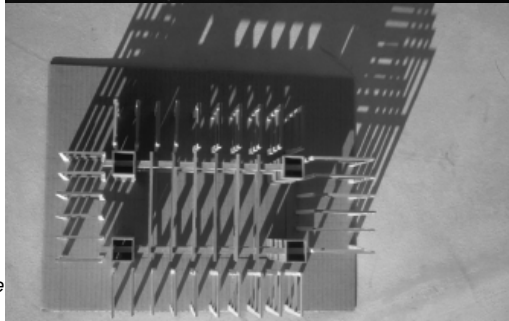
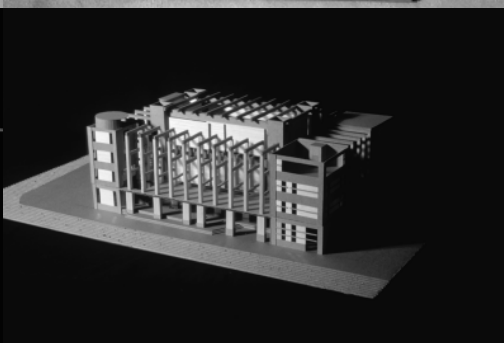
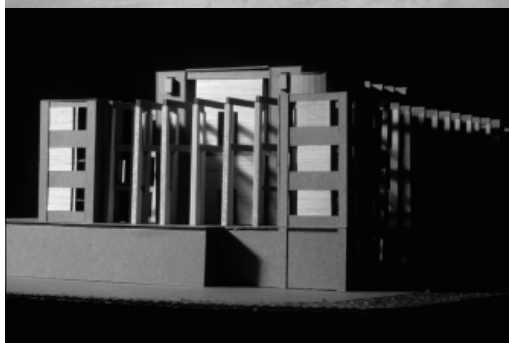


Figure 4--13 three structures in the building



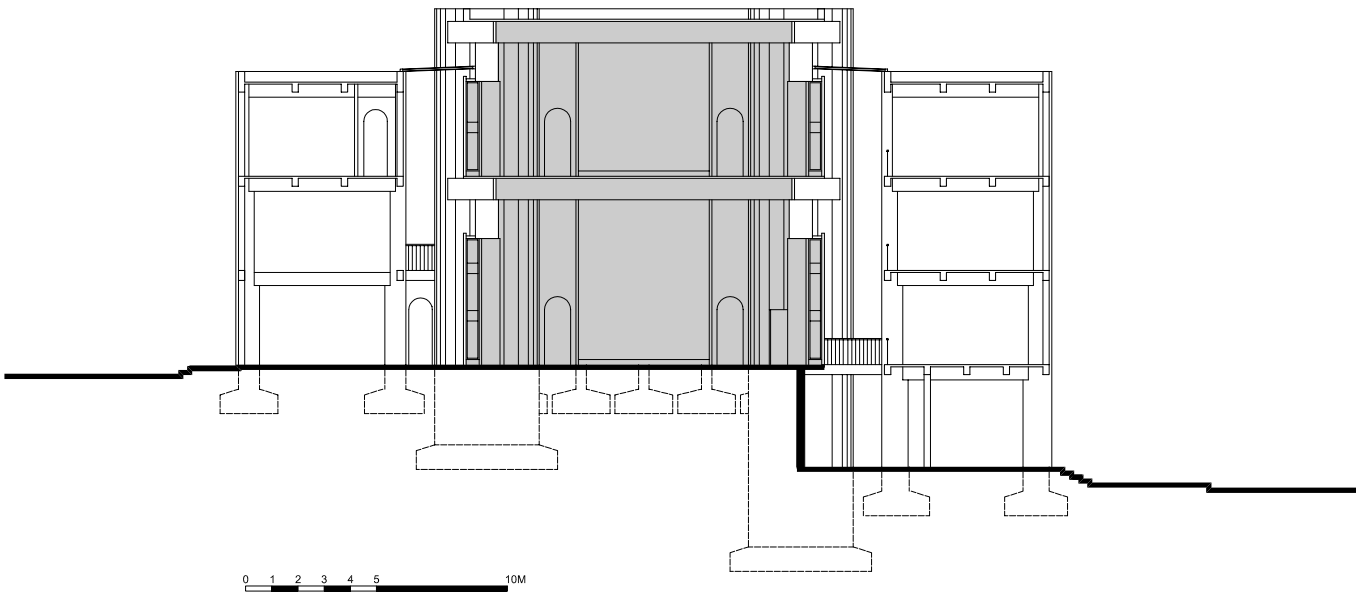
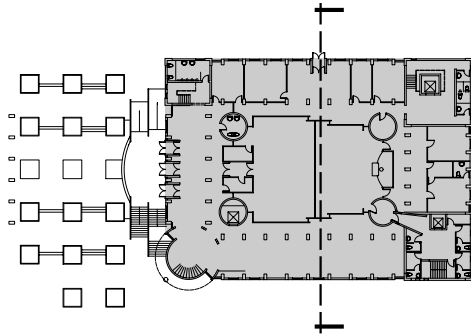
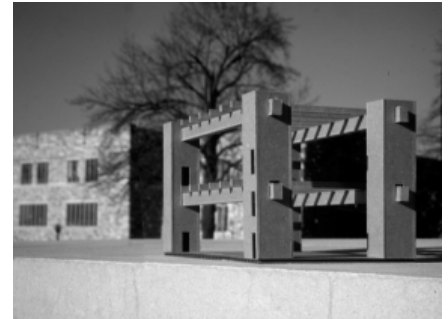


Figure 4--14 Section

Figure 4--15 early study about the concrete structure supporting the courtrooms



Structural Transition

In the courthouse, the structures of the courtrooms can be identified as three parts, with two major materials -- brick and concrete. The different qualities of these two materials determine their structure and form (Figure 4--16).

The first part, the concrete beam and column structure defines the central courtrooms (Figure 4--10,11). Four huge concrete columns, which actually hold small circular rooms, measure 4 meters in diameter, supporting the 18 meters long concrete beams. Because concrete can be easily molded as any shape, four columns are designed as cylinders that not only indicate the traditional classical orders, but also echo the cylinder block in the southeast corner of the building.

In the second part, four corner blocks, are defined by concrete beams and columns. Brick and concrete, two adjacent materials, emphasize the differences between the main structure part and infill (figure 4--12).

The third structure form in the building consists of brick columns and concrete beams. These brick columns are seated in a 3 meters by 6 meters grid system, which is a reasonable span and rhythm for this material. The upper columns are narrower than the lower ones, clearly describing the transition of load from the floor to the columns. The openings on the brick wall also suggest the character of brick and concrete and the transition of load. Pieces of brick are constructed over the arch windows and portico so that their own weight and that of the above brick wall is converted into outward thrusts supported by the side brick. For the square windows, concrete lintels are used. Similar to the way brick columns support concrete beams, brick wall or two edges of windows support the concrete lintels. For the upper level windows, concrete lintels hold the window frames, and indirectly carrying the load above.

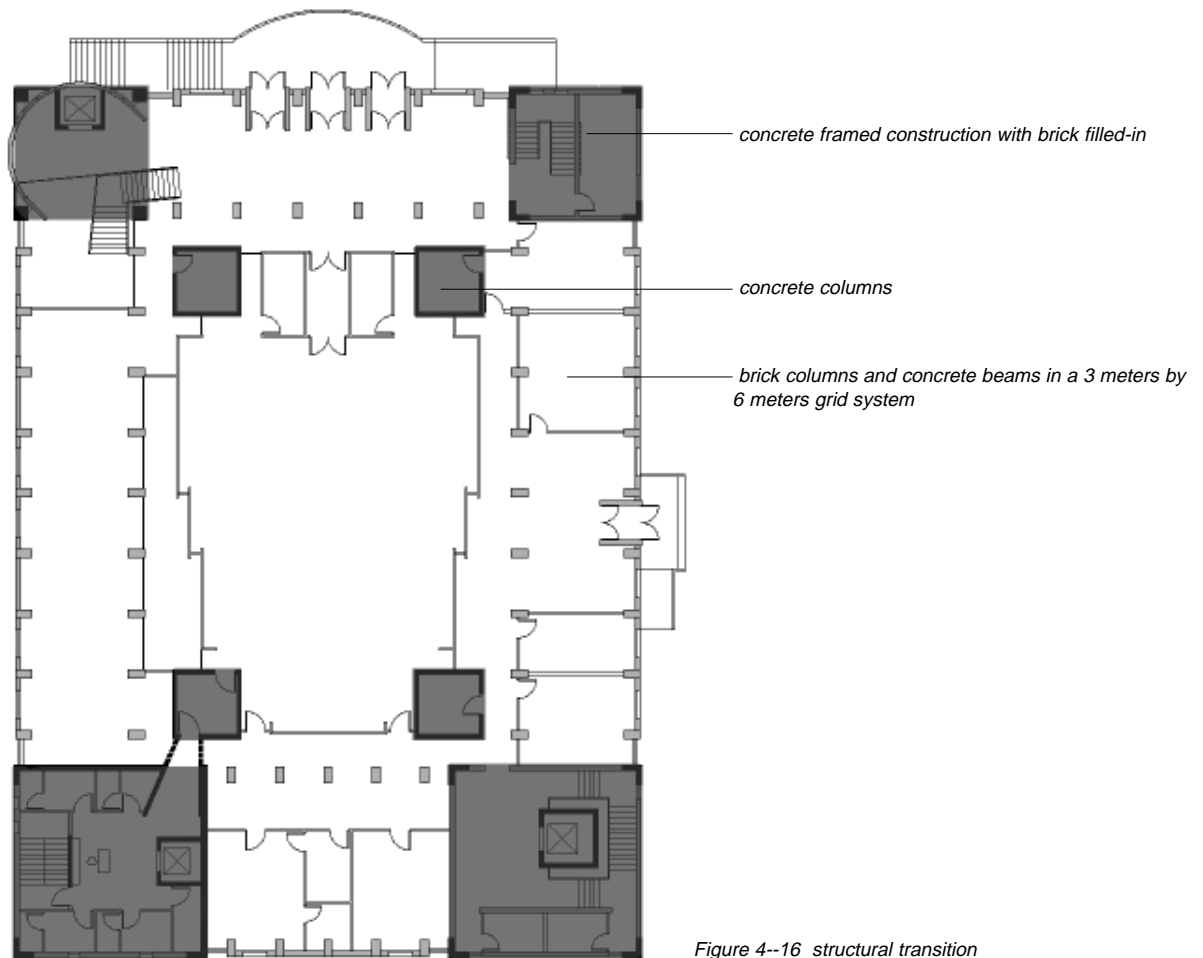
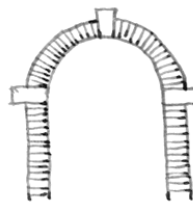
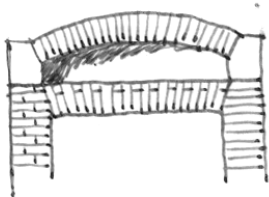
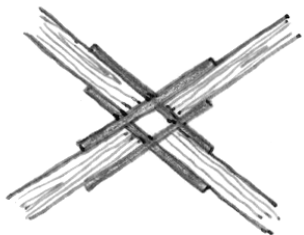


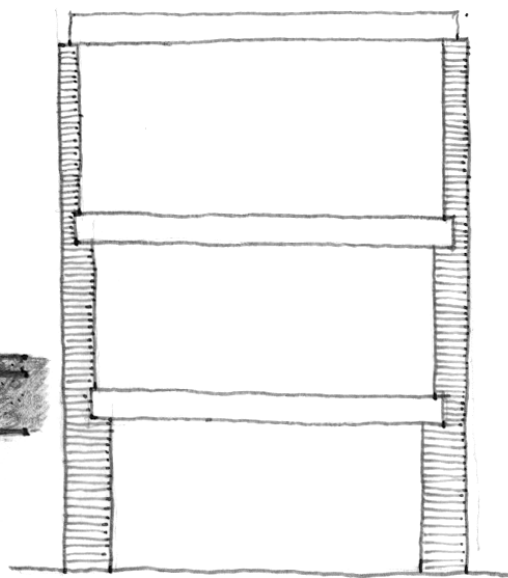
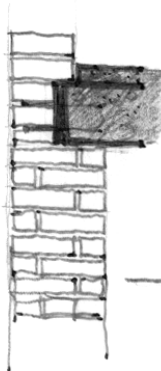
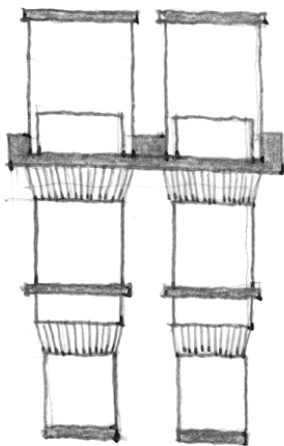
Figure 4--16 structural transition



brick arch.



Diamond shape, steel and wood.



third floor plan

figure 4--17 sketch of the load transfer, arch study

figure 4--18 the eastern entrance and lobby on the ground floor

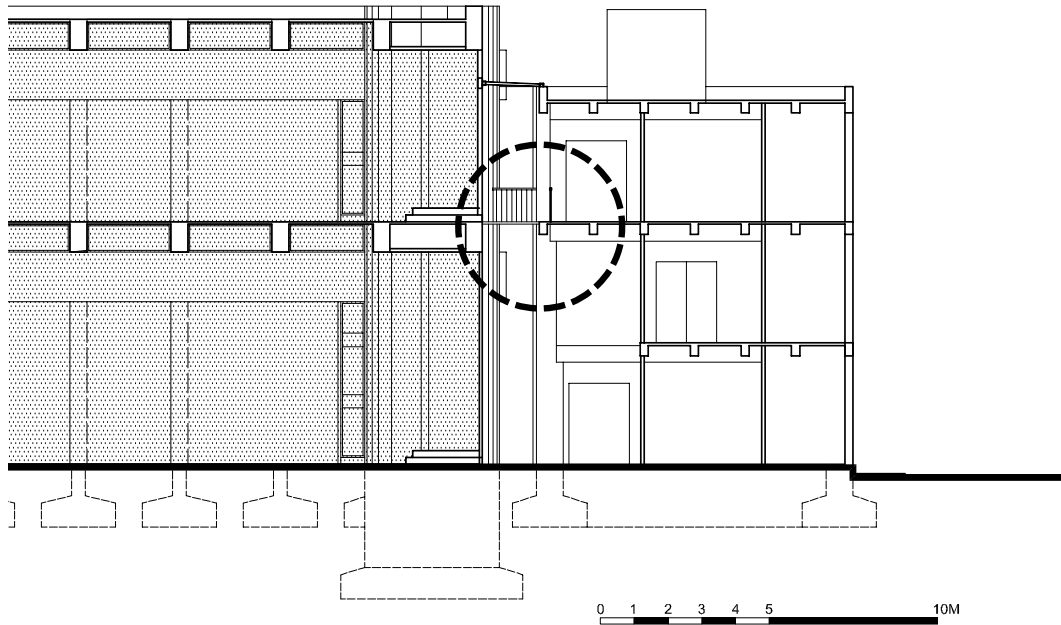


figure 4-19 the bridges

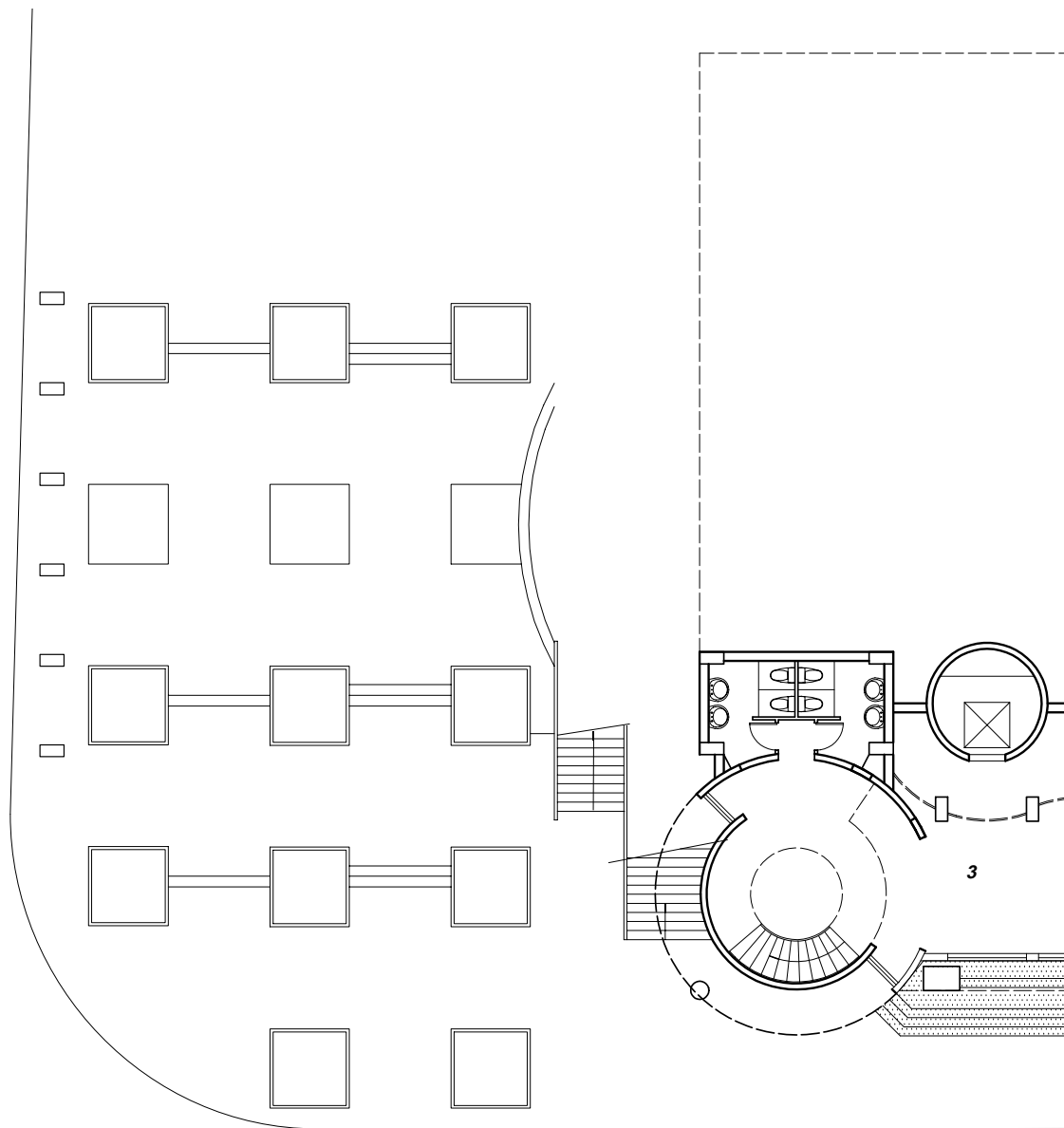


*figure 4--20 model of the
eastern entrance and
portico*

Approach to Courtrooms

Three separated circulation paths are articulated with various perspectives when entering the courthouse. From their offices, the jury and judges will pass a wide, bright semi-public corridor, cross the “bridges,” and then enter into the courtrooms. On the first floor, the “bridge” is defined by a lower-height ceiling, while on the third floor, the bridge connects the courtroom and the offices, above a two-story atrium (figure 4--19). Two bridge spaces are the very important part in the sequence from the private offices, to the semi-public corridors, and then to the public courtrooms. The bridges are thresholds to the courtrooms. By reducing the size of the bridge spaces, the space arrangement along this sequence also emphasizes the importance of the courtrooms.

Waiting spaces and lobbies are for the public before they enter into the courtrooms. Two lobbies at different levels welcome people from the east and south entrances. Pedestrians from campus and the nearby residential area will walk through the entrance portico, a covered semi-public space, and then enter into the eastern lobby (figure 4--20,21). People who drive to the courthouse will enter into the southern lobby. A circular staircase inside the southeast cylinder block connects the two lobbies. With large radius and a skylight above, the staircase will catch the attention of people visually and functionally (figure 4--22,23,24).



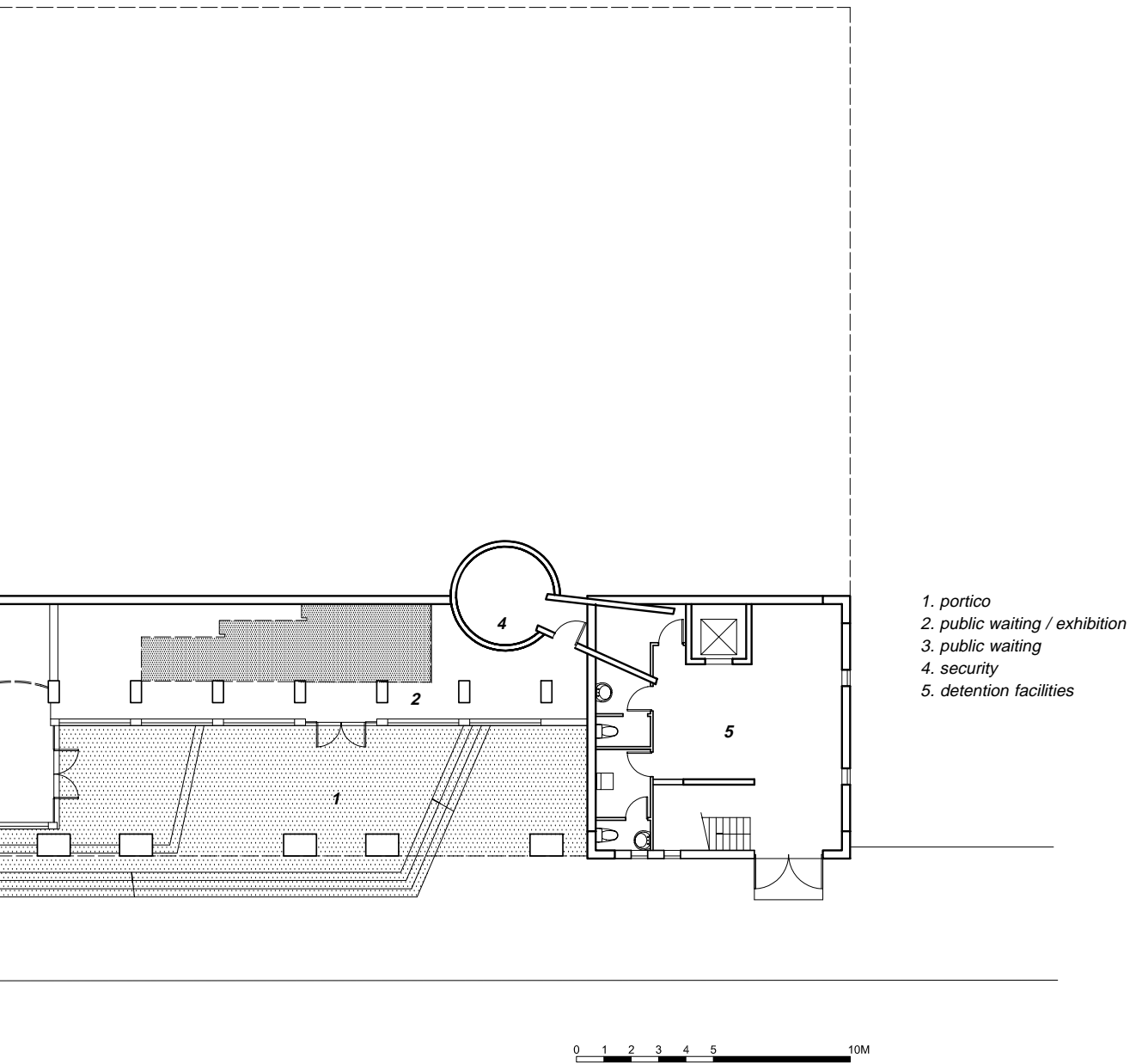


figure 4--21 plan of the entrance portico





*figure 4--22 the eastern entrance and lobby on
the ground floor*