

A School of Architecture

9.1.99

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sity, College of Architecture and Urban
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requirements for the degree of*

Master of Architecture

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Alexandria, Virginia*

Keywords

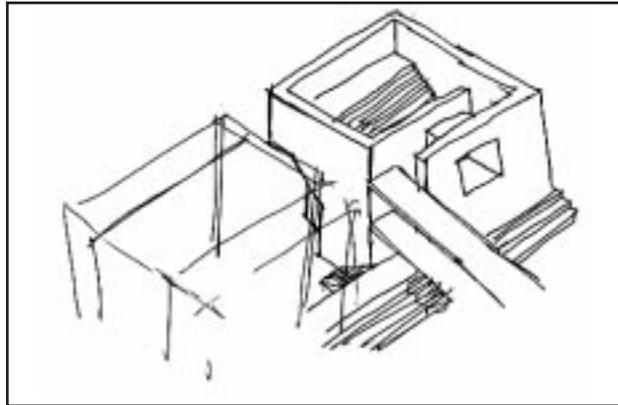
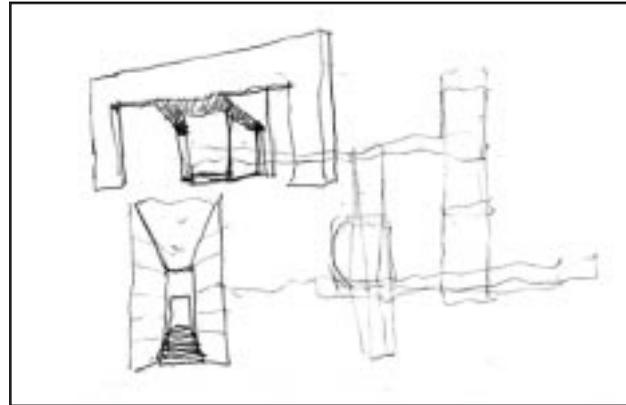
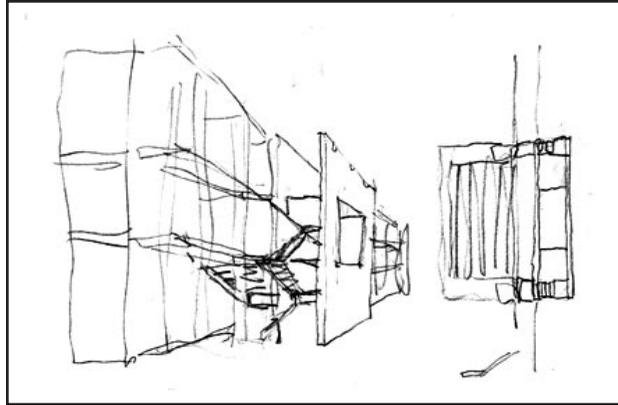
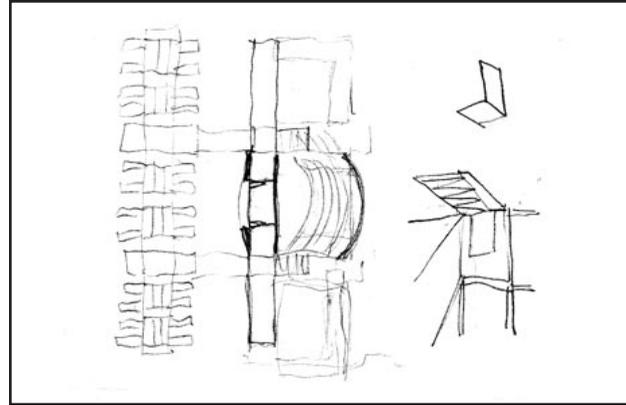
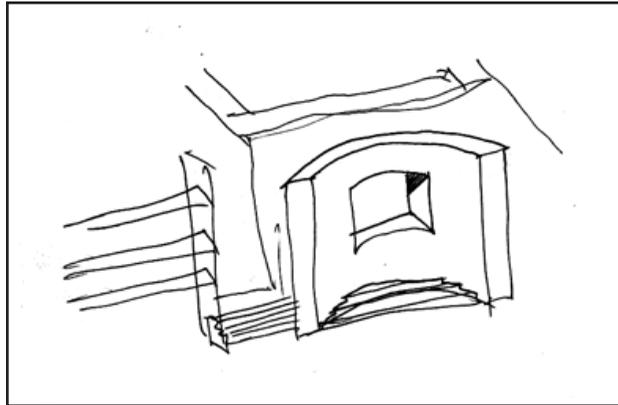
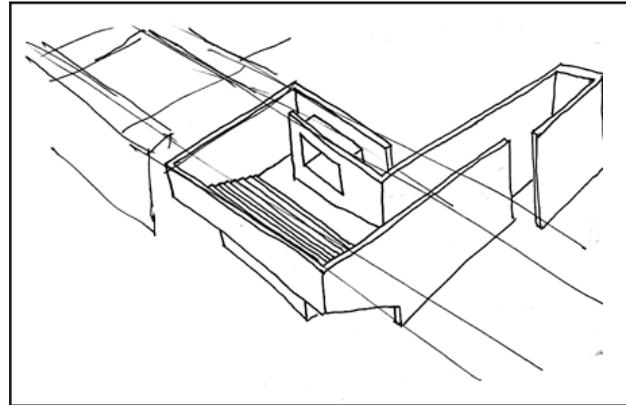
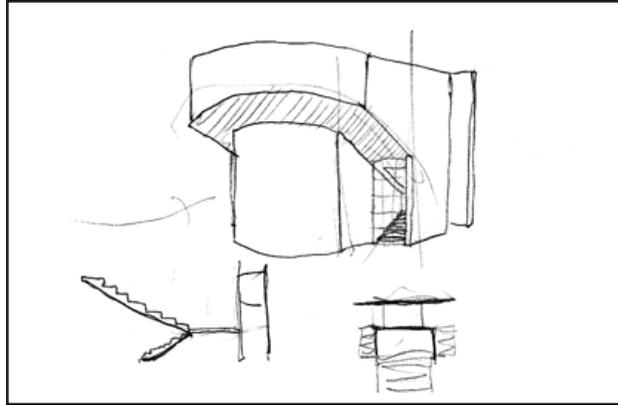
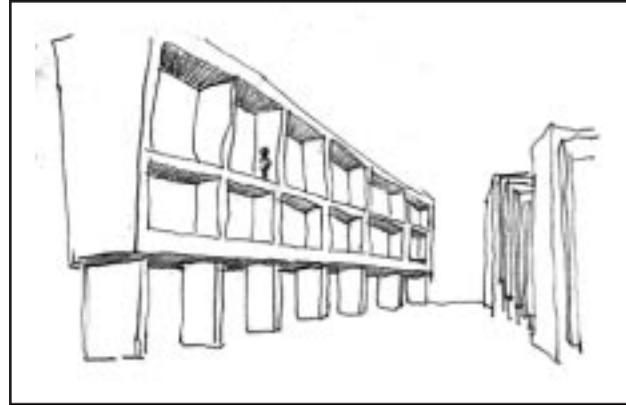
architecture school Alexandria integration

Abstract

I propose to create a building whose formal architectural elements; floor, wall, column, and stair, all transform to provide for the needs of the user. The structure will exist as not just a support for an enclosure, but a system where the furniture, storage, and other systems are integrated parts of the building itself. This is the central idea that I will use to create a form language that can be applied to a building whose parts serve all of the functions of the building. If the building itself changes to accommodate the needs of the creator, then the building would become an integral tool in the creative process.

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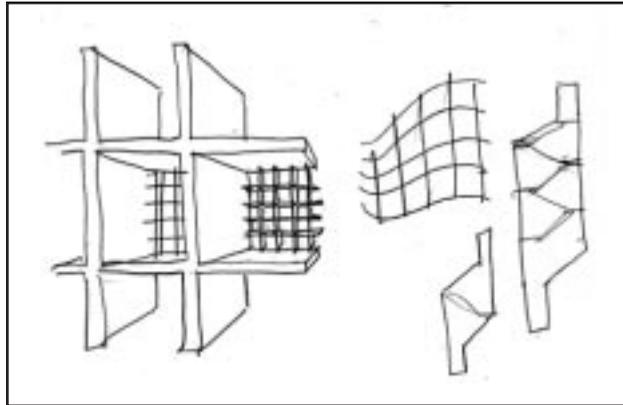
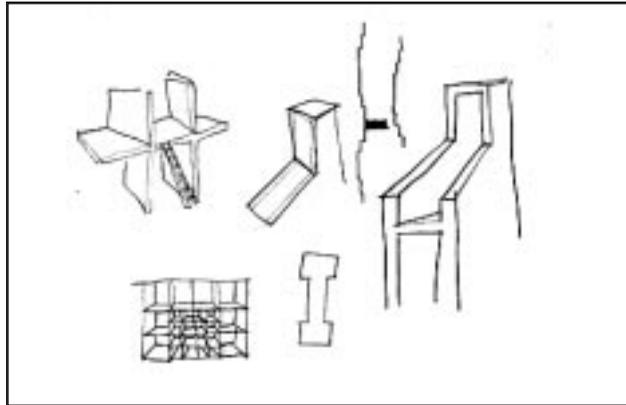
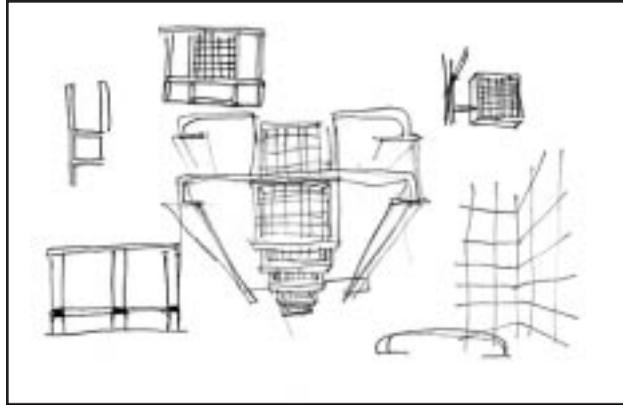
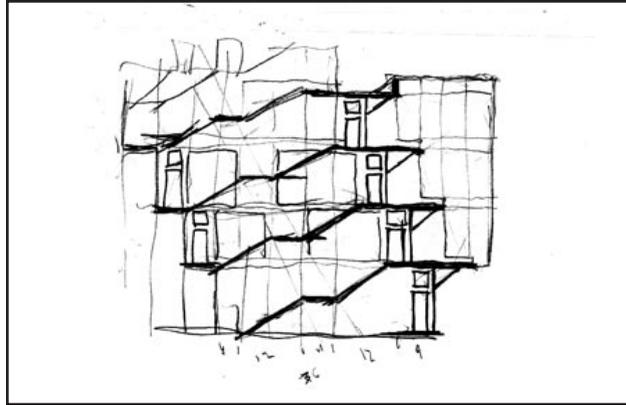
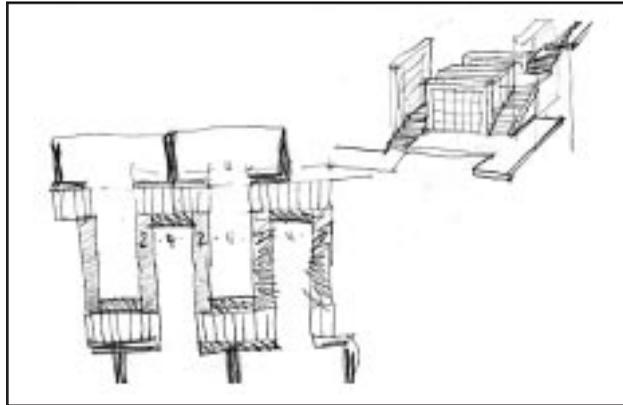
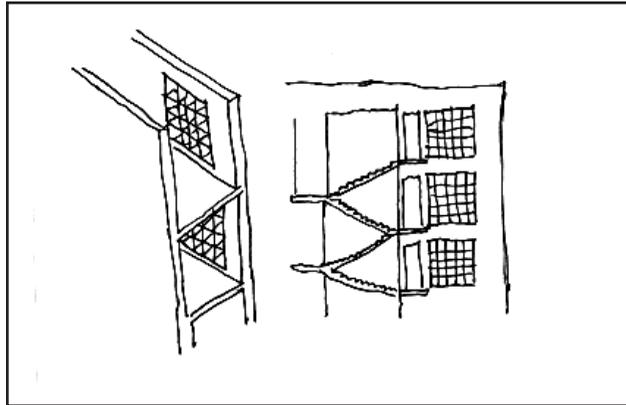
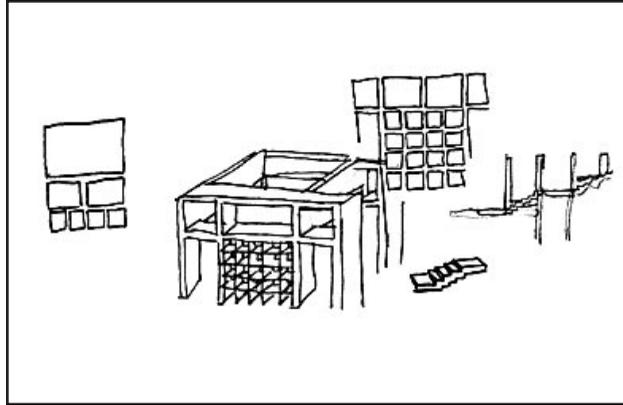
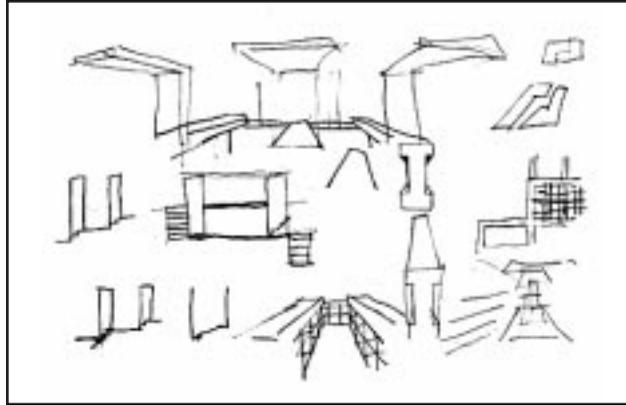
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Forward

Determining an appropriate thesis project is quite a difficult process. It is akin to an artist who must begin a painting, and must choose a subject to paint. Artists and architects alike look for inspiration in their daily lives. Some find a spark of inspiration that gives them the impetus to begin a piece of artwork, and they then draw from their own experience to expand upon it and make it a reality. Paintings, sketches, and sculptures are often created express a single idea or feeling. More complex creations like stories, symphonies, and buildings require more than just a single idea to hold them together. Certainly, a single idea may spark the first lines, notes, or sketches of the creation, but this idea must be strong enough to be drawn out into a theme. A solid, pronounced theme is the thread that ties a complex creation together and gives it unity.

A theme in many cases may not be able to be adequately expressed in words. The theme may be subliminal in many cases. But as long as the artist is always aware of the first idea that created the theme, and the ways that they have expressed it, they can use it to develop a system of rules in which they can create variations on those expressions. This way, an artist may be able to develop a process for both creation and testing the validity of those creations.



The Project

The type of building chosen for the subject of this thesis project is a school of architecture. Host to both undergraduate and graduate students, it has a capacity of 450 students. It is intended to be a consortium of many architecture schools from around the world. It is able to function autonomously, with the ability to accommodate all of the functions of a typical architecture school, including specialty areas for construction, photography, and computer-aided design. It also has resources, such as its own private library and supply store. It has clearly delimited areas serving public and private functions, and allows for public access around the exterior property.



a



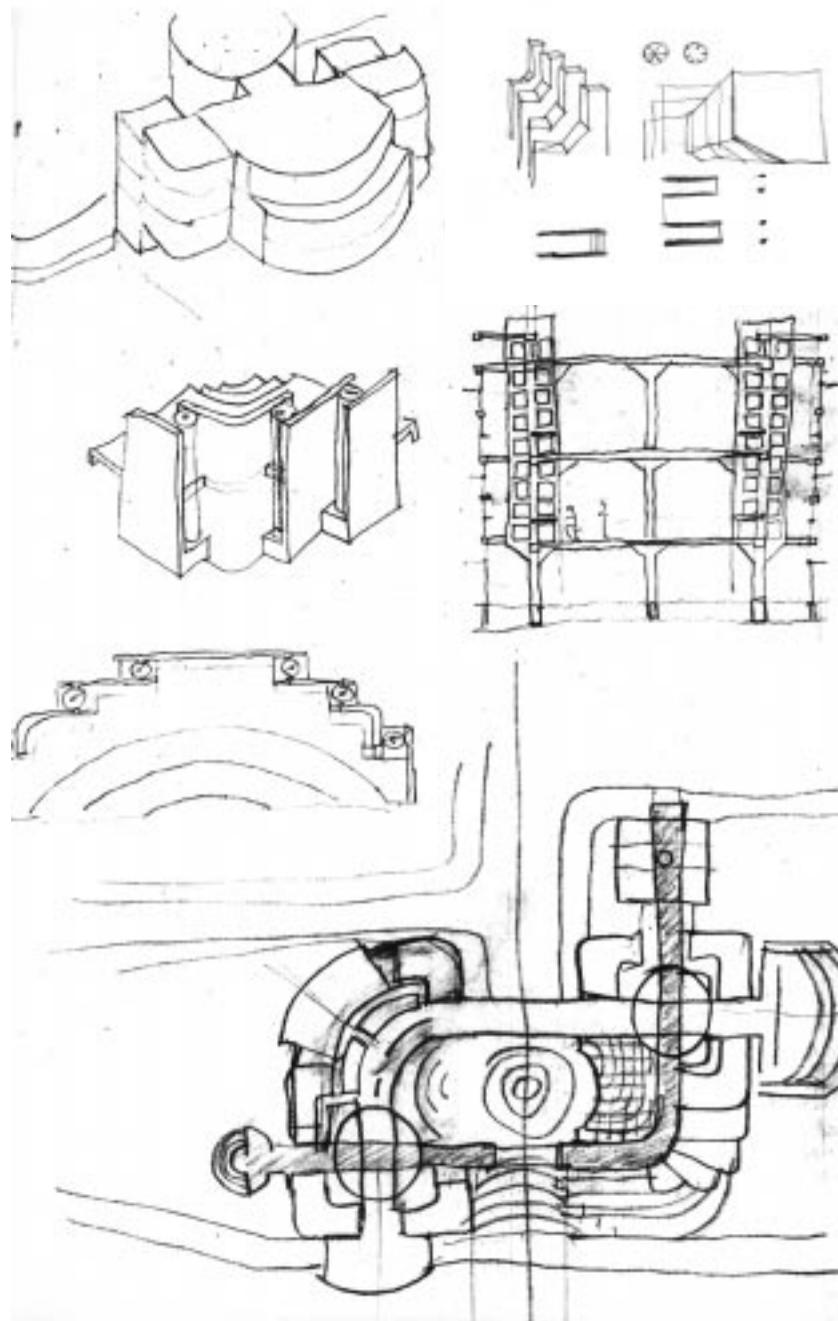
b



c



d



a. canal, Dotumburi, Osaka
 b. intersection at arcade, Dotumburi, Osaka
 c. plaza, Yokohama Station, Yokohama
 d. aerial view of plaza, Yokohama Station, Yokohama

This project is inspired significantly by the architecture and urban fabric of Japan. The urban fabric of Japan's most developed areas is chaotic by western standards. Districts are often meshed together in a haphazard fashion, and roads are almost never laid out in a grid. There are no broad formal gestures (with the exception of temple and castle grounds), nor symmetry you might find in classical city plans. Despite this lack of order, many areas have spaces devoted to public use. Many of these areas focus around transportation hubs, like train and subway stations. These pedestrian plazas are focal points that give a sense of place and identity to areas that would normally blend together into an amorphous tapestry. In many places throughout Japan's larger cities, areas where broad pedestrian thoroughfares intersect with canals have been further developed to create relatively large common areas, sometimes with landscaping and seating.

This project, which occurs at the intersection of Prince Street and the Potomac river, is also built around a central plaza, which not only accommodates the public, but provides a formal element that imposes an order upon the building's plan.



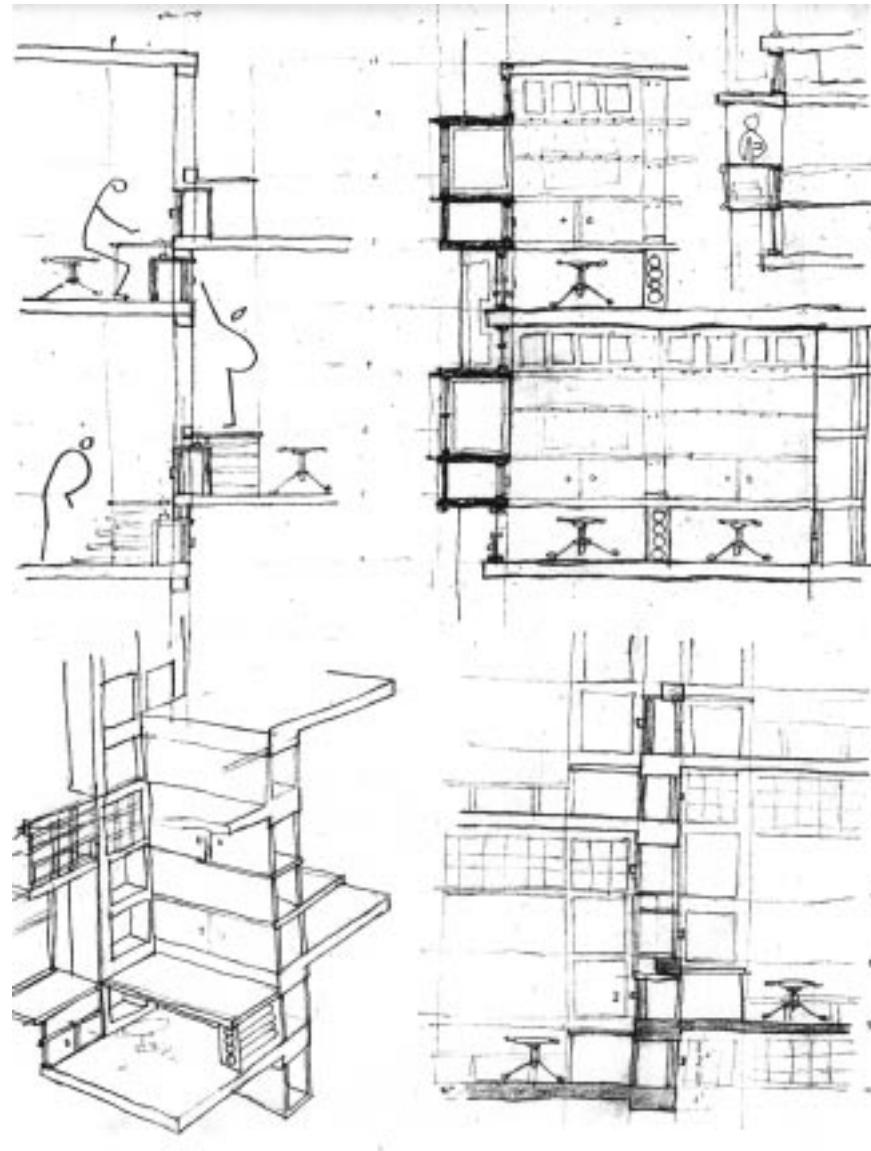
a



b



c

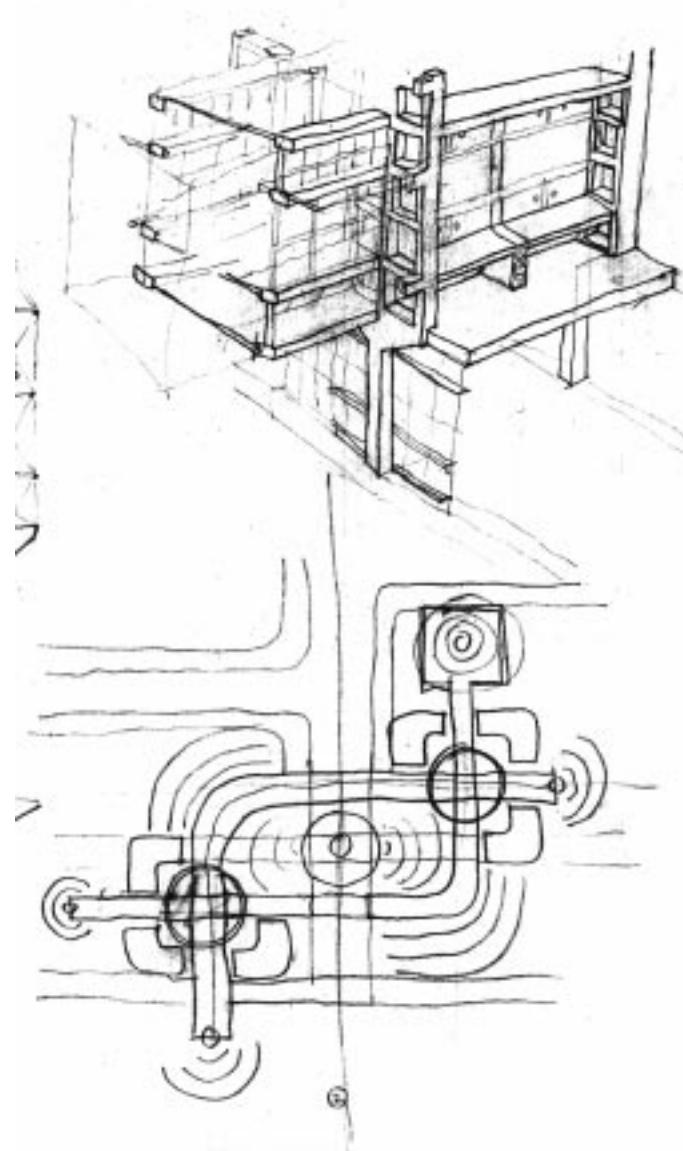
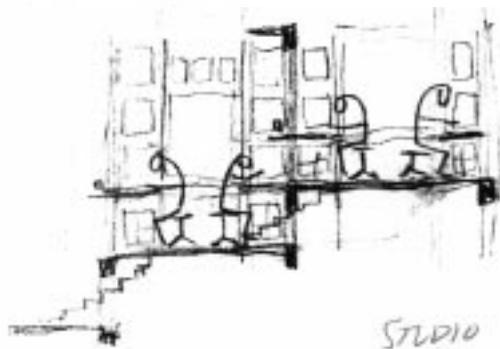
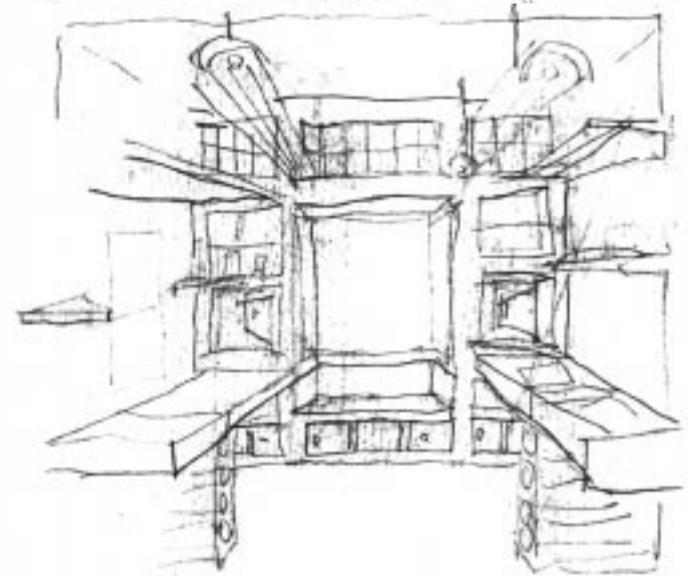
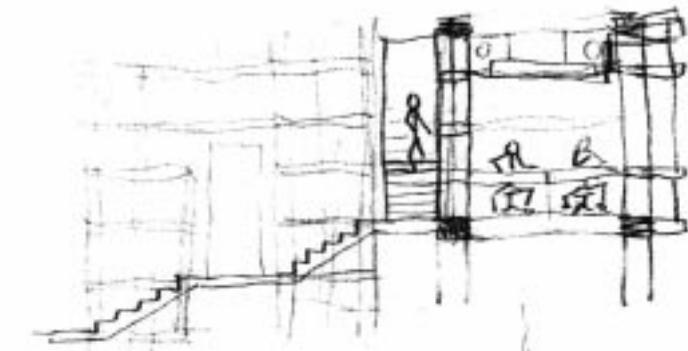


a. temple sanctuary, interior
 b. typical residential interior
 c. engawa and garden

Throughout Japan's dense urban fabric, there are many different types of architecture, from the poetic to the chaotic, traditional to the ultramodern. The interior structure of this project is built around the ideas taken from some of the more human-scale elements in Japanese architecture.

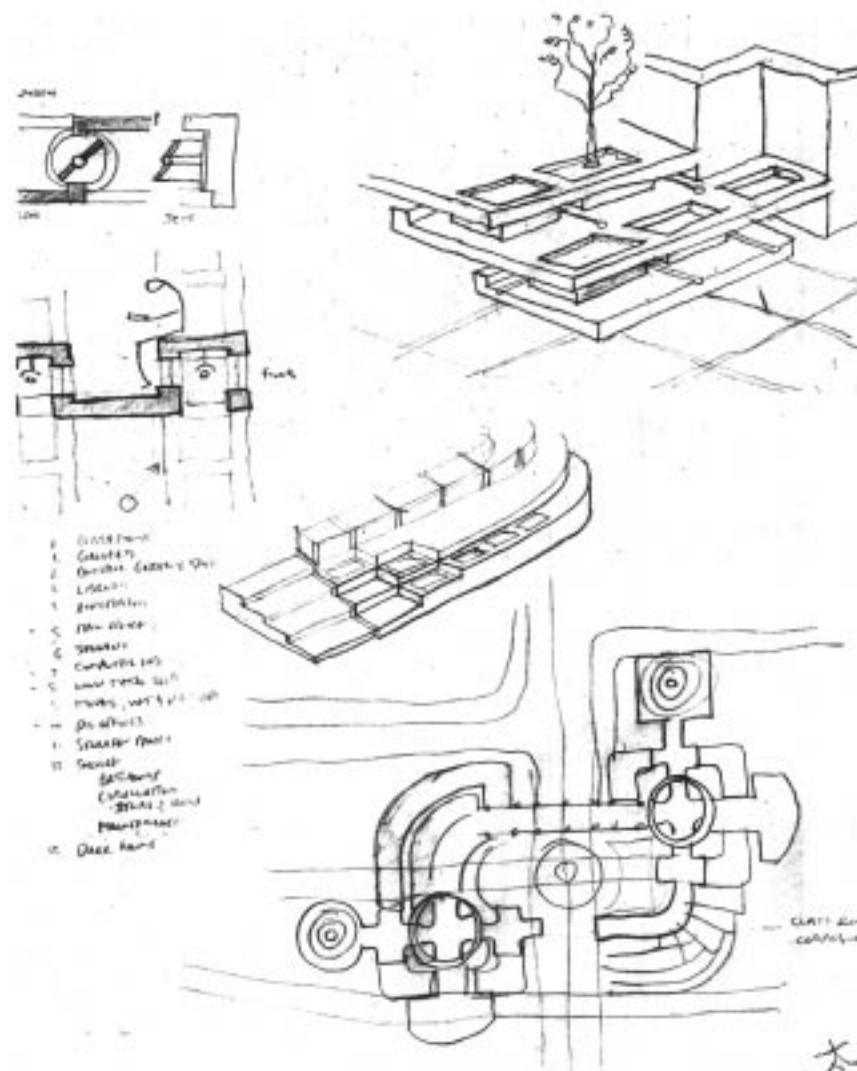
The structure of this building does not exist as just a support for an enclosure, but a system where the furniture, storage, and other utilities are integrated parts of the building itself. This idea of integration comes from traditional Japanese residential architecture. Their rooms are kept simple and tidy by the use of *oshiire*, closets built into the wall and hidden away behind sliding doors. Often, Japanese residences have private gardens wrapped by *engawa*, covered porches that act as both threshold and pathway. Instead of accommodating their needs by filling a room with furniture, they build it into the architecture itself.

The heart of this project is the studio space, the student, and workplace ergonomics. The tools and furniture that an architecture student uses were all considered to be important architectural elements in the design of the studio. This way, instead of just providing an empty space for the user, the studio is built around the user.



The studio is a split-level space, where studios run parallel to stairs, so that each adjacent studio is approximately three feet offset in floor elevation from its neighbor. This is intended to create the impression of the floor itself rising up to be the desk. The structure itself, in an obliging gesture, changes to accommodate the needs of the user. This is the theme that is carried throughout the building.

All of the elements that are relevant to learning about and creating architecture are built into the structure itself. If the building itself can change to accommodate the needs of the creator, then the building itself becomes a tool for creating architecture.



a. aerial photograph of site
 b. city plan with figure ground
 c. view of city from river

The Site

The city chosen for this project is Old Town, Alexandria. The site itself is directly at the end of Prince Street. Beginning at the shore of the Potomac River, Prince Street is one block to the south of the main thoroughfare of Old Town. The site, which straddles Prince Street along the shore of the Potomac River, is currently a small park at its north end, and a brick building with a large parking lot on the south end. Here, Prince Street simply ends in a dead-end. There is currently no formal acknowledgment of the river.

The site of this project is in a flood-plain and is mostly infill, with a man-made, hard edge to the water on the west. The elevation grades slightly towards the water, but is basically flat. The public park immediately to the north shall remain mostly untouched. There is a building in the southern portion of the site, which I propose to be demolished, and its parking lot used to serve the new building.

The new building straddles Prince Street, split into a north and south building. The path created by Prince Street is continued into the formal layout of the building. Prince Street splits the building into two parts, with a large open plaza in between. This plaza follows the direction of the road, and contains the entrances to both buildings, a central meeting place, and a man-made shoreline stepping into the river. This space is the central focus of the building, acting as a public meeting space and main circulation zone.





Ground Floor Plan



Perspective



Perspective

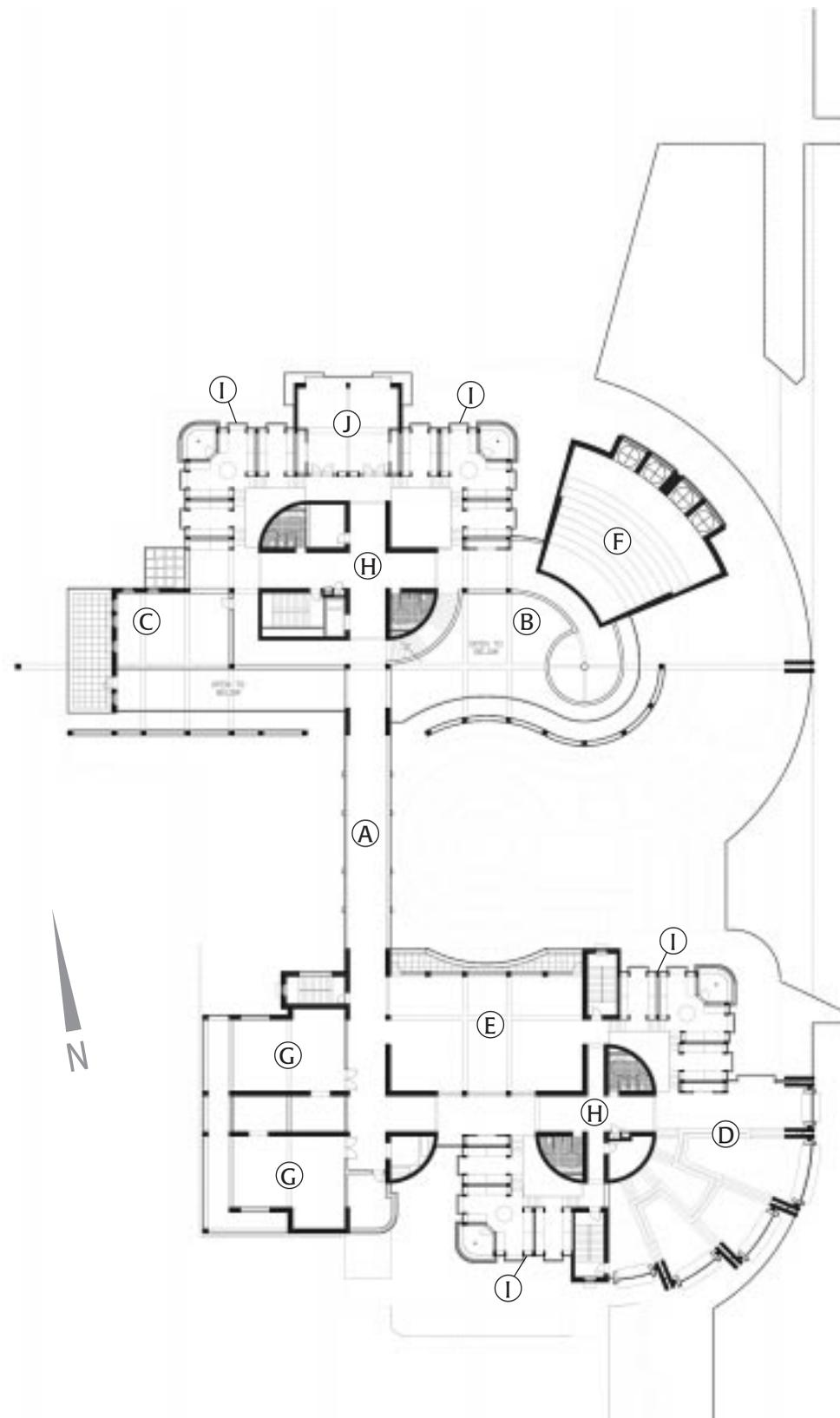
The Building

The school is a four-level structure, built upon a plinth that raises the structure above the flood plain. The structure is split into a north and south building, and is connected by a bridge on the second level. The main entrance to the building is at the top of the steps, on the plinth level, underneath the bridge.

Between the two buildings is a large circular plaza that has steps toward its center, and down towards the water. The circular area closest to the bridge is intended to be a gathering space for discussion. Its steps cascade toward the water, and spreads out to create a linear space that pays homage to the view of the river, and is intended for 'looking out'. These steps descend into the water and will appear and disappear with low and high tides. The path along the edge also extends beyond the building and becomes a part of the existing public path along the water. This extension knits the building to the urban fabric, and acknowledges both the river and the city. The path wraps around the curved shape of the auditorium to the north, and forms a small man-made water inlet. This inlet is a reflecting pool with fountains and a mosaic tile bottom. This way, part of the river is brought into the city, and allows for a more intimate relationship between the city dweller and the river.

Both north and south buildings are organized around a central service core. This core contains vertical circulation (elevators

- A. Entrance Stair
- B. Central Plaza
- C. Reflecting Pool
- D. Public Park
- E. Meeting/Exhibition Area
- F. Auditorium
- G. Administrative Offices
- H. Service Cores (2)
- I. Studio Pods (4)
- J. Group Studio
- K. Shop/staging Area(2)
- L. Photo Lab
- M. Store/Cafe
- N. Loading Dock
- O. Parking
- P. Prince Street



Second Floor Plan



Perspective



Perspective

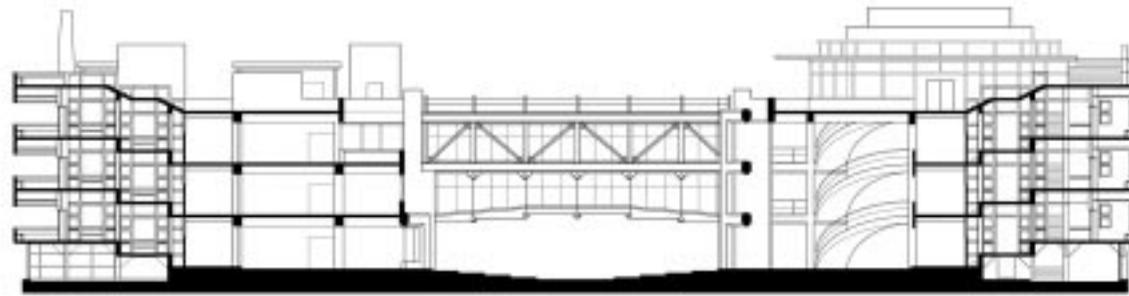
and stairwells), along with bathrooms and storage spaces. These are heavy, dark concrete cylinders that protrude above the roof of the building, forming headhouses that provide access to the roofs of the buildings. The headhouses are mostly glass, with awnings that protrude from their circumference to provide protection from sunlight. Most of the roof area of both buildings are occupiable, and intended for private use.

The north section of the building faces the plaza to the south with a large glass wall. In front of the glass wall is a screen that both filters sunlight and provides a colonnade that wraps around the south side of the structure. This colonnade brings cadence and rhythm to the experience of walking from the entrance under the bridge down towards the water.

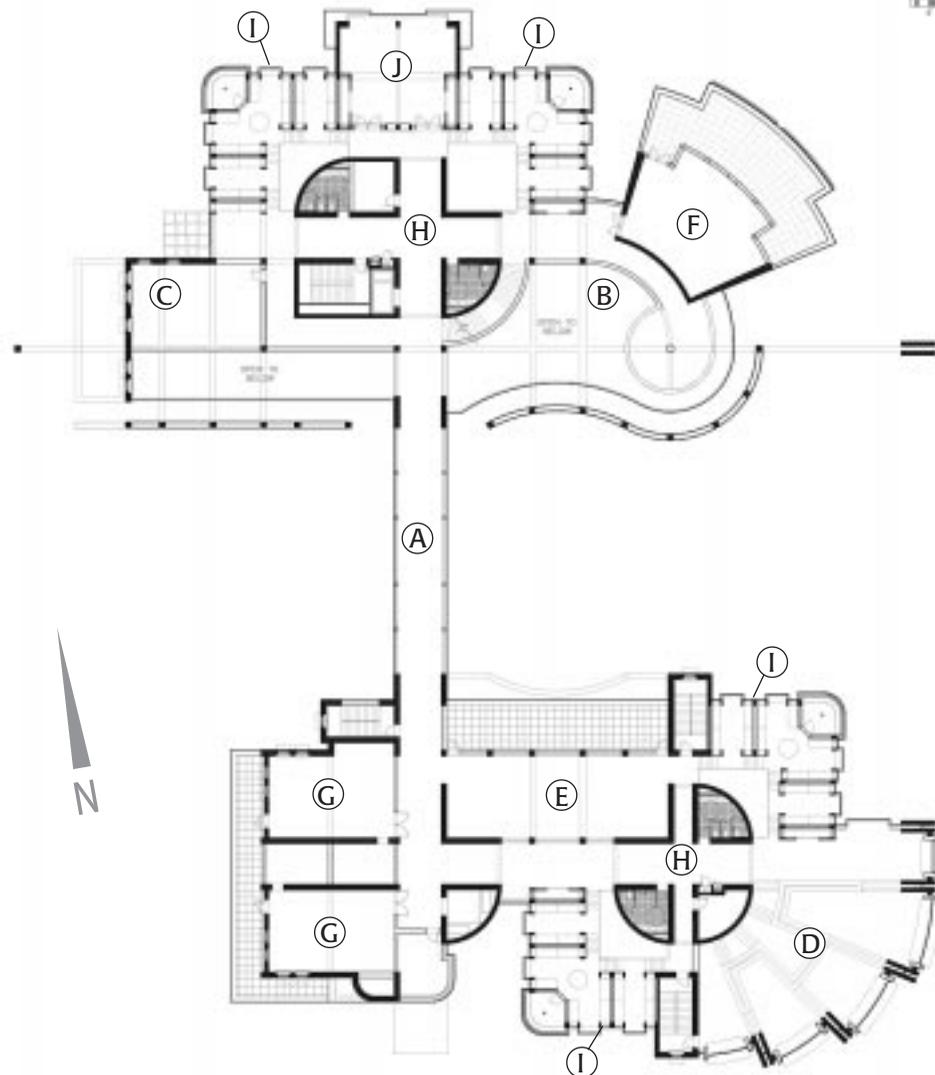
Inside the screened in area are two discreet zones, separated by the entrance and the bridge. The west section, on the city side, contains offices and classrooms. On the river side is a large, open meeting space for students and faculty to have general meetings and other functions. This space is wrapped by an interior circulation space, with places for wall attachments and wall hangings for student works.

On the far east side of this structure is an enclosed auditorium. This space is intended for large meetings where there is a central focus, like a lecture or movie. This space has large window slots that are built into the thickness of the wall. These slots can be shut by rotating large rotary window

- A. Bridge
- B. Meeting/Exhibition Area (Below)
- C. Classroom
- D. Library
- E. Group Studio
- F. Auditorium (Below)
- G. Shop/Staging Area
- H. Service Cores (2)
- I. Studio Pods (4)



○ *North-South Section at Plaza*



○ *Third Floor Plan*



Perspective

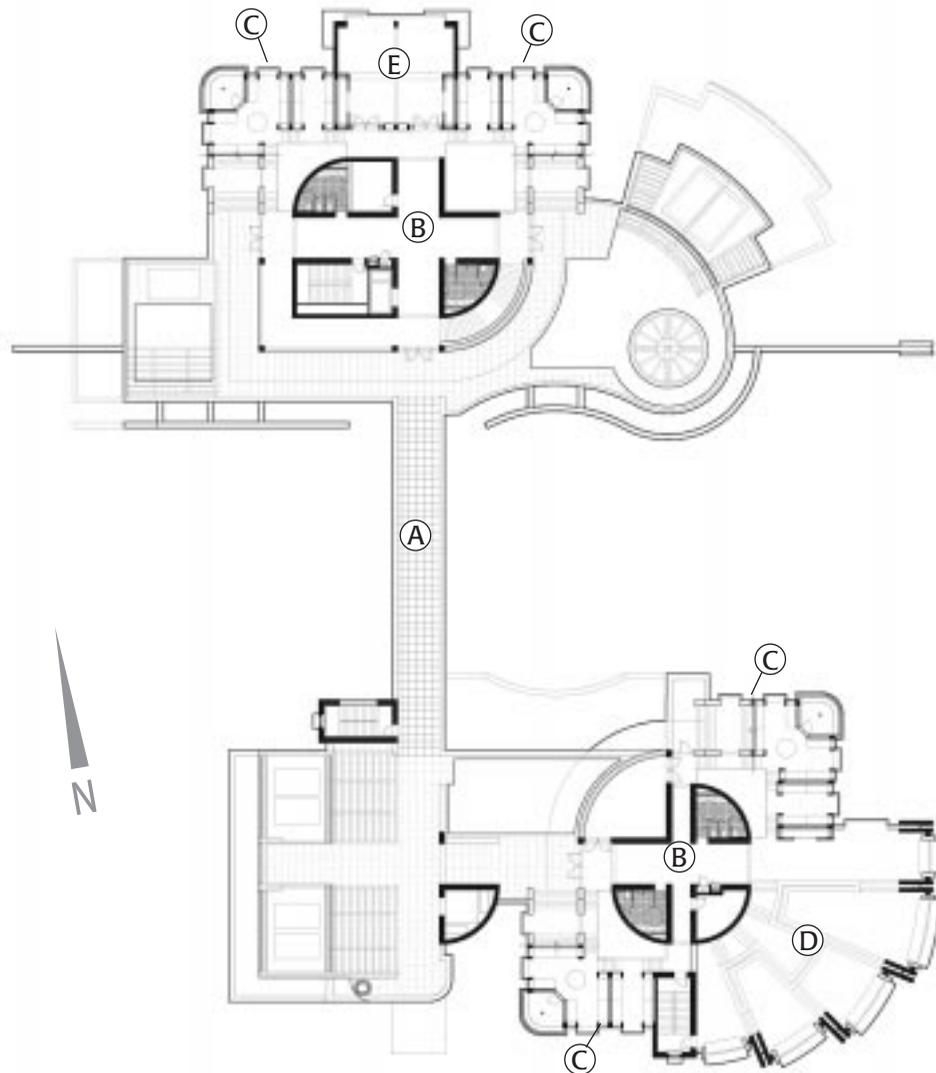
- A. *Bridge*
- B. *Meeting/Exhibition Area (Below)*
- C. *Classroom*
- D. *Library*
- E. *Group Studio*
- F. *Meeting Room*
- G. *Shop/Staging Area*
- H. *Service Cores (2)*
- I. *Studio Pods (4)*

shutters in between the slots. On the top level of the auditorium is a smaller meeting space adjacent to a balcony with a view to the river for faculty functions, meetings, and celebrations after thesis defenses.

On the far west side of the building is the office and classroom module. This was placed on the city side of the building, because I thought that it would be the most accessible to the city. People who come to the building from the outside often visit the main office first, or come to attend post-graduate classes. It is a fairly simple, rectilinear space, and the main office itself is an open two-story space that is the focal point of the area.

On the far north side of the building, beyond the core, are two main studio pods. These pods are separated in the middle by a medium-sized classroom space, that is used on the ground floor as a photography classroom and darkroom, and a computer lab and other classrooms on the upper floors.

There are four studio pods in total, two in each building, each with a capacity of up to 70 students. They consist of separate private studios on the upper floors, and a large open studio on the ground floor. The circulation consists of stairways that interlock all of the studios and continues around to the interior of the core. All of the studios share adjacent walls, which lie perpendicular to the stairs. Since each studio space is separated by a split-level stair, each one is three feet higher in elevation than its predecessor. This allows



- A. Bridge (Open)
- B. Service Cores (2)
- C. Studio Pods (4)
- D. Library
- E. Lab/Classroom



for the plane of the floor of the higher space to extend into the lower space, creating the plane of the desks in the space. This system of stepping levels is how the studios interlock. The studio spaces wrap around a central open atrium that is the main circulation zone. The atrium is continuous from the ground up to open, airy skylights that bathe the space in light.

A single regular studio space holds four students. Their desks and storage spaces are integrated into the side walls of the space, and each student faces the sides of the space as he works. The entrance to the studio faces a bay window on the opposite side of the space, which has a bench that forms the sill, that can be shared among the students. The inside entrance wall and outside wall is a concrete frame structure, and is very deep to allow for further control over light infiltration and also for use as shelving.

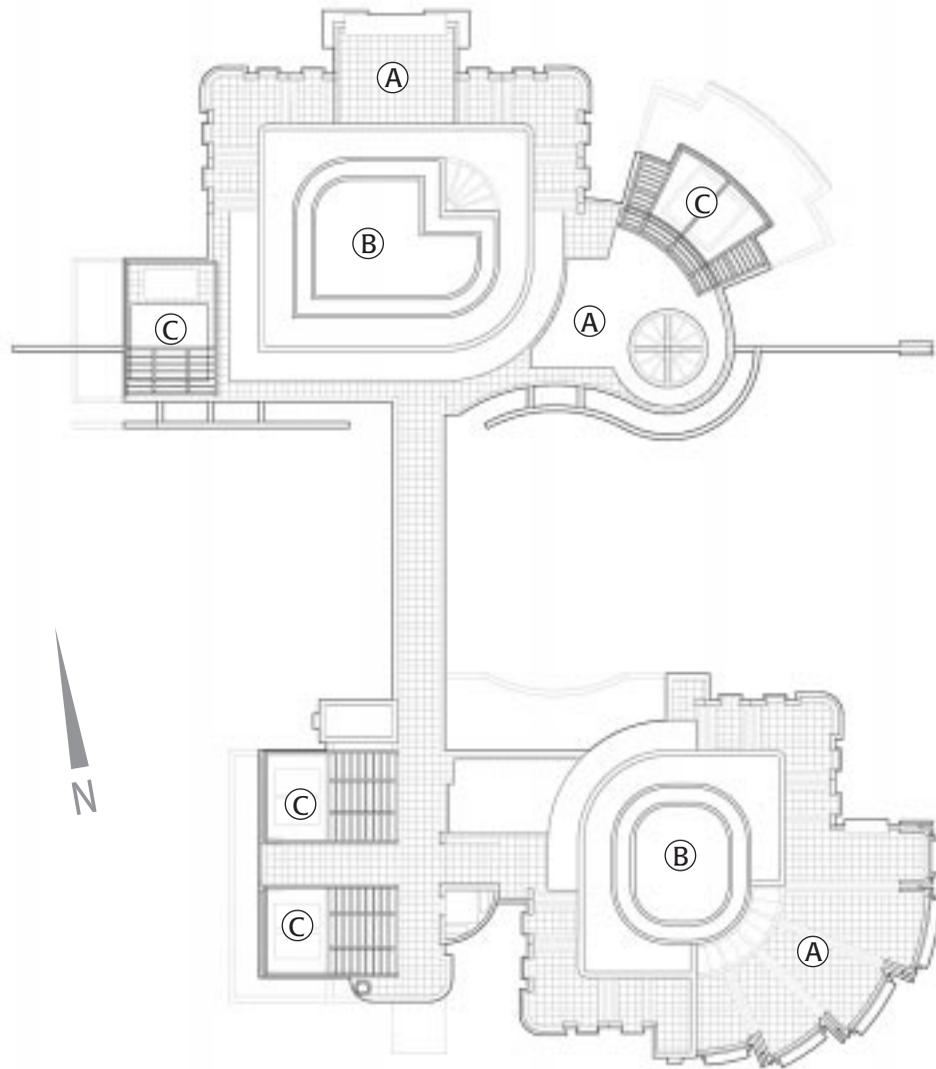
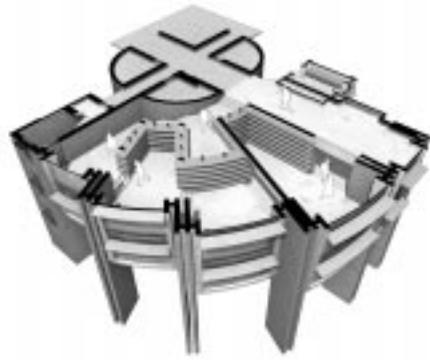
In the center of the south building is a large open studio space for beginning students. Most architecture curriculums are more group oriented in the beginning, and move more towards a more private studio environment as they progress. There are three floors to the studio, each one stepping back behind the floor below to both form a balcony space, and to reduce the amount of shadow cast on the plaza to the north.

On the west side of the south building are large, unfinished, industrial rooms intended to be used for wood and metal shops, large-scale modeling and full-scale staging. This

Fourth Floor Plan

above: 3d models used for analysis and presentation

3d model showing plan cut through third floor.



Roof Plan



Perspective



Perspective

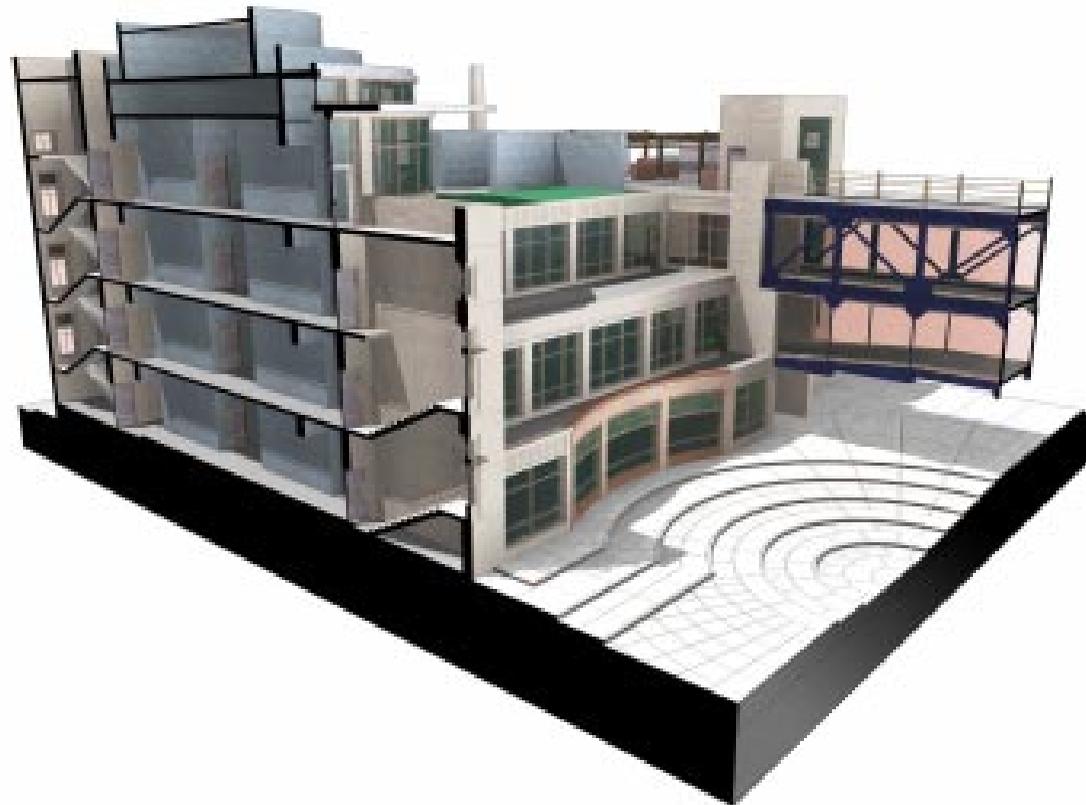
space is adjacent to a loading dock at the south entrance next to the parking lot for unloading materials. There are small balconies at the west elevation on the upper floors of this area for placing models to dry, and for spraying glues and other chemicals. The west elevation is adorned with exposed I-beams and is intended to look very industrial.

On the opposite end of the south building, facing the water, is the library. The bottom floor of the library is open to the public, and is for use as a café and architecture supply store. Above that is the private library space. The library is a curved space that spreads out along the river vista. It has its own discreet circulation, which is integrated into the structure. It consists of stairs that spiral around the interior of the library and interlock with the shelving system. The changes in levels of the floor mimic the changes in the levels of the shelves, and act as one. The fenestration is divided by concrete piers that are in line with the stair system. Between each pier is a desk that is integrated into the enclosure, so that readers may enjoy their books while looking out on to the Potomac River.

- A. Roof Garden
- B. Service Cores (2)
- C. Mechanical



○ *East Elevation* _____
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



○ *Section through South Building* _____



○ *West Elevation* _____



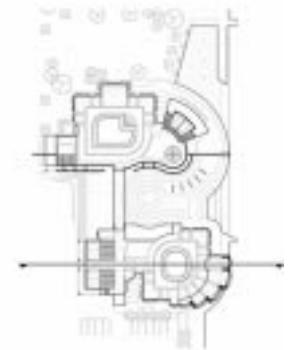
○ *North-South Section facing West* _____



○ *South Elevation*



○ *North Elevation*



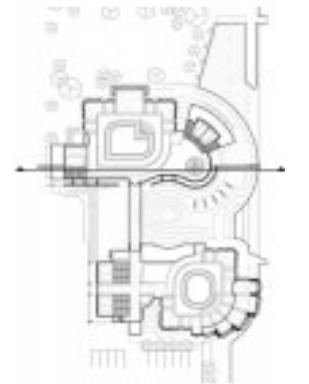
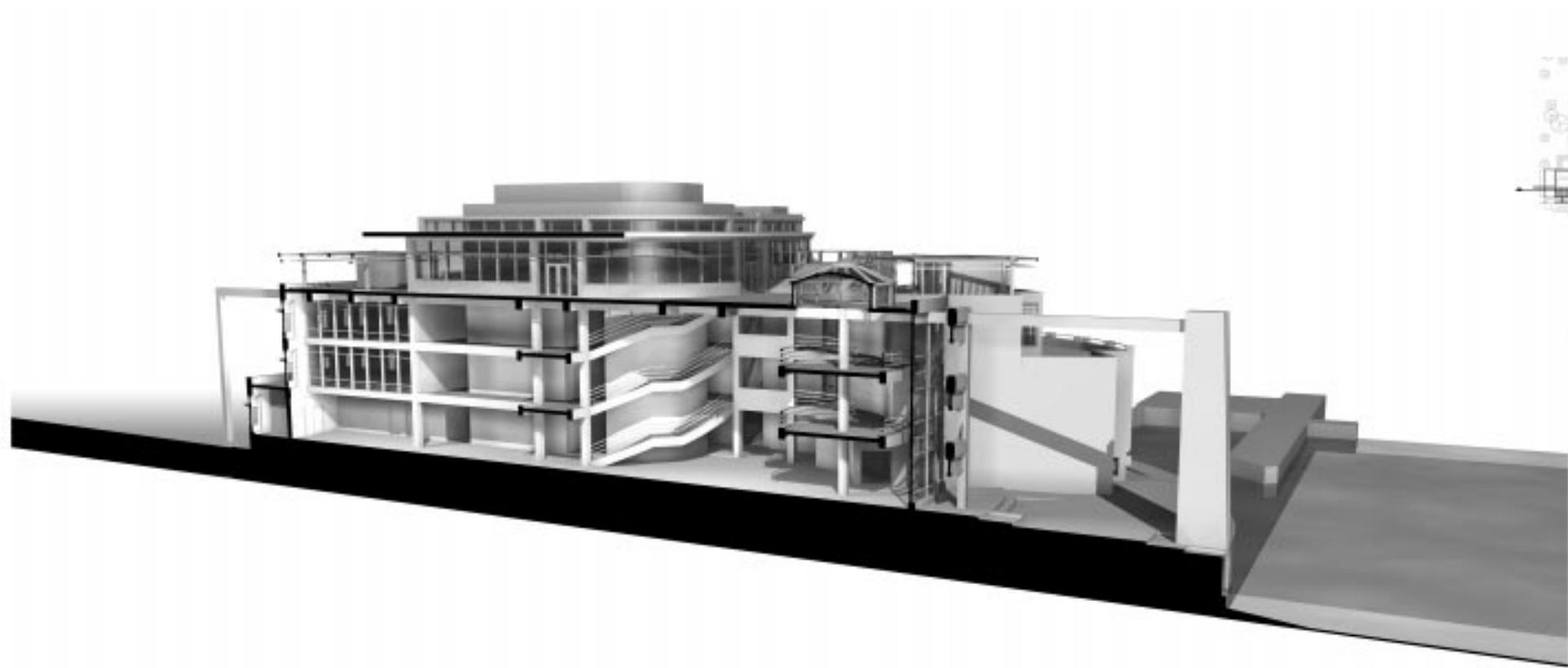
○ *East West Section*



○ *South Elevation at Plaza*



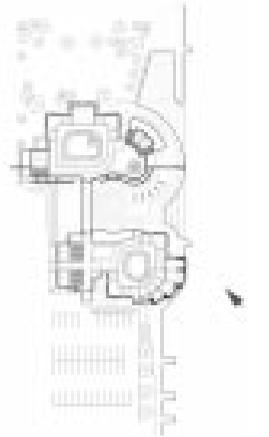
○ *North Elevation at Plaza*



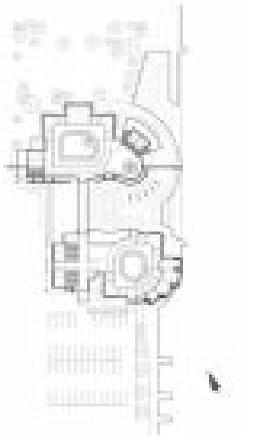
○ *East West Section*

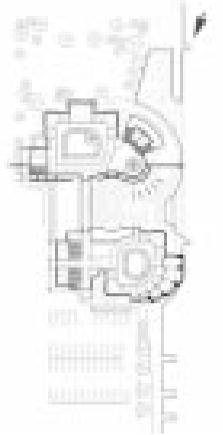


○ Perspective

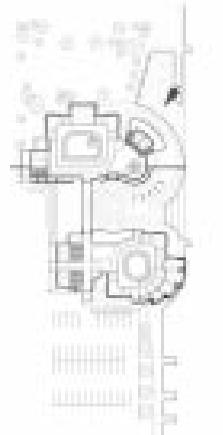


○ Perspective





○ Perspective



○ Perspective

○ Perspective



○ Perspective





○ Perspective



○ Perspective

○ *Perspective*



Postscript

It is of the utmost importance that we learn about the design process in a thesis rather than obsess over the product. Students should concentrate on developing their analytical and problem-solving skills, rather than try to create an object of art. We should all learn how to define requirements and restraints for a design project, and how to prioritize them so that we can find the best way to tackle a large, complex design problem. Students and Teachers should work together to make sure that a project is well defined before it is started so that solutions can be easily tested for validity.

An artist is only as good as his process. No amount of raw talent or finesse will ensure everlasting victory in the design world. An artist who understands the design process can apply it to any problem and always come to a solution that is sensible, simple, and elegant.



○ *Perspective*

Vita

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Education

Master of Architecture
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 1996-1999

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 10 best Flash Sites, Create Online
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