

Four Walls: Transformation and Assemblage

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INTRODUCTION

This work is founded upon the belief that architecture must acknowledge its interdependent and collaborative role in building the city. The rural landscape, its preservation and furtherance, is seen as the complement and partner of building the city well.

Four Walls is the first architectural design project students encounter in the course of a three-year undergraduate studio sequence. It follows and is founded upon two months of creative analysis of public, collective space at the scale of the campus, the city, and the city precinct. The objective of deferring architectural design for the first two thirds of the semester - focussing first on the broader relationships between a settlement and its attendant landscape - is so that the building may be seen as an integral, fully related part of the public space to which it belongs. As such, it is understood not discretely, but in relationship. The walls which define the spaces of the city, the block, and the building are understood as coincident, (see Fig. 1). Four Walls is a program for a building project designed to further this understanding of architectural space as connective - as made by independent but relating elements. The program for this project is invested in the walls, rather than the rooms. The rooms are then seen to emerge from the manipulated interactions of these layered and often occupiable walls. The definition of two major volumes and the articulation of a primary spatial path complete the program components.

Through a directed process of scalar, programmatic, and material abstraction and transformation, students fuse the spatial lessons of the city into a moment of intense synthesis: the building. Students may think of the building as a city museum, institute, gallery, or archive. Its specific institutional identity is not as important in this case as its function of furthering a critical understanding of the city. Thus a high degree of creative interpretation is required as the project advances from the small scale composition of program elements, to a conceived series of occupied rooms. The program is intentionally abstract, ambiguous, and open to student interpretation, both in terms of the listed elements and their interplay.

FOUR WALLS

**wall'wol/n 5: a material layer enclosing space
(as defined by Webster's Collegiate Dictionary, Tenth Edition)**

Walls bound, enclose, delimit, define. Four walls make enclosure; make the cell.

This project and the ones that precede it interpret the wall not as something that blocks, but as something that connects. While it bounds, it does so by describing a seam between different spatial

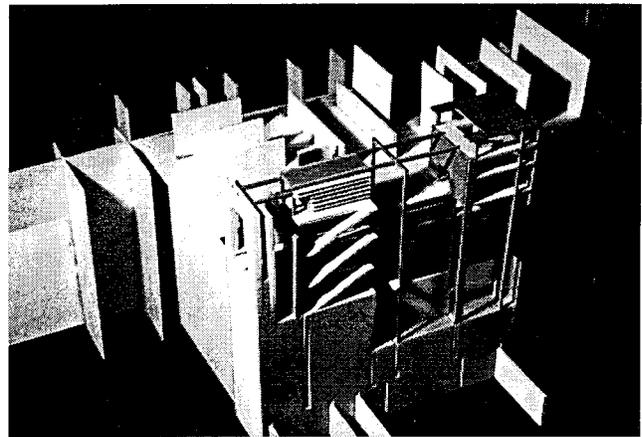


Fig. 1. Preliminary building model in site context.

conditions, rather than by describing separation and disjuncture. The four walls which comprise this project connect through different types and degrees of porosity. They are constituted of mass, aperture, and line.

The "Wall of the City" is constituted of mass and aperture, (see Fig. 2). It is a wall of passage, pause, threshold. This wall defines entry. It is not simply a wall but rather a place in between, a transitory moment between different conditions (outside and inside, public and semi-public, light and shadow). This wall is occupiable and serves the function of vestibule. It is also the wall shared with the city, defining space within the building and helping to define the space, character, and scale of the street corridor. This wall is the element which defines the connection between these two conditions.

The "Wall of the Surveyor" is constituted of line; it is characterized and ordered through rhythm, repetition, meter, and proportion, (see Fig. 3). This wall portrays the city as a repetitive system of lines which represent the order and increment of habitation. With this wall, the particular spatial characteristics, scale, and meter of the city are described and recorded. Some students have designed this wall as a marching frame which holds panels inscribed with maps of the city: wall as gallery. For others, the repetitive structure of urban fabric becomes the structure for the building.

The "Wall of Books" is constituted of mass - fundamentally, it is a wall which holds, (see Fig. 4). Characterized by density and thickness, this archival wall allows habitation and storage. While this wall usually is designed to hold the written records of the city, it also may hold corridors of both horizontal and vertical circulation, individual reading carrels, and service functions.

The "Wall of Light" may be constituted of mass and aperture, or

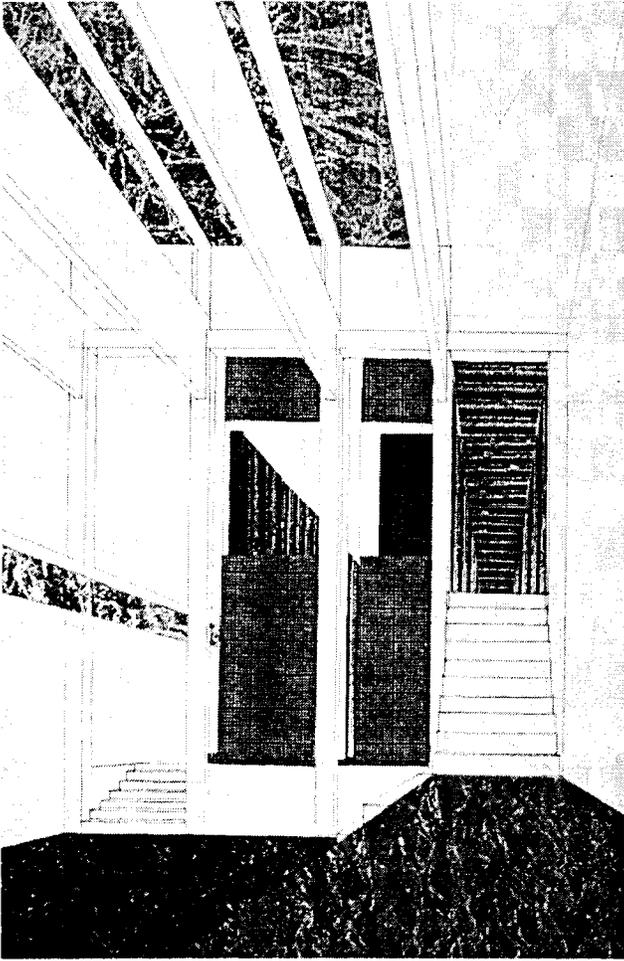


Fig. 2. Collaged perspective of building interior — Wall of the City.

line, (see Fig. 5). It exists between two distinct territories: light and shadow. This wall actively affects the quality of light within its physical dimension, such that it acts as a transformational device in this regard. The light comes in and is changed by the wall. Students sometimes design a strong relationship between this wall and the Wall of the Surveyor, such that in some cases they become a composite wall. This wall often turns the corner of the ceiling plane and begins to structure the roof.

Students are advised that a direct relationship should be made between at least one of the walls with each of the volumes. Garden or courtyard space fills the gaps between the interacting elements and volumes. Students are asked to think of the walls as articulated layers which may hold corridors of occupiable space between them. They are also reminded that zones of threshold and transition always mediate between distinct spatial conditions and built elements. It is emphatically stated that there should be interaction, overlap, and interweaving among all the elements of the program. They are not discrete.

PROCESS

Building the Site

The first step of the design project following analysis of the city, is to identify and construct an abstract spatial representation of the site through drawing, (see Fig. 6). In the cities studied, the basic unit for the city's structure is the block. The city block can take on numerous configurations and scales which reflect various values:



Fig. 3. Building model — Wall of the Surveyor.

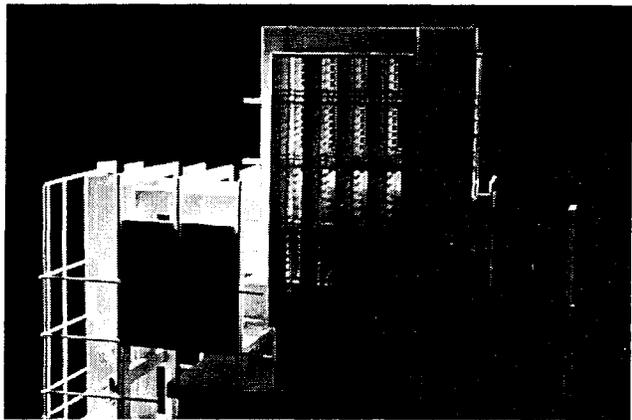


Fig. 4. Building model — Wall of Books.

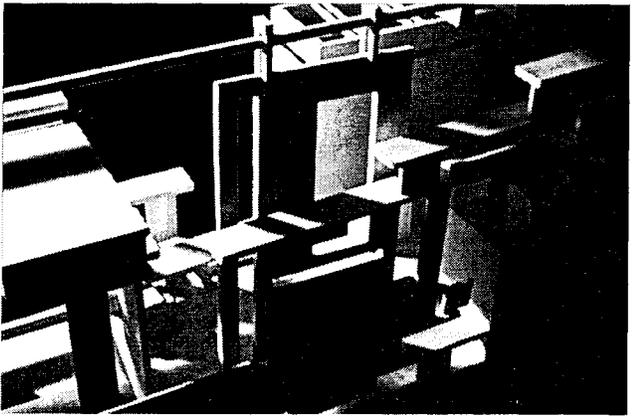


Fig. 5. Building model — Wall of Light.

privacy, participation in the public realm, autonomy and continuity of the habitation of the block, among others. The block is defined in the case of the cities studied as the principle element of the urban field. The block is itself a composite form, made up of many discrete subsidiary elements: bearing walls, courts, porches, stoops, alleys, front yards, gardens, sidewalks, loggias. Within the block, the strategic juxtaposition of these elements creates a graduated range of spaces connecting the public street to the most private rooms within buildings. Thus, the block mediates between the public and private realm. Before the student can successfully participate in building the city by designing an intervention, a thorough understanding of the

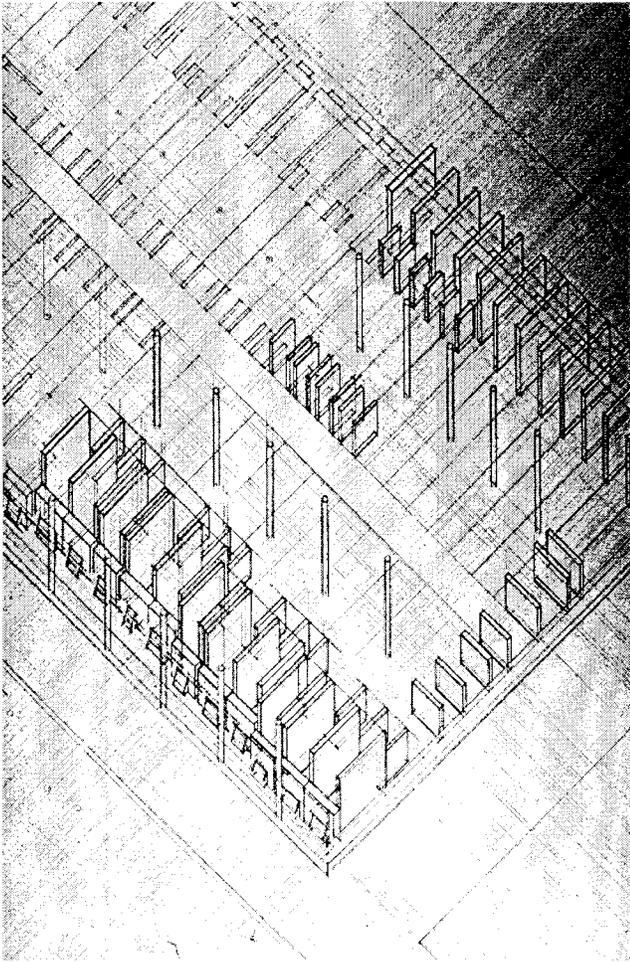


Fig. 6 Axonometric drawing of block structure, Richmond, Virginia.

existing structure of the block is critical. Since the “rules” of the block or block fragment selected are to be clearly stated, the more complete the block structure, the better.

Based on previous work studying the city’s precincts, students make a drawn abstraction of the block fragment they have selected as their site. They begin by outlining the overall elements of the block composition. These block elements include all sectional changes from the street to the building’s entry level, the screens or layers (trees, lawns, columns, porches, steps) which mediate these transitions, and the parallel bearing walls which structure the block. Students are asked to note whether these walls are singular and shared by adjacent buildings, or paired, leaving small alleys between the buildings which make the block. They are asked to record front, back, or side yard conditions which are repetitive: alley or mews conditions, interior block structures, such as garages, dependency cottages, courtyards, parking courts, and gardens. Students are expected to have an understanding of where their block fragment sits in the city relative to solar orientation, to the nearest urban center, or to a major landform such as a river or hill. Notes to this effect become part of the drawing.

Transforming the City

The next step of the process involves the construction of a series of transformational models. Using their site as determined by the axonometric drawing of their block fragment, students are asked to make a series of diagrammatic models of some spatial relationships

and threshold conditions observed in the city. Each model abstracts a specific series of spatial relationships found in the city or in a part of the city and condenses these formal and compositional qualities into the dimensions of width, depth, and height dictated by the slots the students have selected and recorded.

Students are asked to represent, at the building scale, the distinct systems analyzed in the city:

1. The Landform Armature: In their city studies, this term referred to literal topographic and landscape form; here, it refers to a subtractive approach to space-making. Elements might include sectional changes, stairs, ramps, sculpted wall mass, for example.
2. The Urban Armature: In their city studies, this term referred to the system of streets and public spaces; here, it represents the system of circulation through the building.
3. The Texture of Urban Fabric: In their city studies, this term referred to the material mass of the city: its repetitive buildings, its singular institutions, and the texture created through landscape of parks and tree-lined streets. Here, it represents the additive approach to space-making characterized by repetition of planes, columns, and frames.
4. The System of Spatial Joints and Connections: These joints and connections are the places of overlap and mediation of the systems described above. They articulate the threshold zones between space and space, space and mass, street and building boundary. They negotiate edges, openings, and passages. The models clearly demonstrate an interlock of the first three systems described above, through the system of joints and connections.

Assembling the Building

The third step generates the building in embryo. It is at this stage, and not before, that the program is introduced. The program is comprised of three groups of elements: the four programmed walls, two spatial volumes, and an architectural promenade. The four walls, discussed previously, are the Wall of the City, the Wall of the Surveyor, the Wall of Books, and the Wall of Light. The two spatial volumes are A Volume of Center, cubic in form, which accommodates gathering with a centered point of focus; and A Volume of Line, linear in form, which accommodates gathering with a directional focus. The Architectural Promenade is the articulated spatial sequence through the building which engages all four walls - the primary, if not sole, route through the building.

Drawing from the spatial lessons of the selected site block, and the spatial relationships and transitions found in the city, students compose and arrange these programmatic elements in a series of small models, designed to fill the volumetric field of their selected site, (see Fig. 7).

Multiple repetition, a high degree of craft, and a fluid manifesting of the spatial idea characterize the making of these initial study models, described as “no bigger than your palm.” Varied attempts at spatial and scalar transformations are undertaken quickly and loosely. From this series of initial study models, students develop their project through larger scale studies. From these tiny compositions, based on various abstract spatial conceptions drawn from the urban context, the students reverse their lens of observation. They move from seeing the building as the mass and surface which makes urban space to seeing their building from the inside, as a series of habitable spaces, formed by specifically articulated walls. This reversal is furthered by plan drawings which are not conventional, but designed to clarify and represent sequential movement. Fundamental also to this phase of study is the use of the collaged perspectival vignette. After laying out the framework of lines dictated by their model of a given view within their buildings, students experiment, through collage, with qualities of light, shadow, and material texture.

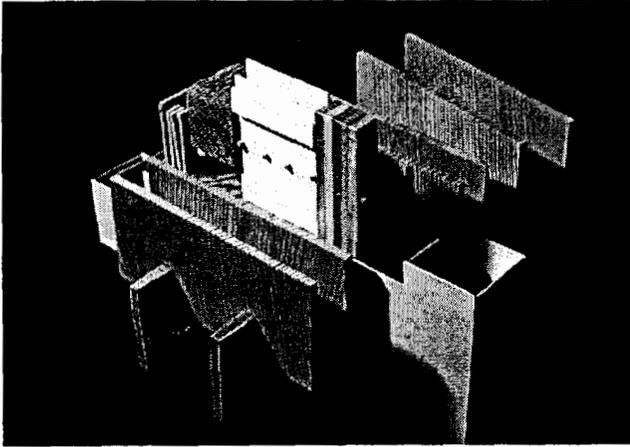


Fig. 7. 1/32" scale study model.

CONCLUSION

This project has yielded varied and complex spatial arrangements which in most cases greatly transcend the level of sophistication, compositional richness, and clarity typically seen in the work of a first year student, (see Fig. 8). Its success seems to be attributable to the emphasis placed on programmed, and therefore highly articulated, layered walls, and on a designed path of movement through the building. Some students respond with frustration to the deferral of the design intervention component of the semester's work, as well as to the deferral of the issuance of a formal program for the building. They seem to want to give the building a name, to pin it down, and to design their project from a tabula rasa condition. Students face a conflict between what they think they know and the uncertainties of a guided exploration. This curriculum intends to challenge the limitations beginning students have placed on what architecture is and on what they can do; it is the intention of this teaching to expand their vision of both.

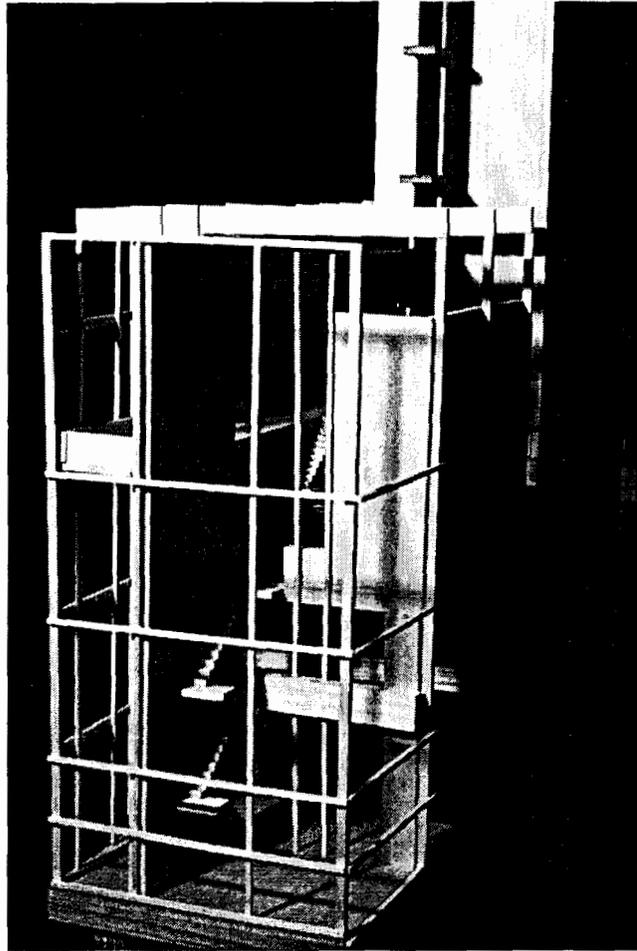


Fig. 8. Building model.