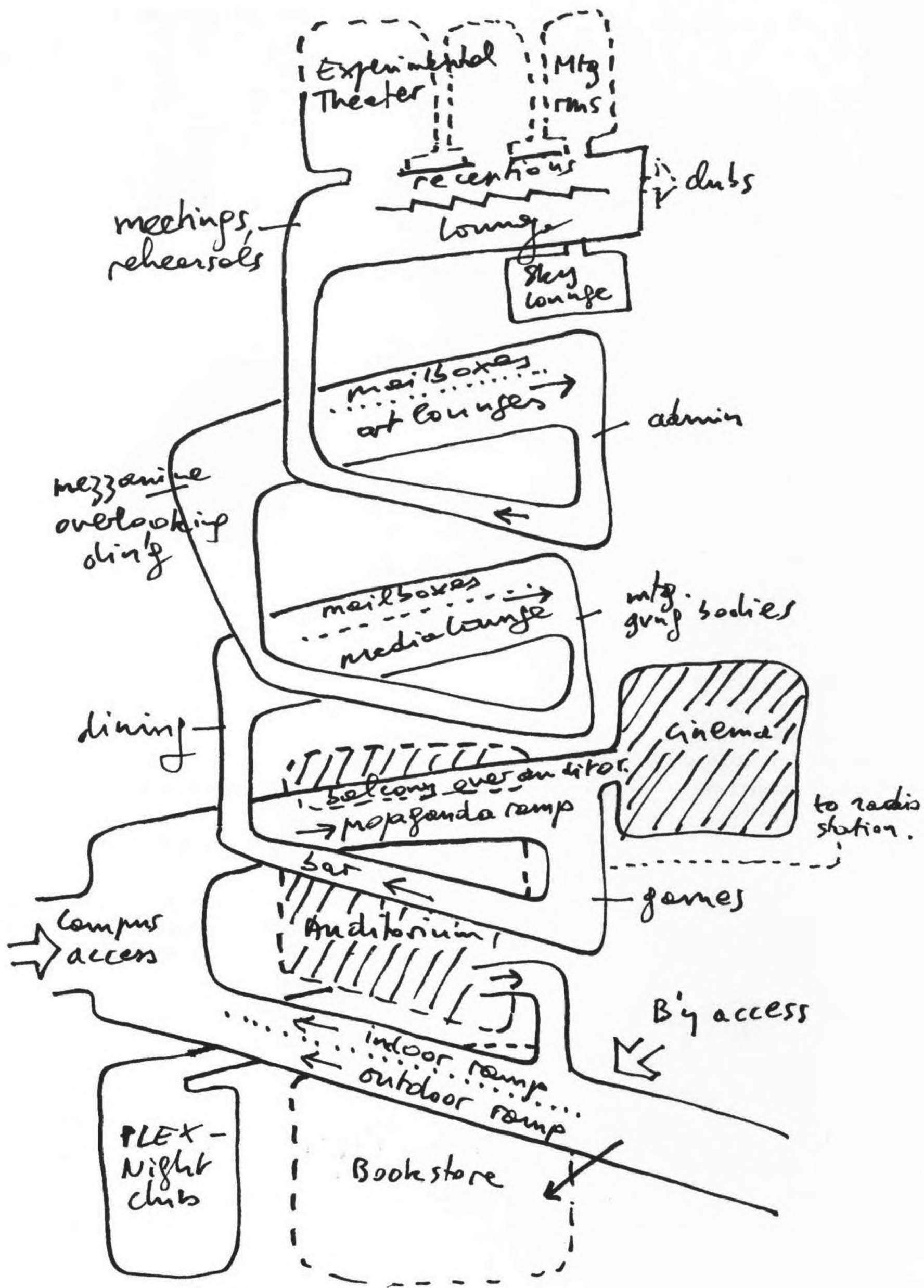




CONCEPTS MATERIALIZED

A CONVERSATION WITH BERNARD TSCHUMI

NEW YORK, NEW YORK
AUGUST 1999



Praxis

In your early writings there were implicit and explicit references to Marxist theory, revolutionary ideals and “guerrilla” tactics. In your 1975 article *The Architectural Paradox* you stated that, “If the architectural piece renounces its autonomy by recognizing its latent ideological and financial dependency, it accepts the mechanisms of society.” Do you still think in terms of the possibilities for a revolutionary architecture?

Bernard Tschumi

The texts you are referring to were written in the early 70s, at a time when there was a fairly strong political consciousness but quite critical of the rigid Marxist framework. I would never qualify myself as someone who had followed Marxist ideology but as someone who had had an enormous interest for political issues in the sense of how architecture can interact with the society in which it is built. Towards the late '70s, it became apparent to me that architecture was never going to trigger major political changes but had an ability to either slow down certain developments of society or to accelerate them in the same way that the legal apparatus of a nation can either slow down or accelerate social progress. I always felt that, depending on how you shape or locate the more public spaces of your building in relationship to the public spaces in the city, you can give an urban dimension to the building. In terms of Lerner Hall it was very clear that the building had to have non-programmatic areas or, say, spaces of appropriation. It could not be simply a building that would be organized according to a simple distribution of functions. Hence, the idea of the glass court, the hub, which is really that place which was to be appropriated, with the ramps which are just a little too wide to be only circulation, and the lounges which are just a little too public to be private lounges. The notion of the court as a mixing space so that you can have people on one floor talking about the Latin poems they read that morning, on another floor, students discussing some cyber-conference, and further down a rock concert in the party space. That heterogeneity of activities starts to play a role which is quite different from what you see within the classroom buildings in the rest of the University. It gives, in another sense, a political dimension that is very conscious in many of our projects, a constant in our work.

FACING PAGE

Tschumi's early sketch shows a heterogeneity of program placed on and along the ramps.



In many of your writings and early project descriptions you emphasize the ongoing nature of the investigation you present, calling them “works in progress.” To quote from *Event-Cities*: “the goal of these projects is neither abstract theory nor design, but on the contrary, a series of conceptual strategies aimed at establishing conditions for new urban events. The book starts in the middle of the strategic process, like a text that would start in the middle of a phrase. It is a ‘work-in-progress,’ in transition. Can and does the concept of the continuing process translate into a materialized project? And how do you design a building which anticipates and accommodates change over time, a provisional tactical architecture? Do you think the Lerner Center does this?”

Of course, every building takes on a life of its own, one that you can’t control. But is there a way to define an anticipatory architecture, to in fact provide a catalyst for the unexpected?

The notion of a provisional tactical architecture quite fascinates me. The more I am involved with actual building the more interested I become in the unpredictable dimensions of the use of the building: how it’s diverted from its original intentions. The strategic location of elements of the program—for example, placing the mailboxes on the ramps instead of in a separate post-office suite in the back of the building, or having all the lounges facing the ramps—is a way to charge the ramp space. It becomes the nerve center of the building, while all the rooms around it can be in a constant state of flux. Even the material of the building itself, the detailing in steel or in bricks, makes a big difference in terms of the way the building will develop over the years. I always say architecture is the materialization of concepts. But you could also say the reverse: a concept is the idealization of architecture. As Lerner Hall evolves, we’ll see how well it works and what kind of social uses or even subversions are going to take place.



LEFT
Stepped benches are placed opposite 6000 student mailboxes lining the ramps at the “Hub.”

We tried to provide for that possibility at Lerner Hall by ‘accelerating’; by putting the ramps, all the circulation, the lounges, and 6,000 student mailboxes in one place you make sure you get the critical mass of activities at the heart of the building.

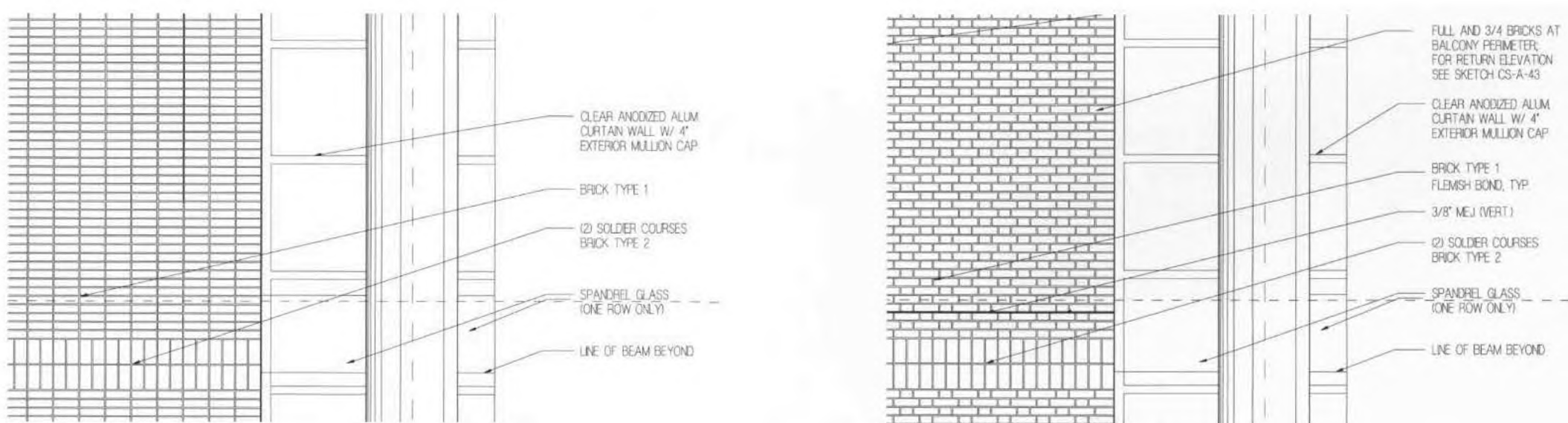
Walking through the building you constantly catch glimpses of people and other spaces through transparencies obliquely related to you. It appears as a sort of a labyrinth. It can be a surprise that subtle devices on the drawings, such as half-levels connected by ramps, translate into such powerful spatial effects. Is there anything about the realized building that gave you a similar shock or surprise?

Yes. First of all, I liked your example of the transparencies, which exist between the auditorium, the so-called TV lounge and the glass court, the ramps, and then the campus. We had to fight for this idea because many people at Columbia had a lot of doubts about it. But it was worth the thirty-five computer renderings that we did and the endless meetings. I think I considered most effects ahead of time and knew what it would feel like once built. One amusing exception though; I spent a lot of time strategizing about reflections versus transparencies, specifically about seeing campus through the auditorium picture window. The glass is transparent during the day, but at night it reflects the ramps above, which is great, and was unexpected.

Actually, I remember the meeting in which we had finally agreed with the client about everything, but there were two bones of contention: the glass opening between the auditorium and atrium and the use of Flemish bond versus stack bond on the bricks on the Broadway facade. In the case of the brick we said we would use the same material specified by McKim, Mead and White but with a slight twist. The glass blocks were in a stack grid and the ground-faced blocks inside were also stacked, so we were going to use a stack bond with the brick as well. But Columbia insisted that McKim Mead and White had used a Flemish bond, so eventually Flemish bond was what was done. We won one; we lost one. (laughs) Then, also, there are certain things we thought were terribly important, but now that the building is finished we realize they were not crucial for the building. We would be fighting for several weeks with the client, the budget, the project team, and the contractors. We could have used that energy and time to work on other parts of the building.

...choose your battles.

Choose your battles. Being both an insider and an outsider—an insider as the dean of the school, having close links with the administration and the University, and an outsider as an architect hired separately—meant that I knew how far we could go and how far we could push. I think Columbia got a better building out of that.



ABOVE

In the bid set of the construction documents brick on the Broadway façade was shown in a stack bond pattern. The final drawings show a revision of the pattern to flemish bond, in response to the client's requirements.



In terms of things that were entirely under your control during this design process but not issues related to contractors, what one thing would you change based on your response to the final outcome of the building?

I'm asking myself whether it is too early for you to ask this question. You may have to wait another six months. I can tell you the things where I've been wavering, hesitating...I have a whole series of sketches showing several logics for the campus-facing corner of the building. We tested every one of them. Things linked with certain things that we found out only in the process, and were—as you say—not related to the contractors. I might have used a slightly different strategy, but I don't have the answer because I also knew the drawbacks. There are certain things that this ending of the corner achieves that another way would not achieve. That's where you learn that architecture is not about...In certain cases, you can reach perfection. I do think the facade on Broadway is as good as anybody could get. But the corner that fronts the campus—I was optimizing, and optimizing is statistical; you never have one hundred percent. It's like those impossible games where if you solve one problem you unsolve another. The corner totally helps the reading of the ramps. If you plan it differently, it kills the ramp, What I find interesting in design is the implication that you have to design something not quite right in order to make something else absolutely right. I like the idea of discord or dissonance applied to architecture. By the way, I was still doing alternative sketches three months ago, during the final days of construction.



ABOVE
Tinted curtain wall and a brick column front the campus at the northeast corner.

Under your leadership, Columbia University's GSAP was the first architecture school to fully implement paper-less studios and has become the largest lab site for Silicon Graphics computers on the east coast. It is evident through the representations of the projects your office is producing that you use computers extensively in your practice. Has the computer allowed you to get beyond what you have referred to as the "prison-house of architectural language"—that is the language of the conventional modes of architectural representation such as plans and sections? More generally, how do you use the computer in your practice? Do you feel like you've been able to use it as an investigative tool as well as representational tool?

In *The Architectural Paradox* you quote Spinoza via Lefebvre as saying "the concept of the dog does not bark," going on to say that "in the same way, the achievement of architectural reality (building) defeats architectural theory while at the same time being a product of it." At this point in your career, if you had to choose between the three modes of writing, graphic representation and building to best define your intellectual practice to date, which would it be?

Ninety percent of the time I feel the computer gets you stuck even deeper into that prison house of language, since it carries within its software even more restrictions than older modes of architectural representation. This is true with simple line drawings, but it's especially true in their 3-D representational capabilities. Softwares carry all sorts of cliches and you need to subvert the software in order not to fall into those categorizations. It's interesting that you picked up on "the prison house of language." I would say that, in many ways, it's actually worse. Often it's not progress, it's actually regression. Fortunately, there is the other ten percent. With the computer you can start to look at things in conceptually driven ways and arrive at new architectural concepts and new spatial experiences. We must make the distinction between so called real space and virtual space because on the one hand computers can help you develop real spaces that will eventually be built which had no precedents, certain geometries can be calculated with a speed that was unthinkable twenty years ago. That's quite exciting. There are two aspects to the design of virtual spaces, one which you see in great images in the magazines, but is simply paper architecture. At the moment they are fairly new, therefore we're all excited. Then we see them built out of paper, chewing gum, and sheet rock; it doesn't quite work. What you can do today with a computer is far beyond what the construction industry can do at this time.

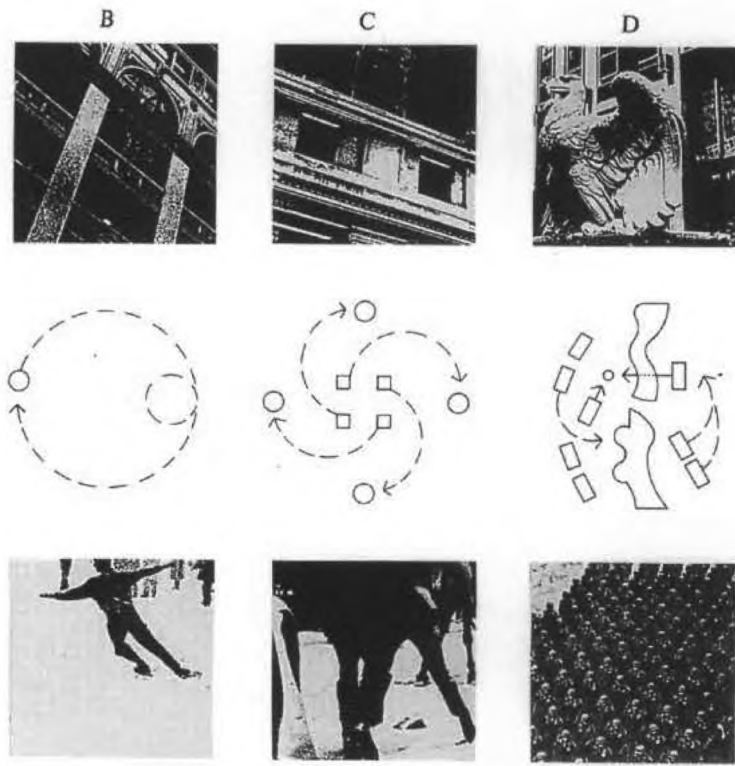
On the other hand, virtual spaces may not be actually physical but may be spaces which are totally projected spaces. Hani Rashid has engaged this type of research at Columbia: defining spaces both through real walls and through virtual imagery. He projected digital images on hanging mesh and very thin fabrics suspended in space and depending how that fabric received light, and how the very cinematic changing images and changing light affected the fabric, it would be alternately be transparent, or translucent, or opaque. It had the power to create or trigger totally different spatial experiences and therefore also ways to use that space. Maybe, it's simpler to change the perception of architecture radically, through light, through a digital mode, as opposed to going into mere shape-making.

That's a very easy question to answer, unfortunately. Building has taken over to such a degree that I sometimes find it upsetting. Every year I spend less time writing or drawing because building is such a labor-intensive activity. The pressure of building literally devours your time. Designing is a very energy-driven activity, you get a rather lot of adrenaline out of it. When you write something, it's a very different sensibility; you have to take your distance and you have to occasionally have the luxury of spending four hours being stuck and not being able to get to the next idea. As an architect builder, you don't have a choice; you have to produce results non-stop. And you get addicted to the pressure. It gets hard to change pace.



Earlier, you mentioned that you feel that there is a reciprocity between your ideas and buildings and that they feed into one another, back and forth. With the time constraints you've talked about when you're involved in building, do you feel that there is time for your ideas to evolve?

Can you clarify what you mean by that?



The ideas are constantly evolving in one's head. Clearly there are right now major themes that I can sum up in the form of headlines. One theme that has been significant in my work for a long time is the use of vectors of movements as a way to intensify activities in the building. A fairly recent idea is to start to look at the envelope as a crucial part of the investigation. A good expression of this concept is the Rouen project, with its two envelopes—the interior envelope and the outer envelope—and the movement between them. I think that's something which gets conceptualized in the project as well. Another theme is the notion that buildings are generators of activities. These are ideas that, if I were not designing them, I would be writing them, but of course the logic of writing is not the same as the logic of building. You can push a concept much further when you write than when you build, which gets us back to "the concept of the dog doesn't bark."

At the time when I quoted Spinoza, I said that the concept of space is not the experience of space. The experience of the Gothic Cathedral has not much to do with the very intricate geometries and sacred diagrams that are hidden in it. It may instead have to do with the darkness and the dampness, the sound, the acoustics. There are always certain parts of a concept that cannot be conveyed in the experience and there are always parts of the experience which cannot be conceptualized. What I have also found fascinating in the context of architectural debates and polemics is that people always want you to stand on one side or another, on the side of concept or on the side of experience.

LEFT
A plate from Tschumi's 1977 Manhattan Transcripts, showing the tripartite notation and the use of photographs of New York City

Theory and building?



If architects explain certain theoretical concepts to the press, whether it's architectural magazines or the dailies, the media will often say, "those theoretical architects, what pretentious nonsense they are writing about." They feel architects should be architects and theorists should be theorists, but please don't mix the two...We're back to "the prison house of language." Society has its categories and whenever you try to transgress them you get in trouble. We get attacked on Lerner Hall, which questions another sort of categories. We've heard a fair amount already from the conservationists who hate the glass wall. I get hate e-mails from them. I've also heard from progressive friends who say, "Bernard why did you give up and use bricks!" Eventually I have to express these contradictions in the work, instead of suppressing them the way most people expect you to. Brick versus glass is NOT the question.

In the *Manhattan Transcripts* you refer to starting with the site of New York City, a “real place,” and that the actions transcribed are “real actions.” The architectural act/intervention develops an abstract system of notations that discovers a new internal logic of the sequences. Could you say that in the architectural project of Lerner Hall, also sited in the real place of New York City, the design process proceeded in the other direction, from the internal logic of movement to a place where “real actions” will occur? Are the diagrams and the system of notation that you developed in the *Transcripts* still a part of the way that you’re thinking?

Any answer I could give won’t be as good as your question. Of course there is a relationship between the movement diagrams in the *Manhattan Transcripts*, the idea of space, event, movement—the tripartite notation which found other ways in other work—and Lerner Hall, including a way to use normative photography. In this case using McKim, Mead and White the same way as I was using the images from pieces of the city. In the last episode of the transcripts, or the 42nd Street part, I had transcribed existing buildings and transformed them or taken photographs of existing buildings and transformed the photographs using deformation. You could say that Lerner Hall is a deformation of McKim Mead and White. One of the reasons I eventually took a distance toward the *Transcripts* was that it could not be built form; it was drawn form. It followed the logic of the line, and not the logic of materials. But, then the way of using a most photographic reinterpretation of McKim Mead and White in the building but trying to do not out of sheet rock, but building it well—and by the way Lerner Center is damn well built. The photographic association with the *Transcripts* is an interesting parallel, but I also like the dimension that you have brought up by questioning the New York site. *The Manhattan Transcripts* of 1977 New York and now Lerner Hall of 1999 New York. There’s also a piece that I did a year later, in 1978, called the *Broadway Follies*, with a series of buildings with movement and distortion all along Broadway. Now I realize the parallel—Lerner Hall.

Coming back to the general idea of theory and practice... Not an insignificant amount of time and thought goes into the titling of a work. For us, choosing the name of this journal was no exception. We admit perhaps with some chagrin, that when we did so, it was a decision made without knowledge of the subtitle of *Event Cities* (praxis). Of course, when we “discovered” the coincidence, it was a happy accident. For us, Praxis denotes an inseparable simultaneity of theory and practice. However, in your writings it seems to signify a transformation or development of your architectural practice from theoretical investigations to material realizations.

You noted the distinction between praxis and practice. Praxis, of course, has its theoretical dimension, but practice is practice. Hence, yes, we are all aiming at praxis. We are back to “the concept of the dog doesn’t bark.” It’s very hard to bring the two together simultaneously. Occasionally, you can for a small moment; you’re just walking on that limit but then you fall to one side or the other. There are those magic moments when you are exactly on that line but there is no way you can be there twenty-four hours a day, seven days a week, twelve months a year. Generally, the way it works is that you navigate from practice to theory back to practice and so on. It’s almost the mode of expression that you use: one time you’re writing, one time you’re building, one time you’re drawing, one time you’re filming. It’s hard to have them all at the same time. There are moments, fleeting moments when this happens. But most of the time you’re stuck either with practice or with theory. The title of the journal, *Praxis* is, I think, the ideal state.





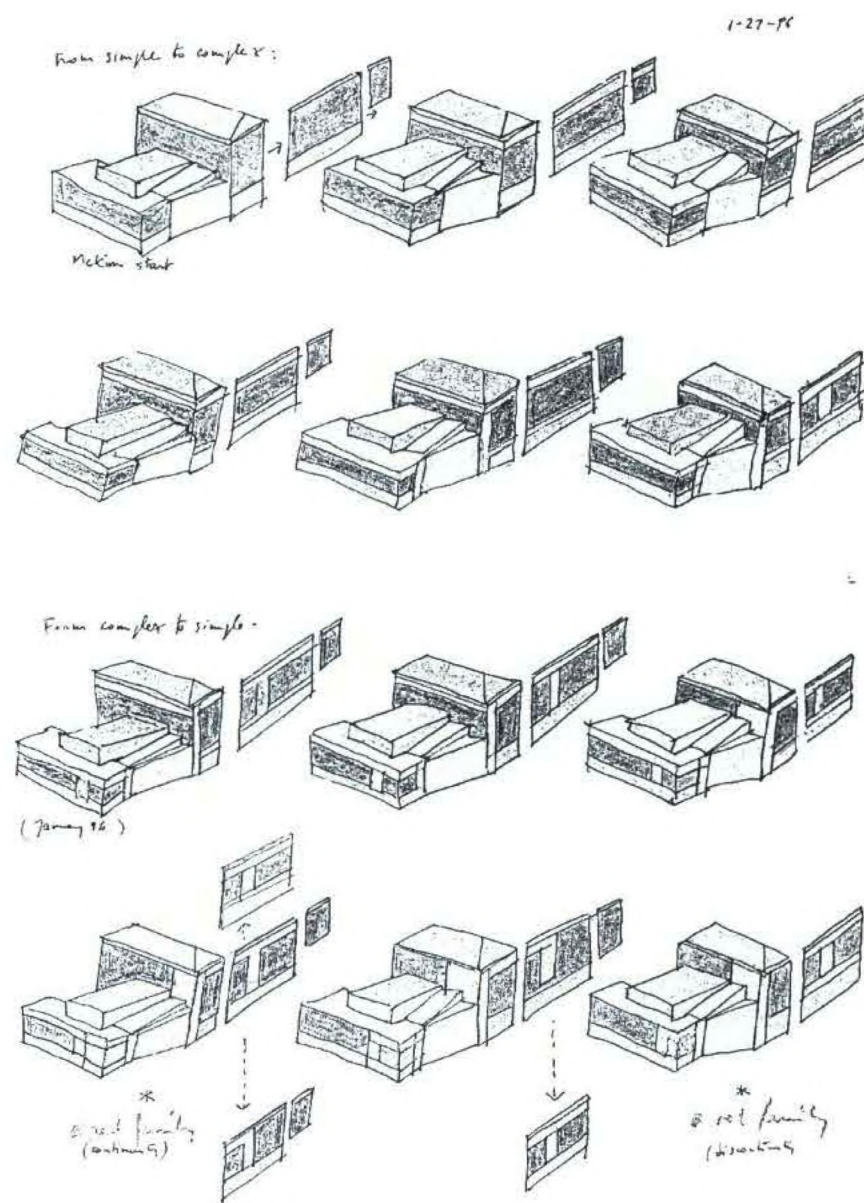
ABOVE
The most prevalent view of the building on campus is from the steps of Low Library.
BELOW
In the evening the lighted ramps relate in scale and effect to the glazed colonnade of Butler Library (left in photo.)



ALFRED LERNER HALL

BERNARD TSCHUMI/ GRUZEN SAMTON
ASSOCIATED ARCHITECTS

COLUMBIA UNIVERSITY
NEW YORK, NEW YORK, USA



ABOVE
Tschumi's studies from the schematic design phase indicate areas of brick, concrete, granite and glass.
BELOW (INSET)
An early scheme with the north facade entirely glazed was revised when it was determined that it wouldn't meet energy codes, even with double-glazing at both of the "bars."

Project Team

Bernard Tschumi Architects:
Bernard Tschumi, Tom Kowalski, Mark Haukos, Ruth Berkold, Megan Miller, Kim Starr, Galia Solomonoff, Richard Veith, Yannis Aesopos, Anthony Manzo, Peter Cornell, Jordan Parnass, Stacy Norman
Gruzen Samton Architects:
Peter Samton, Tim Schmiderer, David Terenzio, Liane Williams-Liu, Ken Hutchison, Jerzy Lesniak, Scott Broadus, Geoff Doban, Nick Lombardo, John Mulling, Nicholas Hedin, Cameron Lory, Jo Goldberger

Special Structures

Engineering (suspended ramp and glass wall):
Ove Arup and Partners, New York, with
Hugh Dutton Associates, Paris

Steel Structure

Severud Associates

MEP Engineers

Ove Arup and Partners, New York

Theatre Consultant

Peter George Associates/
David Harvey Associates

Construction Manager

Barney Skanska, New York

Contractor for Glass and Steel Ramps

Eiffel Constructions Metalliques, Nanterre, France/
New Jersey Window Sales Inc., New Jersey

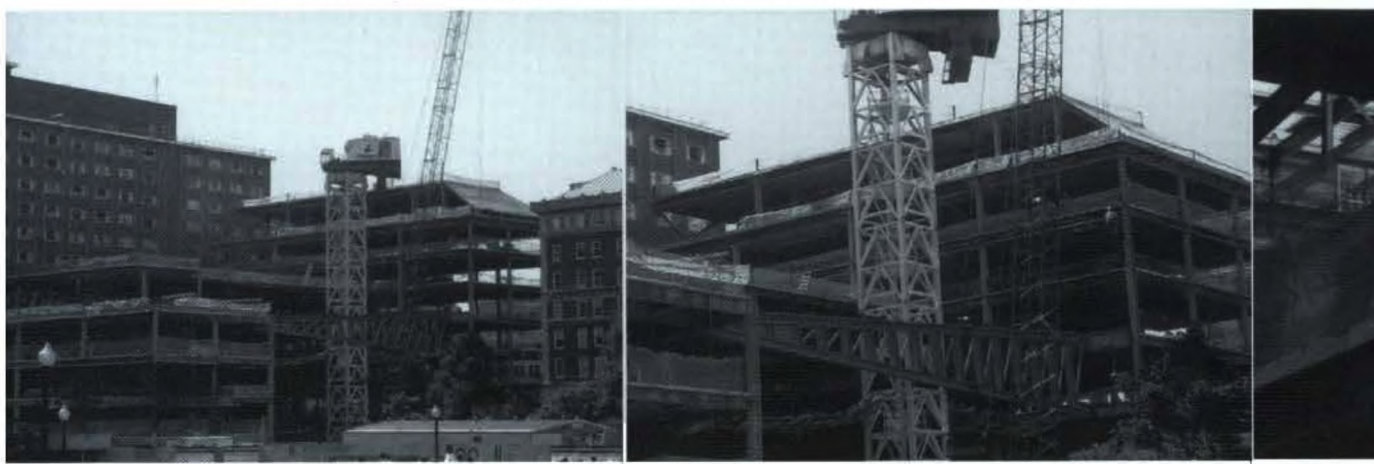
Design 1994-1995

Construction 1996- 2000

Gross sq. footage 225,0000

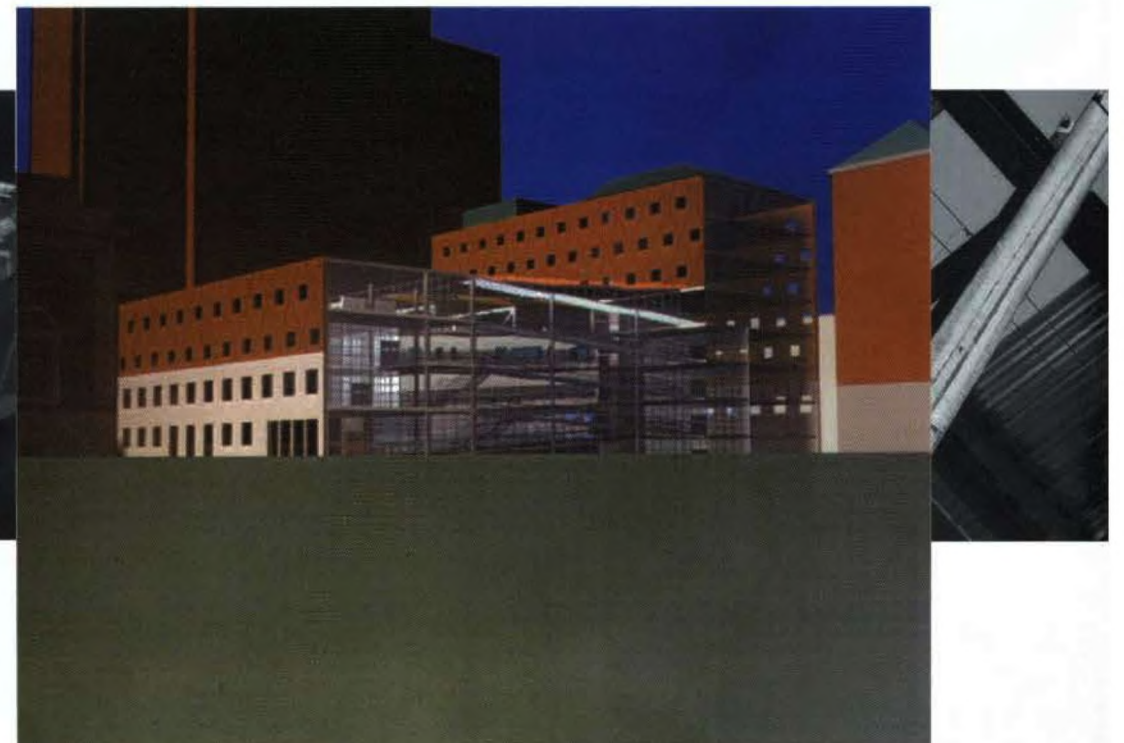
Projected Budget \$75 million

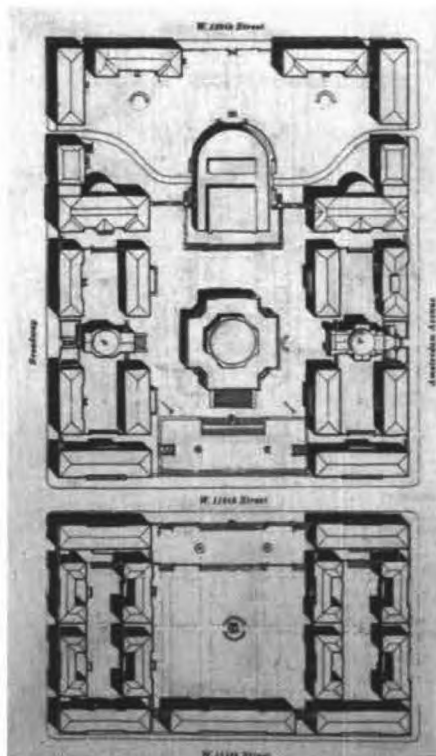
The crane used for the majority of steel erection, located within the footprint of the future "Hub," was engineered to hoist the 40-ton roof transfer truss into place.



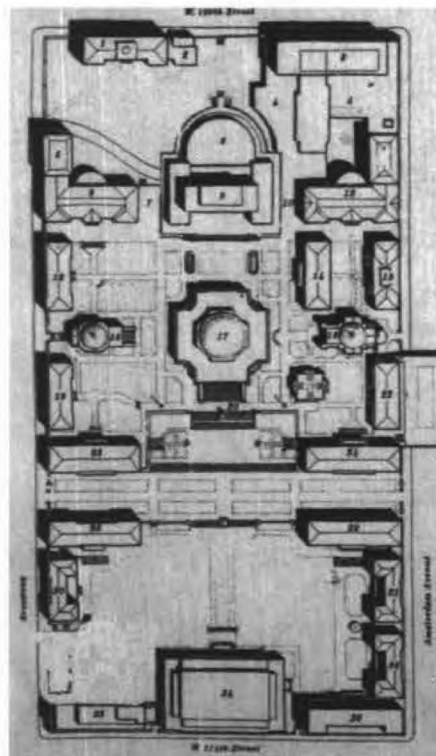
SEPTEMBER 1997

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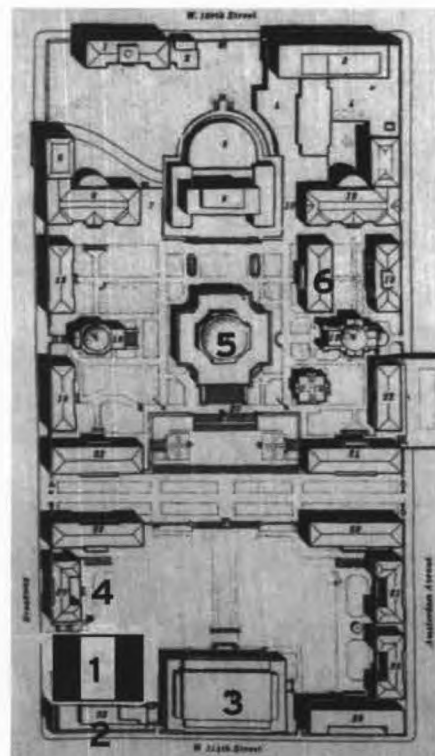




MCKIM, MEAD, AND WHITE
CAMPUS PLAN 1894



CAMPUS PRIOR TO LERNER
HALL 1994



CAMPUS WITH LERNER HALL
1999

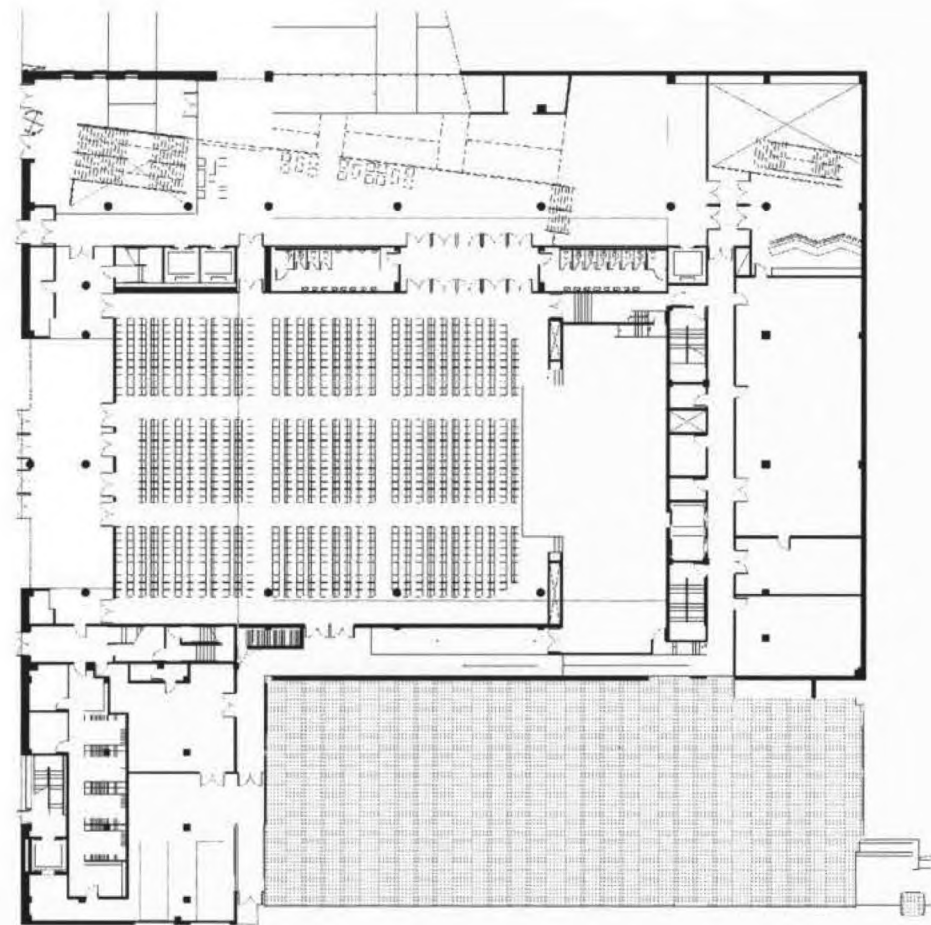


- 1 Lerner Hall
- 2 Carman Dormitory
- 3 Butler Library
- 4 Furnald Hall
- 5 Low Library
- 6 Avery Hall

ABOVE
Prior to Lerner Hall, the only building to occupy the inner row designated by McKim's campus plan was Avery Hall, home of the Graduate School of Architecture where Tschumi is dean.

RIGHT
The "bars" of McKim's layout, legible in the fifth floor plan, break down at the lower floors with the perpendicular volume of the auditorium.

INSET
The Broadway façade echoes the scale, materials and massing of the adjacent building.



PLAN - BROADWAY LEVEL

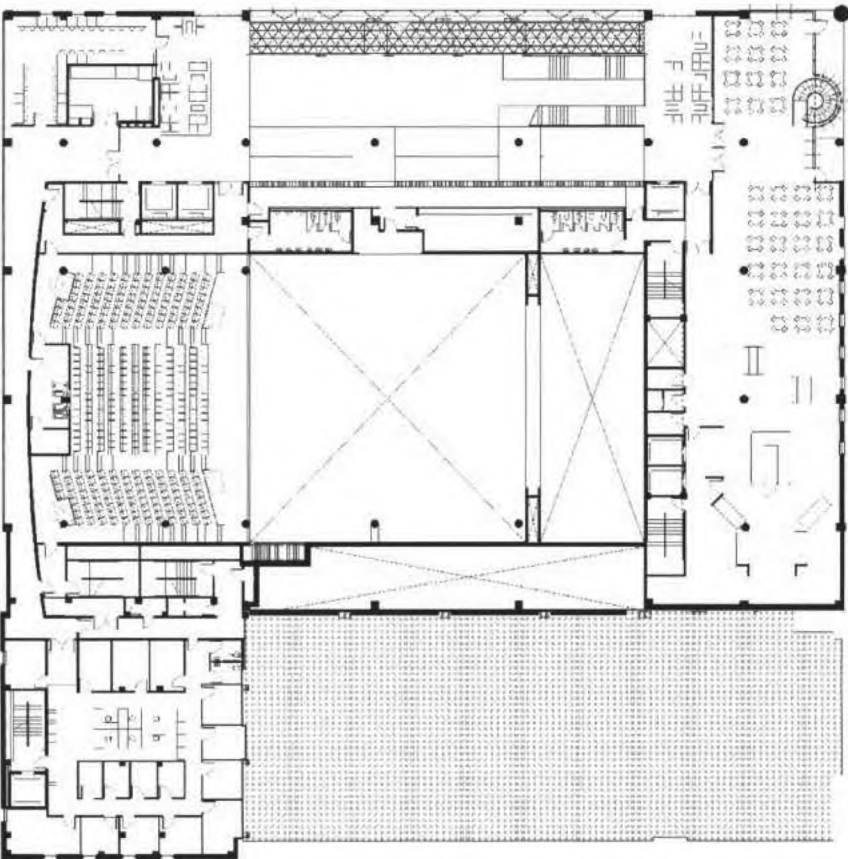


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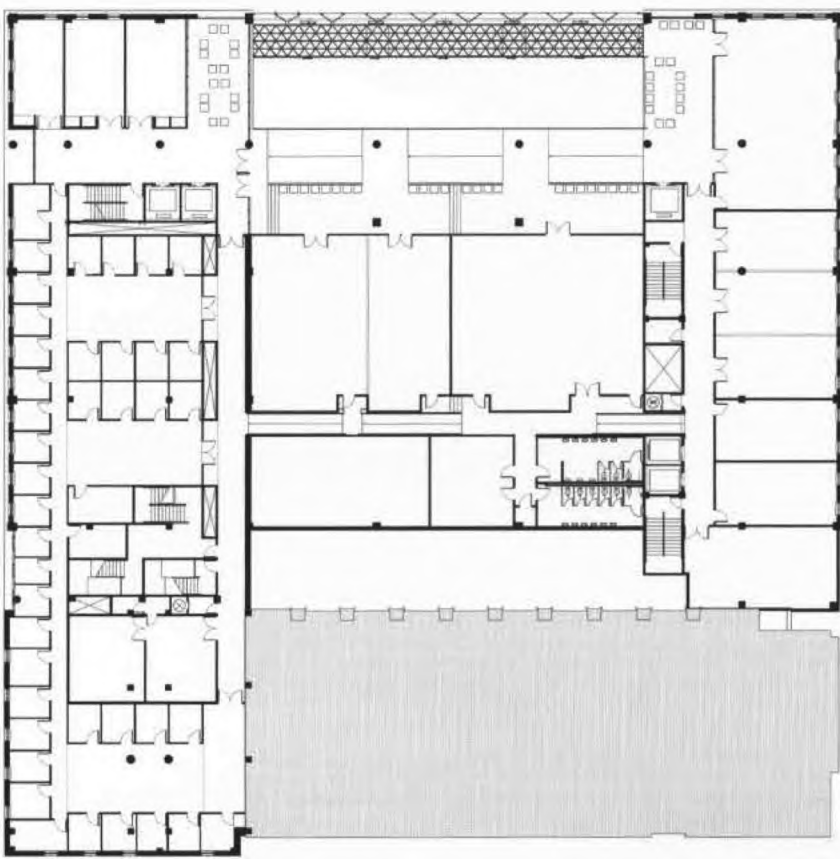
AUGUST 1997

When, in October, the largest pane of point-supported glass at Columbia University's new student center spontaneously shattered, a note was posted on it reading, "Is this the result of nickel sulfide inclusion?" Appended to this question were a series of comments by student passers-by: "It's your tuition dollars at work, fellow Columbians", "maybe, but it's also beautiful", "accidental art", and "typical of this building!"

While Bernard Tschumi might be the first to appreciate this evidence of student appropriation, the term "accidental" is ironic in relation to the long design history of Lerner Hall. The project began under a previous Columbia administration as a design study to renovate the existing student center, the 1959 Ferris Booth Hall. This initial study was carried out by Gruzen Samton Architects who, after a change in university administration, were asked to associate with an architect of international reputation. Though controversial because of his position as dean of the university's own Graduate School of Architecture, Bernard Tschumi was chosen for the association and the two firms jointly studied a more ambitious program of renovation and addition to the existing building. Ultimately, it was determined that the space required by Columbia's program was more than could be supported by the existing foundations of Ferris Booth Hall and the university accepted a proposal for a new building on the site.



PLAN - THIRD LEVEL



PLAN - FIFTH LEVEL

The broadway facade, designed to respect its position at the end of series of McKim Mead and White buildings, nevertheless had to be built by very different methods. Granite panels are held off the building on steel girts in order to achieve the sloping surface typical of the adjacent buildings.



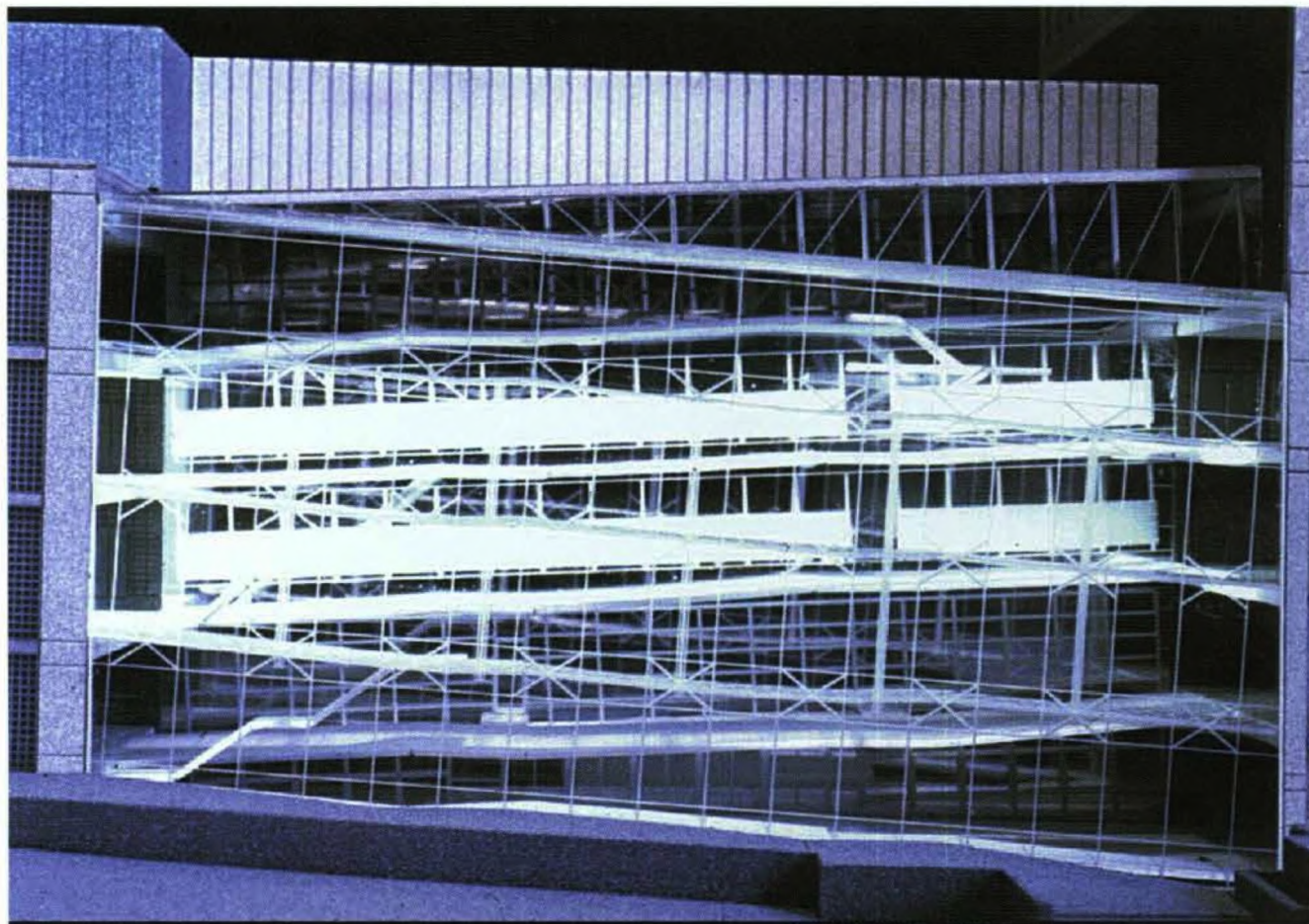
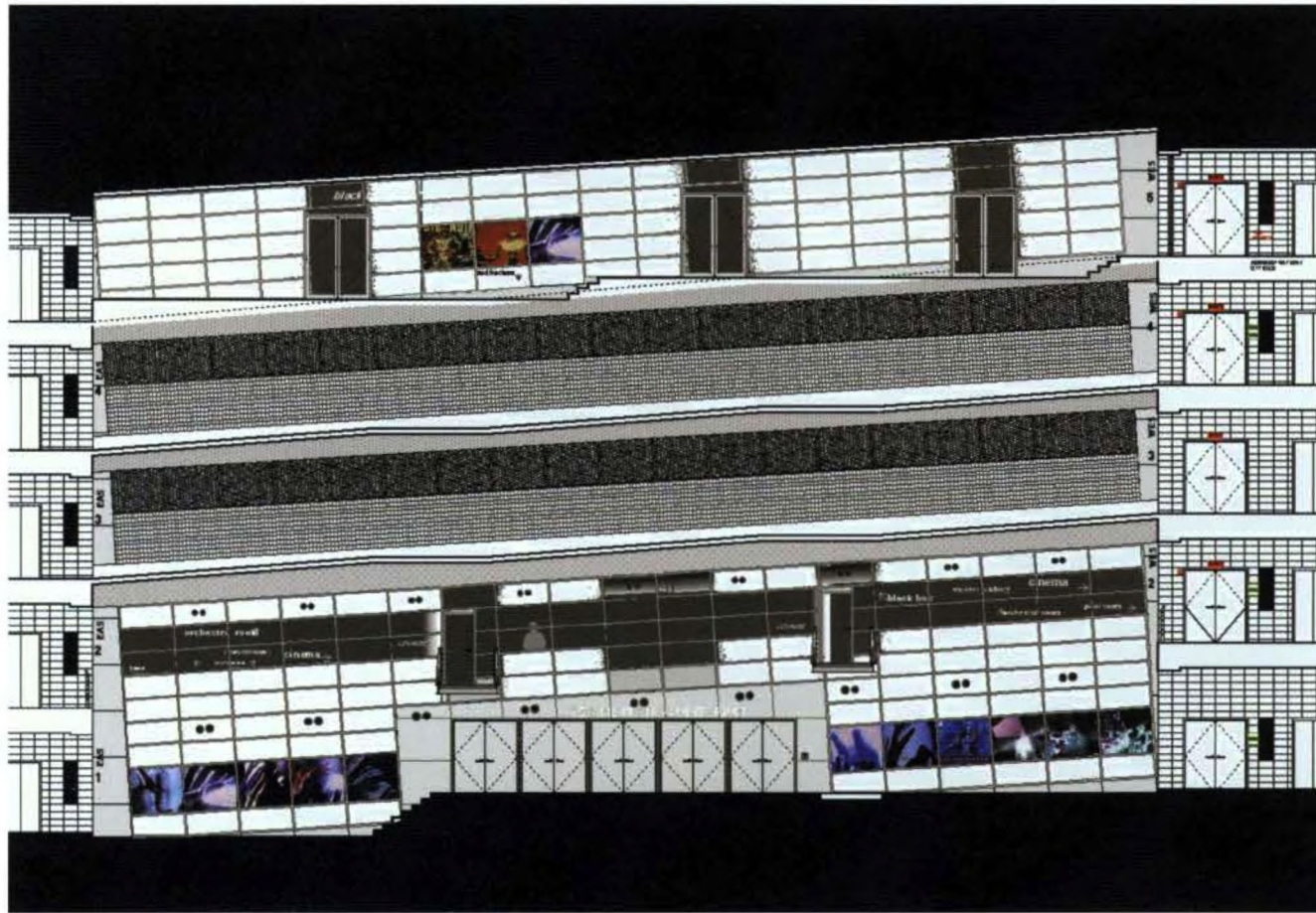
DECEMBER 1997



APRIL 1998



APRIL 1998



ABOVE

A study for the back wall of the "Hub" shows mailboxes, aluminum storefront and back-lit display panels canted to follow the 6.8% slope of the ramps.

LEFT

A model was used to study layers of steel structure and glass at the face of the court.

RIGHT

At night, cold-cathode lighting under the ramps intensifies the desired effect of a "shadow-box theatre."



DECEMBER 1997



JUNE 1998



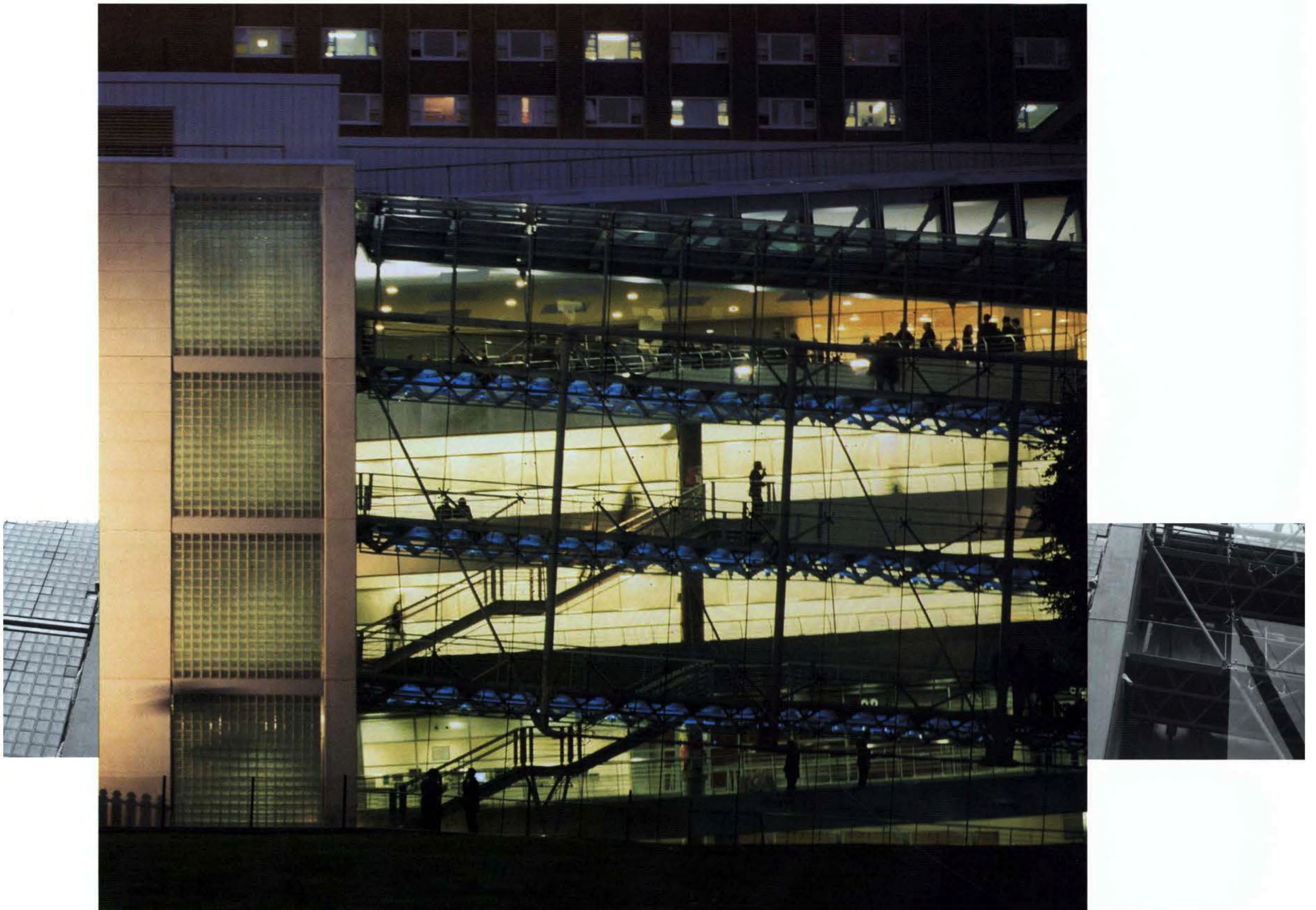
JUNE 1998



SEPTEMBER 1998

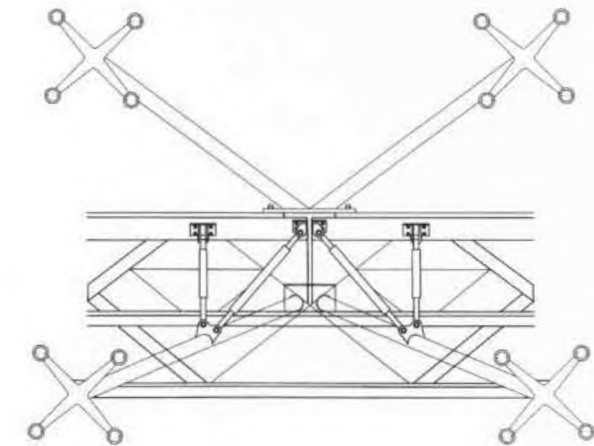
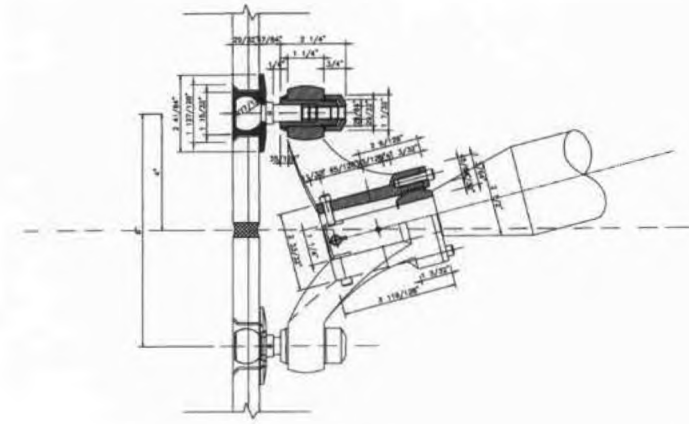
The prospect of an entirely new building gave the architects the opportunity to respond to the hermetic micro-urbanism of Columbia's late- nineteenth century campus plan. The master-plan of Charles McKim, only partly realized, was comprised of pairs of bar-buildings around the perimeter, with an exterior courtyard sandwiched between each pair. Lerner Hall's tripartite occupation of the site is faithful to this original principle, although McKim's 'ABA' articulation has been replaced by something approximating 'aBA' or maybe even 'xBA'. Existing conditions also provided a six-foot differential between grades at the Broadway and campus sides of the site, which the architects opportunistically "stitched" together with ramps across the original courtyard space, linking the split levels of the two bars.

The enclosed court, also known as "the Ramps" or "the Hub," is the literal and metaphorical heart of the building. Successfully protected by both the architects and the client from the forces of pragmatism, it remains virtually unchanged from the schematic design phase. The court is enclosed by large panes of single glazing supported by the ramps, which are themselves suspended from a roof transfer truss and the inclined façade truss. Each lite in the glass wall is simply and independently supported, in the first U.S. application of an articulated point-fixing glazing system developed by Peter Rice and Hugh Dutton for La Villette in the early 1980s. Also occupying the area designated as a courtyard by McKim's plan is the large convertible auditorium, within which the balcony can be isolated as a cinema. While the overall volumes of the hub and auditorium are defined by regulating lines set out in the original campus plan, they bleed into the adjacent bars by transparency and physical extension, creating sudden vistas and locally distinct volumes such as the curved gallery behind the auditorium.



Seen from the exterior the court is bracketed by two largely opaque bars clad in a matrix of materials including standard brick, prefabricated glass-masonry panels, precast concrete panels, and granite. The architects' early design files and sketches reveal seemingly exhaustive studies of façade permutations at these bars. Later construction documents show successive revisions according to value engineering, energy studies and client preference. Although Tschumi maintains that a "contaminated" contextualism was the design intent, it is clear that American codes, New York construction practices and University bureaucracy influence the final result.

While the questions most likely to be asked about this building concern its controversial exterior— e.g. is it contextual, a-contextual, coherent, fluid, mute, urban, contemporary, "Tschumi" enough?—the question that Tschumi himself would like to foreground is: does it function? Does the student center successfully house the program intended by the client while elevating the level of social interaction for Columbia students? Can and does architecture successfully sponsor the action, interaction, creative appropriation and cross-fertilization which are central to student life? These questions will undoubtedly be answered by students, visitors and the architects themselves as the building is completed. #mm





FACING PAGE ABOVE
Top: Spherical bearings at the cast brackets allow a moment-free connection to the vertical glass.
Bottom: Of the four arms holding each pane of glass, the bottom two support gravity loads while the top two take wind loads only.

FACING PAGE BELOW
The glass 'cornice' at the Ramps (shown before vertical glass panels were installed) provides a less literal contextualism than the Broadway façade.

TOP LEFT
Workers on a cherry-picker apply spider-brackets to the support arms.

TOP RIGHT
Adjustment devices at the support arms and within the cast brackets allow for fine-tuning of the glass after installation.

The inclined facade truss was first assembled on the ground and was then lifted into place in minutes. Once it was locked into the building and tied to the ramps, the scaffolding previously supporting the ramps could be removed.



MAY 12, 1998

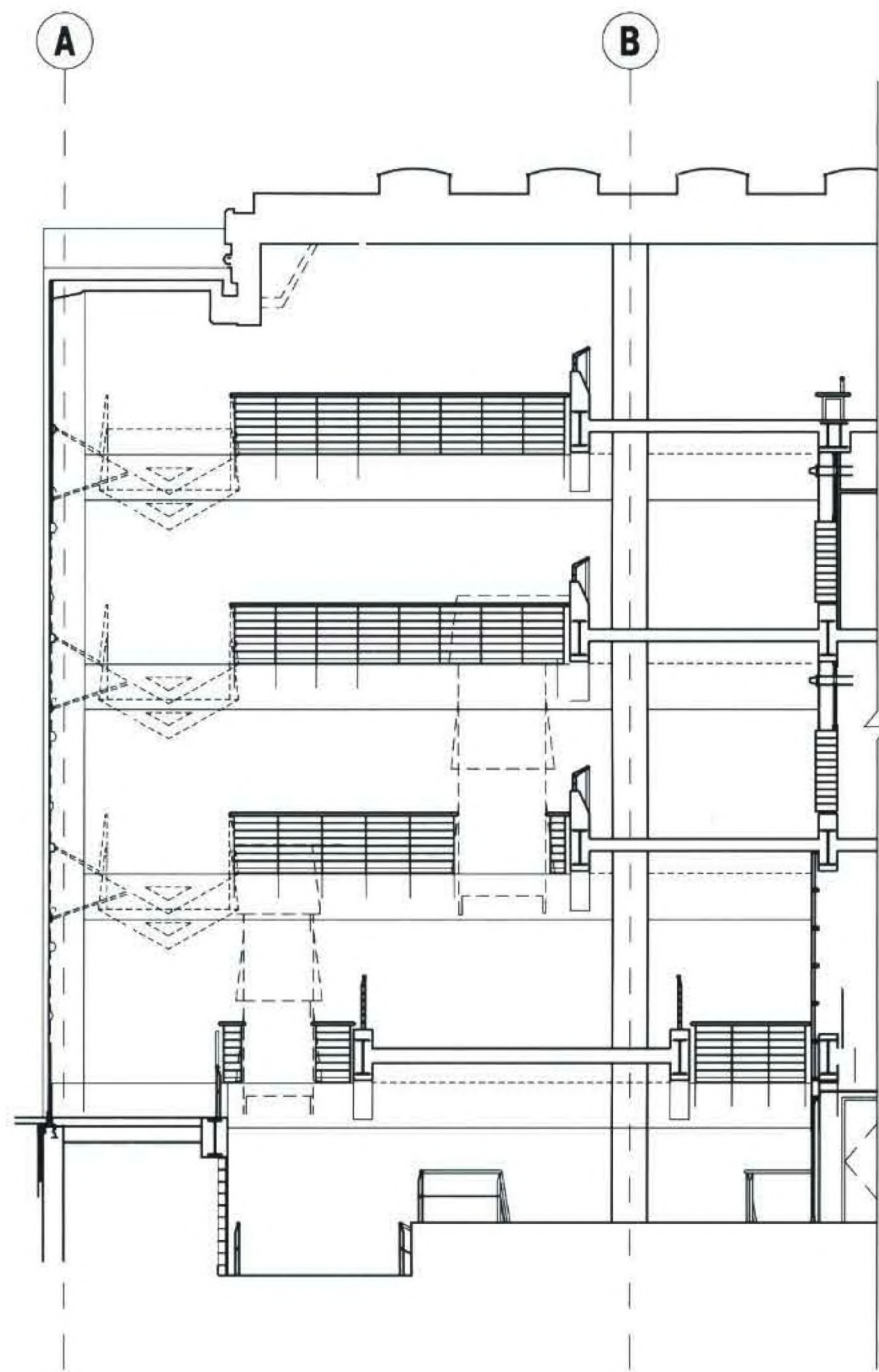


MAY 12, 1998

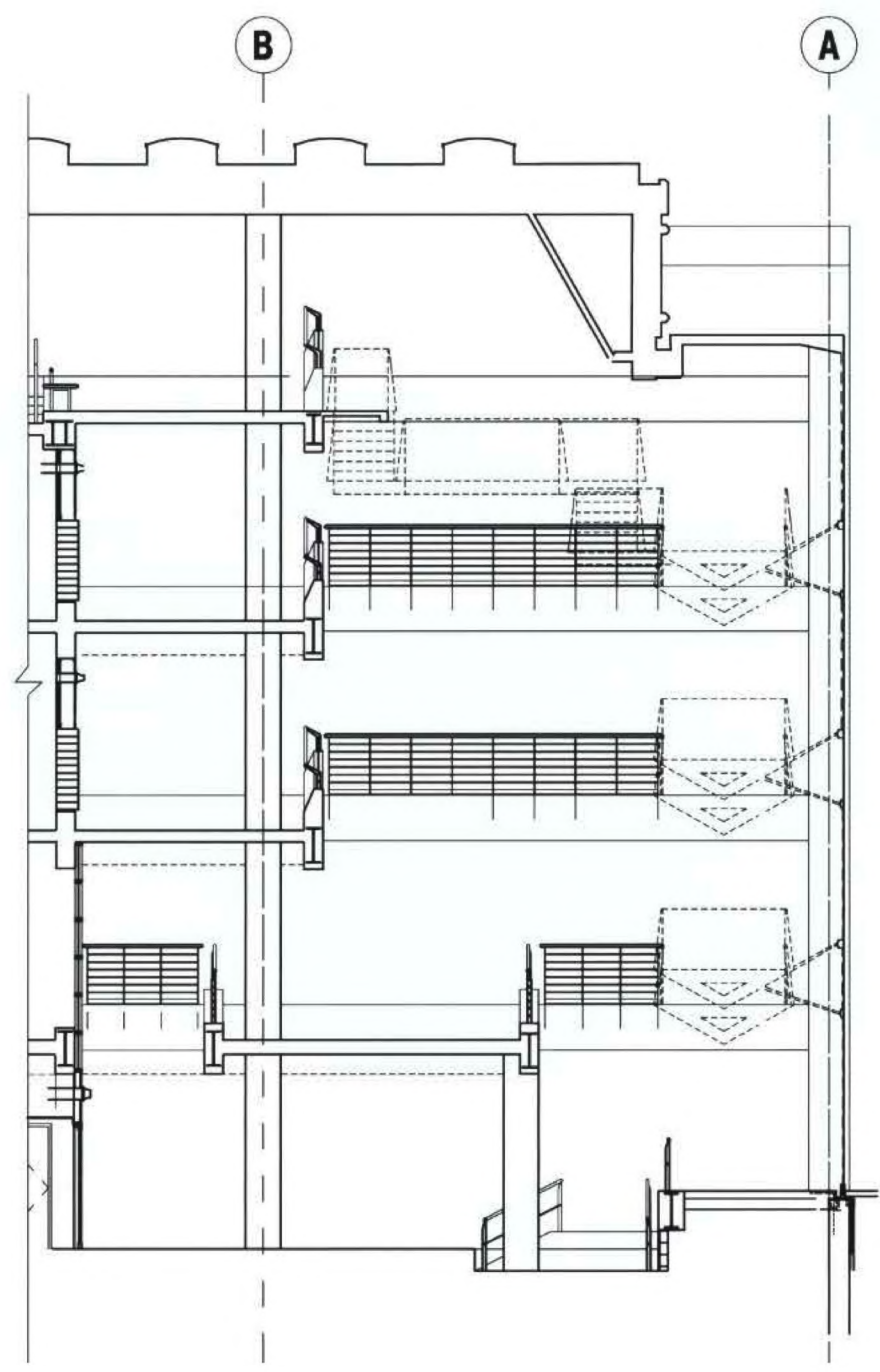


MAY 12, 1998





SECTION THROUGH THE HUB
LOOKING EAST

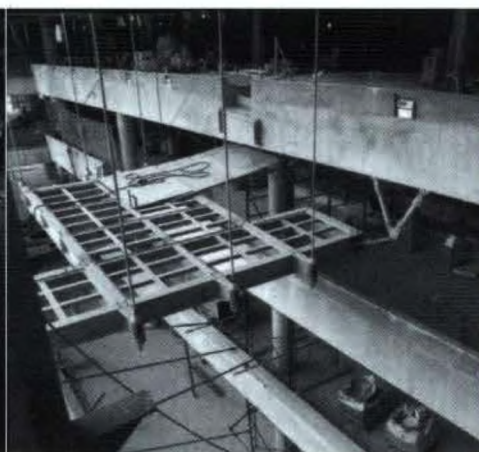


SECTION THROUGH THE HUB
LOOKING WEST

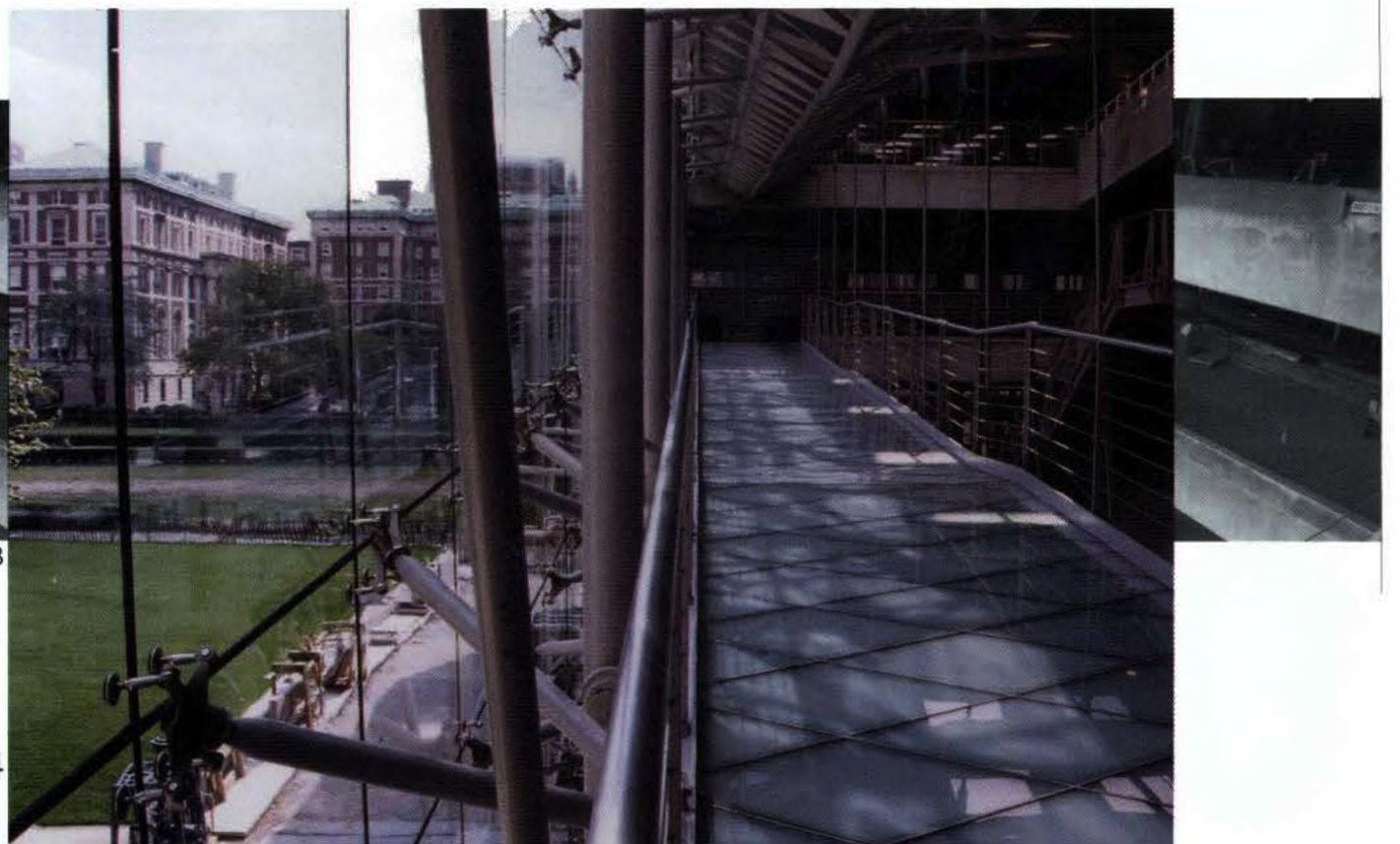
The Sky Lounge is one of several short-cuts which connect the glass ramps and the concrete ramps across the enclosed court.



APRIL 1998



APRIL 1998





ABOVE

The "Sky-Lounge" is suspended between the 4th and 5th floors at the west end of the ramps. Like the ramps, the Sky Lounge has a floor of laminated glass tiles with a fritted surface, set into an open steel grid.

FACING PAGE (INSET)

A view of campus dominates the "Hub" during the daylight hours.



JUNE 1998

JUNE 1998

JANUARY 1999

JANUARY 1999



LEFT

The stairs, the steel and glass ramps, the glass wall, and the inclined façade truss were bid out under a single contract, which was awarded to the French firm Eiffel. To the fullest extent possible, the components were fabricated in France and Italy before shipping to New York. This photo, shows the ramps heavily scaffolded until the inclined façade truss could be installed to add required support.

The roof transfer truss, which spans almost 99 feet between the two 'bar' buildings supports the ramps and the structural glass wall and allows for a column-free facade.



DECEMBER 1997



DECEMBER 1997



OCTOBER 1997



OCTOBER 1997



ABOVE

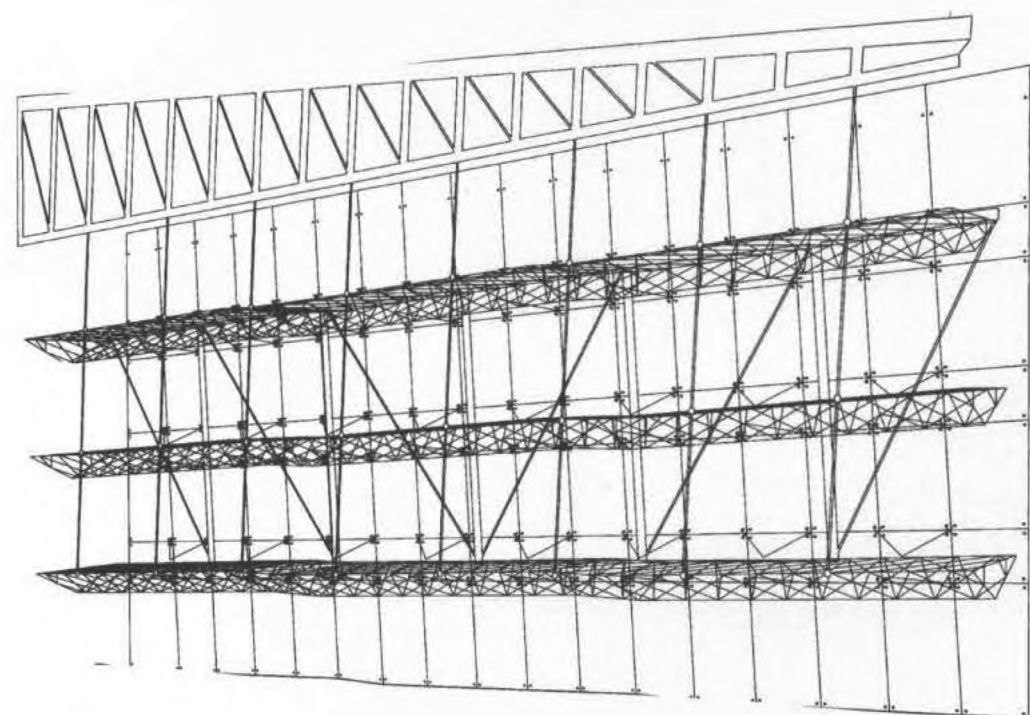
The triangulated mesh of the ramp steel, seen here from underneath, is engineered to be both structurally efficient and expressive. It also provides a convenient cage to house sprinkler pipes for the enclosed court.

ABOVE RIGHT

The heavily articulated roof transfer truss, fabricated as a part of the structural steel package, provides a foil for the light and intricate geometries of the Eiffel steel.

RIGHT

The ramps are dually supported by the roof transfer truss above and the inclined facade truss.



OCTOBER 1997

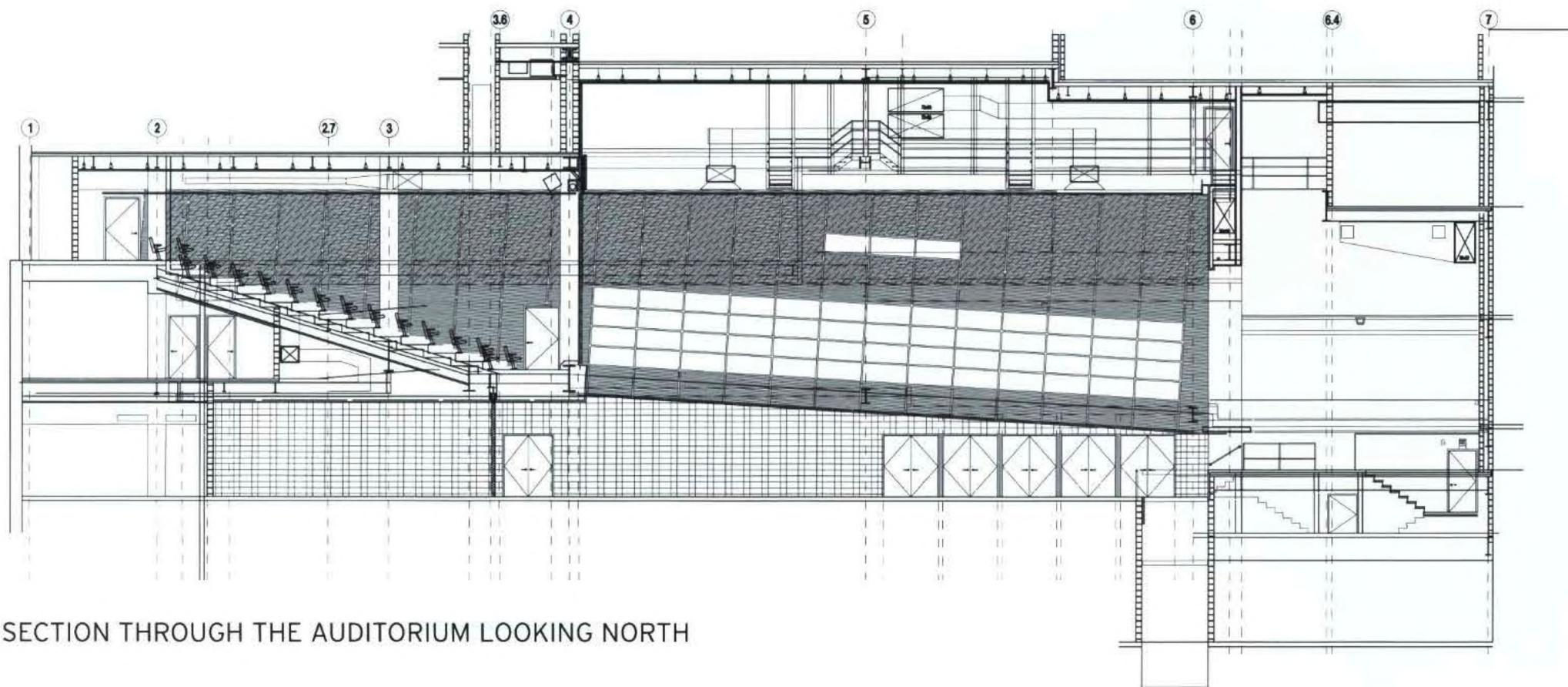


MARCH 1998

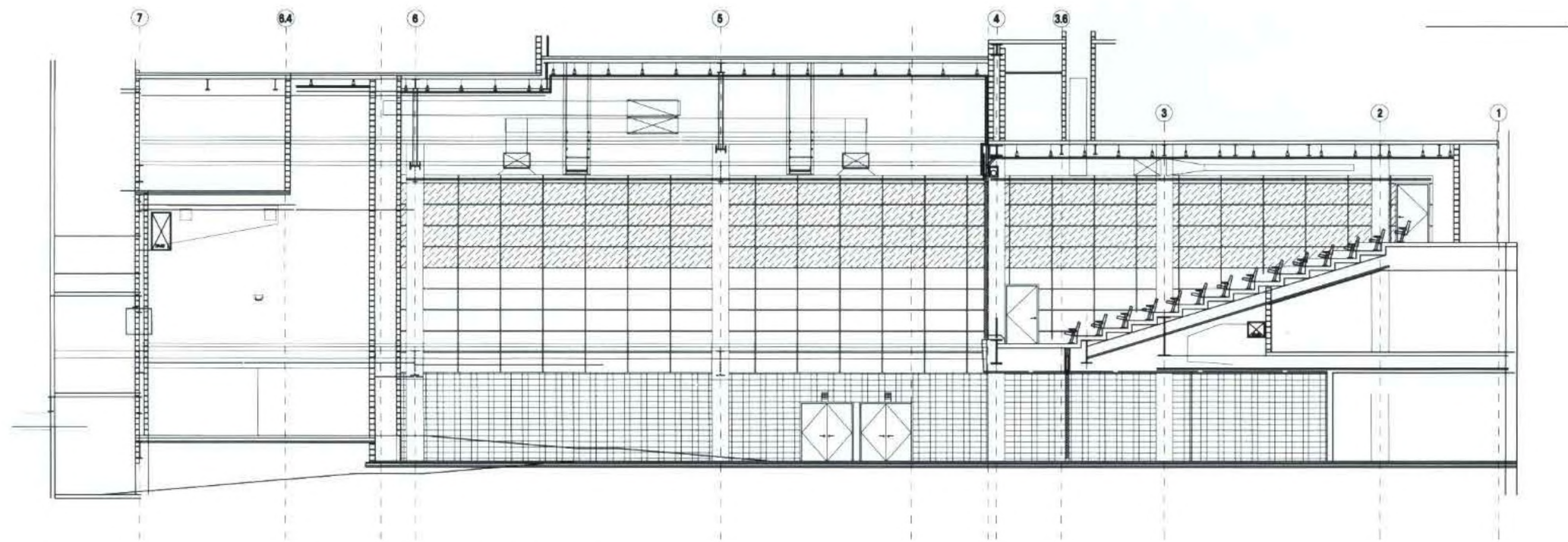


DECEMBER 1997





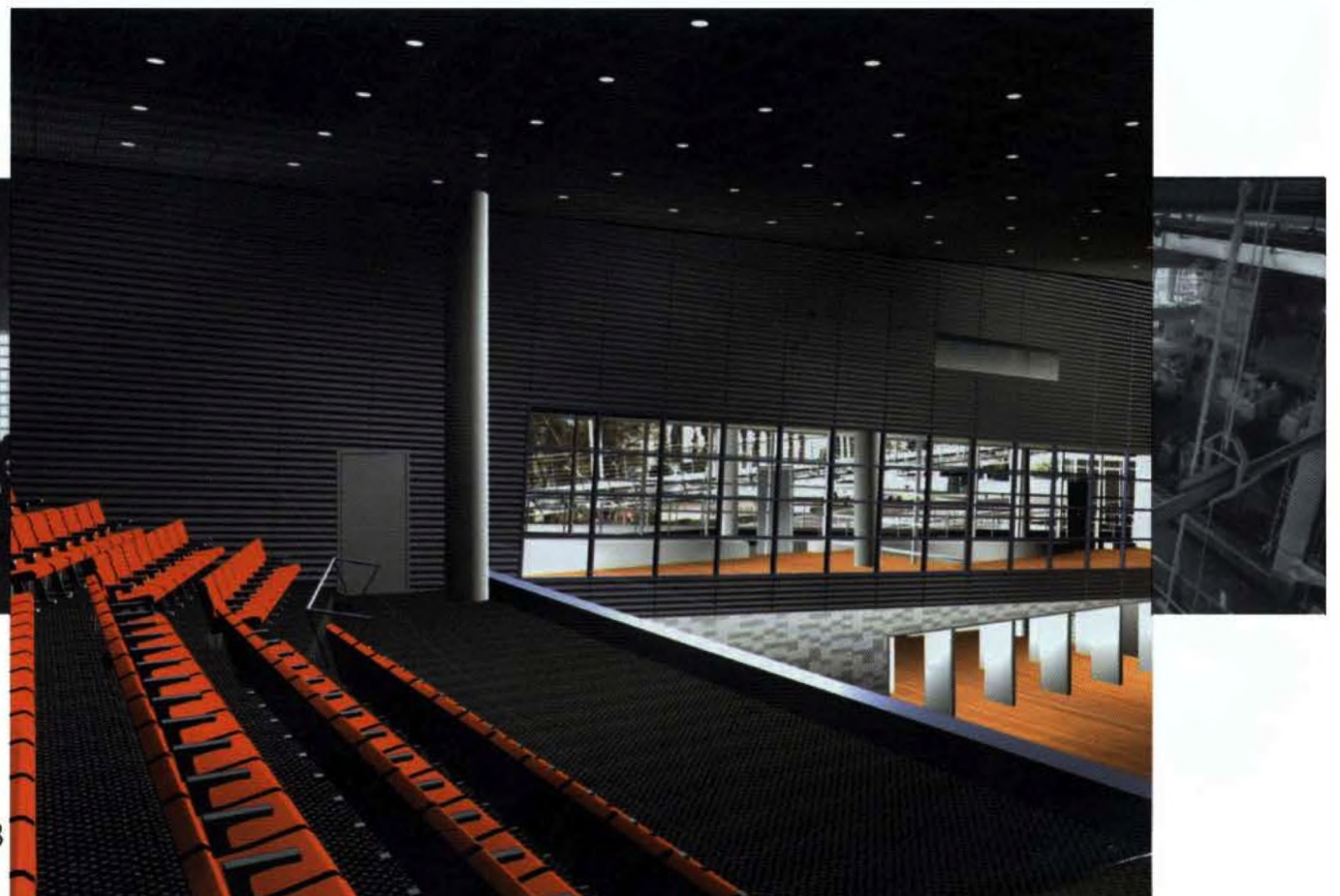
SECTION THROUGH THE AUDITORIUM LOOKING NORTH

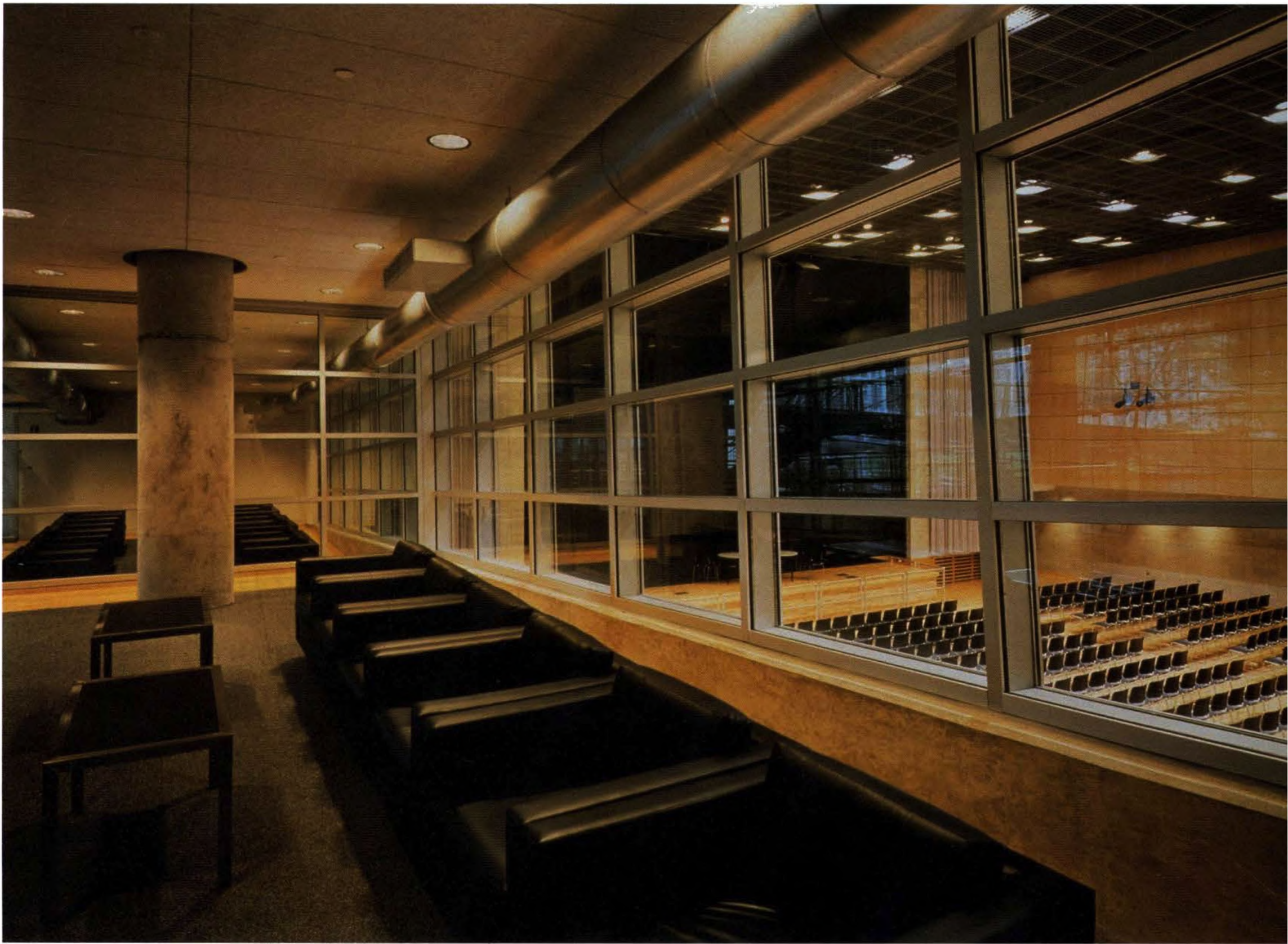


SECTION THROUGH AUDITORIUM LOOKING SOUTH



JANUARY 1998





ABOVE
The acoustical glass wall at the student lounge provides a view into the auditorium space beyond. Options for blacking out the auditorium windows are still being considered, including retractable shades and replacement of the transparent glass with a liquid crystal display glass.

FACING PAGE
Spatial flexibility is achieved in the auditorium space with a retractable partition wall. When closed, this wall defines a cinema above and auditorium below. When opened, the entire space is unified and the cinema serves as a balcony



DECEMBER 1997



DECEMBER 1997



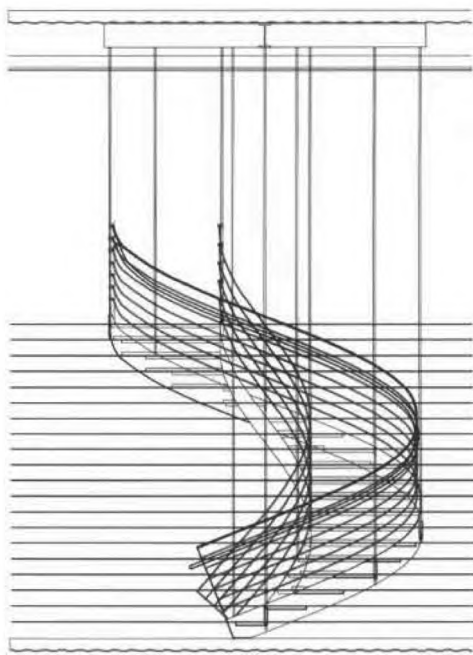
DECEMBER 1997



APRIL 1998

RIGHT/FACING PAGE
Spiral stairs, suspended from a
lattice of beams above, connect
upper and lower portions of the
dining hall.

BELOW
An unprogrammed gallery exists
between the prefabricated
glass-masonry panels at the
Broadway façade and the
curved back wall of the
auditorium balcony.



APRIL 1998

NOVEMBER 1988

