Architecture

New Jersey

Issue 3: 1987

Architecture for Learning

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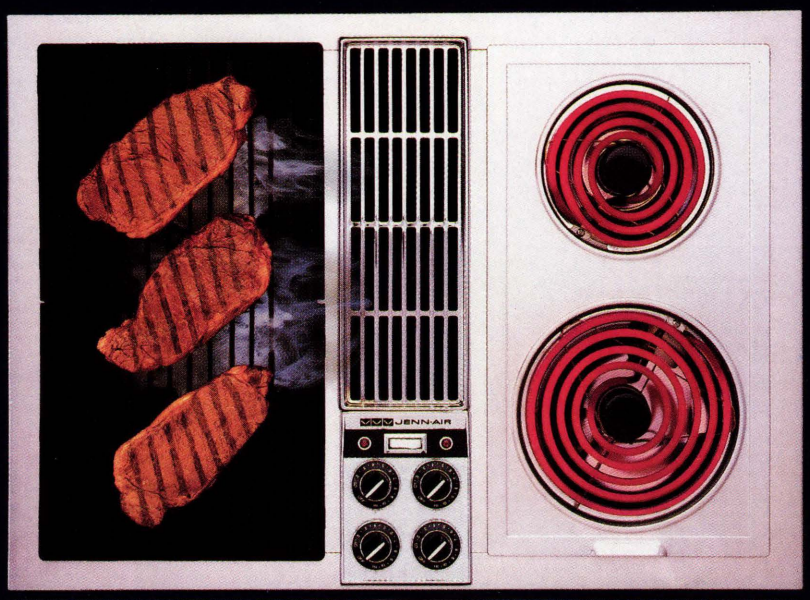

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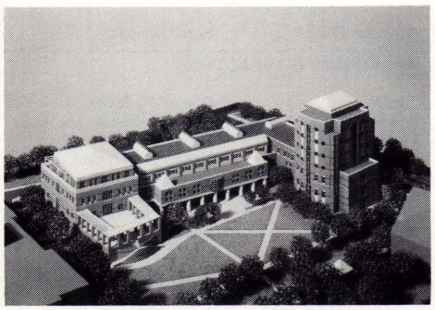

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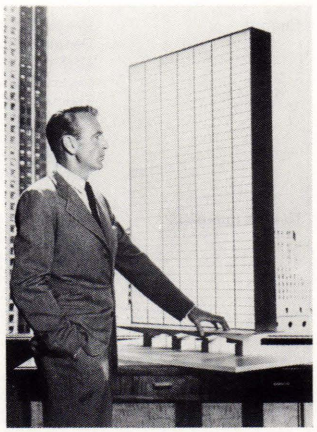

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Cover:
Lewis Thomas Laboratory for Molecular Biology, Princeton University. *Page 16*

Photo by Matt Wargo

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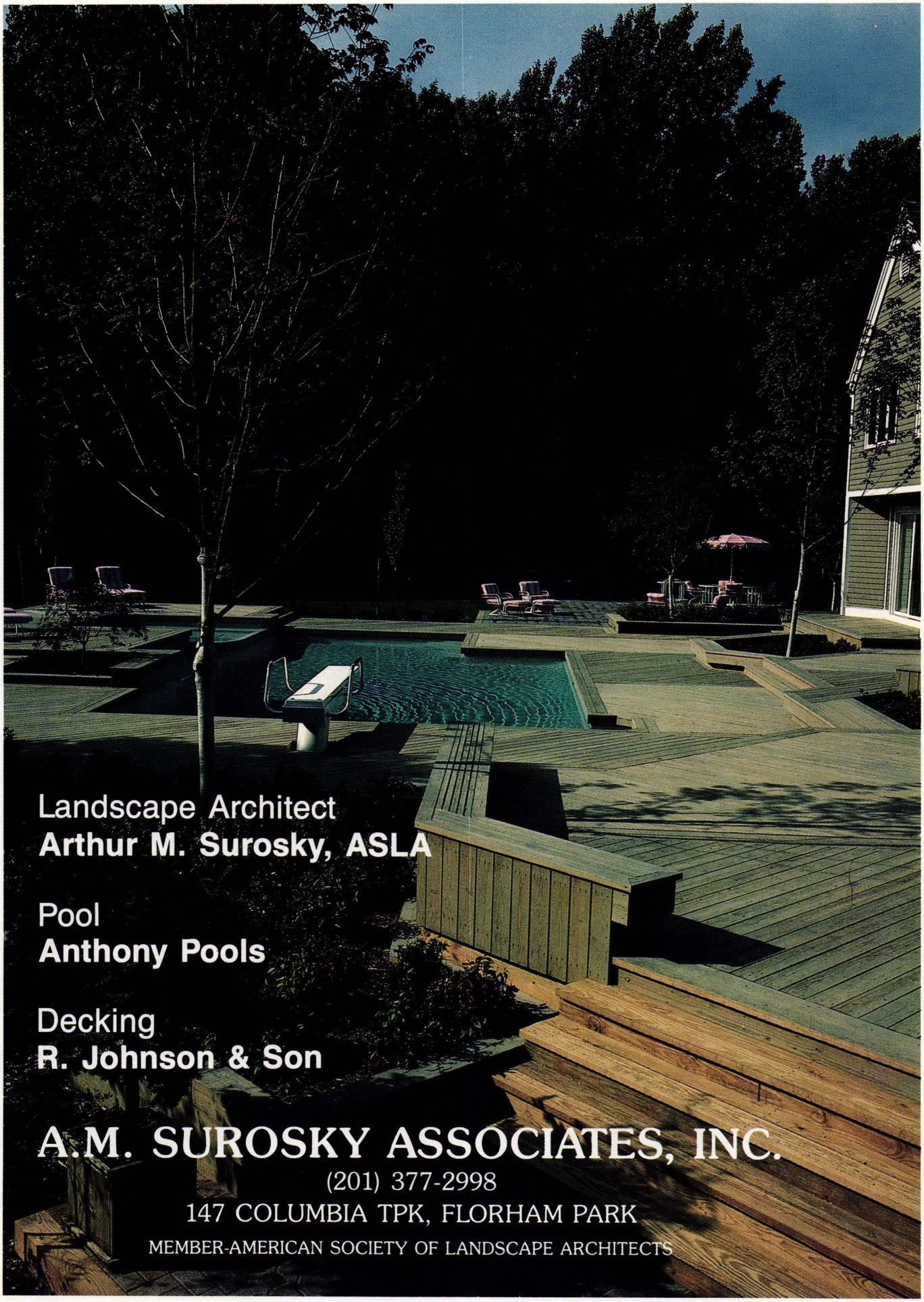
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Architecture for Learning

An Editorial

On the following pages we show many kinds of educational buildings, either proposed or completed, for students from pre-school to post-graduate. While all our articles suggest ideas about architecture for education, the critique of new buildings at Princeton University raises questions about the education of architects.

Typically, architects' careers progress from formal education, to apprenticeship (essentially on-the-job training), to professional competence and eventual stagnation. As our proficiency and responsibility increase, the practice of architecture demands more time; frequently the art of architecture receives less. We take fewer journeys to study new work by other architects, and we get most of our exposure to design, both new and old, through pictorial and written descriptions in books and magazines. Yet the photographer's art can be deceptive, and elegant drawings are seductive in themselves, notwithstanding the information they attempt to convey. The written word, too, obfuscates as often as it clarifies.

Thus, we are readily trapped into thinking less, perhaps even reading less, and into leaving off our education in architecture. Too frequently our projects become standardized; as we mature professionally we deviate less from patterns of design established through experience, and we reduce successful design strategies to formulas. We may become inert while we prosper. Such an outcome may not be surprising, but it is certainly unfortunate.

My visit to Princeton University's Wu Hall, in the course of participating in the critique, brought this realization home to me. Here was a work by Robert Venturi, the acknowledged "Father of Postmodernism," that had been described as "a veritable case study" of his theory of architecture. Yet having read about the building in *Architectural Record* and in the monograph recently published by Rizzoli, and having seen photographs prior to visiting it, I had been confused, and consequently unimpressed. Walking up to, around, and through Wu Hall generated clearer images than those fixed on the page.

We all know that architecture is best experienced firsthand. I had ignored that knowledge, and my education, as it pertained to Venturi's work, stopped.

Having visited the buildings and discussed its merits and foibles with other architects, I now see Wu Hall as elucidating Venturi's *Complexity and Contradiction in Architecture*. Rereading *Architectural Record* and the Rizzoli monograph has been instructive. Writing about the process I went through is helpful, for it requires my continued consideration of what I have read, heard, and seen. And therein lies the essence of education—continuing our consideration of that which we know, or think we know, and that which is known by others.

Philip S. Kennedy-Grant
October, 1987

Information Technologies Building

New Jersey Institute of Technology Newark, NJ

Rothe-Johnson Associates
Edison, NJ

Located on the New Jersey Institute of Technology's Newark campus, the Information Technologies Building (ITB) will house one of the Institute's most important ventures: developing technology for the computer-integrated manufacturing processes that will foster new local and national industries. The five-story, 175,000 sq. ft. building will give NJIT a commanding presence on Central Avenue, a major east-west thoroughfare.

Two major building masses compose the ITB. The two-story, glass-enclosed "Factory of the Future" overlooks the campus, and a five-story block surrounds the factory on two sides. The latter building mass contains laboratories, classrooms, computer rooms, faculty offices, two lecture halls, and a media center. On each floor, public spaces are near elevators, stairs, and lobbies, whereas the private areas, faculty and graduate student offices, are along the perimeter of the building.

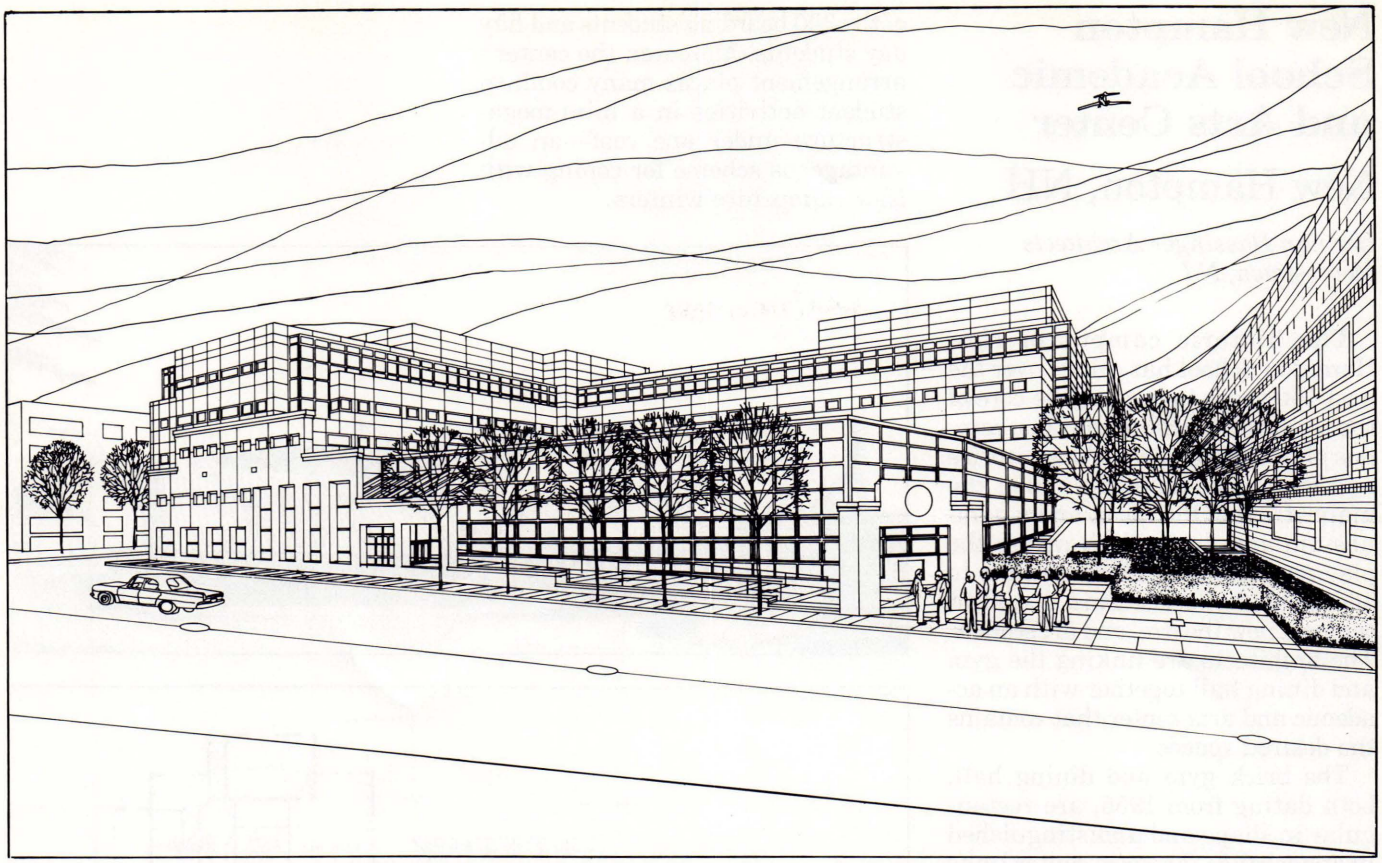
The building's aesthetics reflect its teaching and research functions. The layers of the building's facade suggest the evolutionary process of technological advancement, which is based upon past achievements. Thus the outermost layer, the building's base, recalls an older factory building; in fact, this brick envelope, with its medallion decoration, alludes to local warehouses. The middle layer, sheathed in metal panels, and the innermost layer, sheathed in glass curtain wall, emerge in turn from behind the "older" brick wall as if to represent the birth and growth of new technologies.

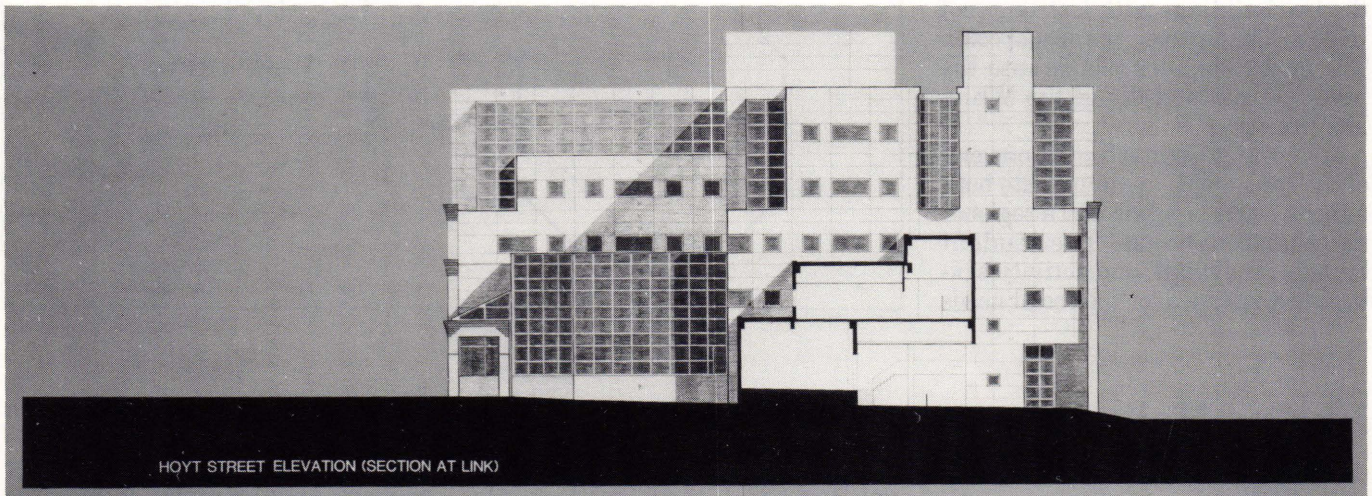
In addition, the brick envelope derives from one of three main contextual issues, the first being the ITB's relationship to the adjacent Mechanical Engineering Center. Brick similar to that in the existing MEC serves as a base for the ITB, and unifies the two buildings; on Central Avenue, the brick base is three stories high, as is the MEC. The ITB is also physically linked on three levels to the MEC.

The second contextual issue is the ITB's location at the northwest corner of the thirty-six-acre campus. The ITB helps define an urban street edge and campus perimeter wall, presently established by the MEC. Not only does the new building anchor the western half of the campus, but it also creates a major entry plaza for the campus. This new gate and diagonal entry sequence point to future campus expansion to the north.

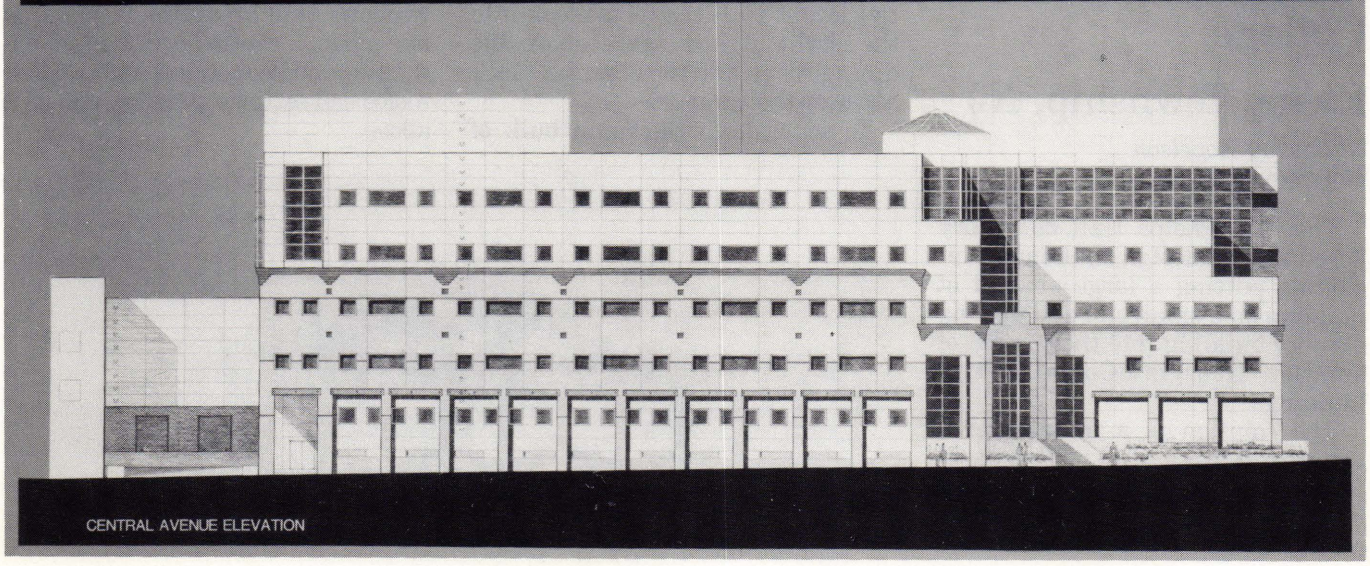
The third issue is the relationship of the ITB to the campus green, which will be enlarged in the future. The Factory of the Future block is closest to the green, and the entire building steps up and away from the green. A major campus side entry leads the visitor along a colonnade that has views into the glass-walled factory.

This path from the campus side of the building along the factory culminates in the octagonal rotunda that serves as the central lobby for the five-story block. The rotunda recalls the classically-inspired spaces of older institutional structures, and is articulated on the exterior to identify NJIT on Central Avenue.





HOYT STREET ELEVATION (SECTION AT LINK)



CENTRAL AVENUE ELEVATION

New Hampton School Academic and Arts Center

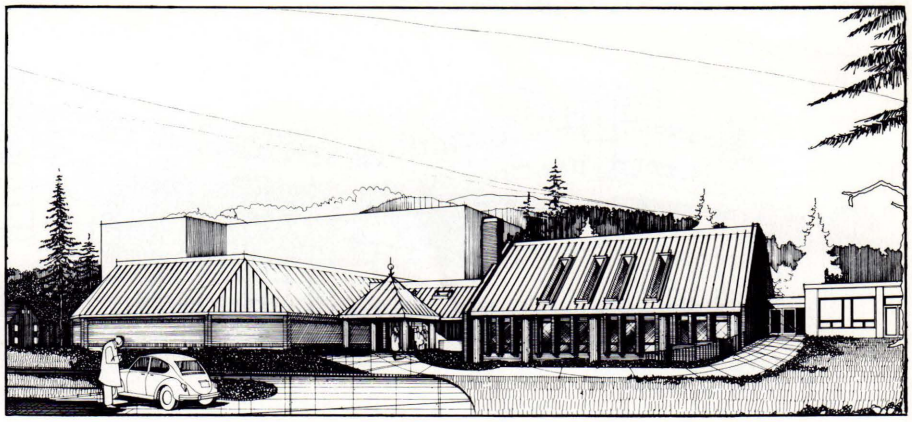
New Hampton, NH

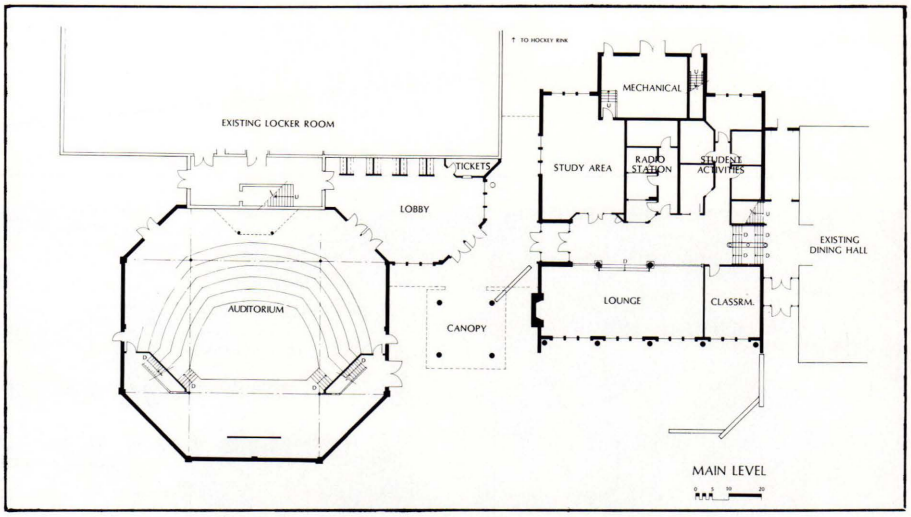
Herman Hassinger Architects
Moorestown, NJ

The historic campus of New Hampton School has grown over the past 150 years to become the core of the town of New Hampton. To a campus plan that consists of dormitories and classroom buildings along the main street of the town, and a gymnasium and dining hall across the playing fields, the school needed to add additional classrooms, a student center, a new theatre, and art studios. The architects are linking the gym and dining hall together with an academic and arts center that contains the desired spaces.

The brick gym and dining hall, both dating from 1955, are rectangular in shape and undistinguished in appearance. The new center links the two buildings with a strong roof in deep forest green, the school color. The entire complex blends into the pine-covered foothills of the White Mountains.

A 450-seat auditorium at one end of the center will accommodate both a theatre arts program and a regional summer playhouse. The student lounge, study hall, and activities offices are designed for the social needs of the 300 boarding students and fifty day students. Moreover, the center's arrangement places many common student activities in a mini-megastructure under one roof—an advantageous scheme for coping with New Hampshire winters.





Phelps Hall, Trenton State College

Ewing Township, NJ

Nadaskay-Kopelson
Morristown, NJ

The new Phelps Hall dormitory posed several design challenges, including putting a large amount of building on a small site and placing a bulky building into the context of smaller Georgian/Colonial-style buildings.

The solution is a multi-layered square doughnut form, with a parking garage below grade; dining facilities, a health center, and offices on the first floor; and double-loaded corridors of dormitory rooms on the second and third levels, each of which has less square footage than the first two levels. Half the rooms look into the skylit atrium space above the dining room, and the other half look out over the campus.

To scale down the main bulk of the building, the architects use a sloped slate roof that makes windows on the third level appear as dormer windows, and break the facade into five parts: a central pedimented entry, two middle sections, and two flat-roofed end sections with bow windows above.

Center for Hazardous and Toxic Substance Management

New Jersey Institute of Technology Newark, NJ

The Grad Partnership
Newark, NJ

The Center for Hazardous and Toxic Substance Management will house labs and support facilities for research into methods of disposing of harmful materials. Researchers will investigate biological, chemical, and physical treatments, as well as incineration.

In opening up this new field, the scientists cannot precisely predict how they will conduct future research. To provide flexible laboratory space that can be reconfigured as needs change, the design includes laboratory modules with services distributed vertically in shafts along the corridor wall. Large expanses of glass areas provide natural light in all the labs.

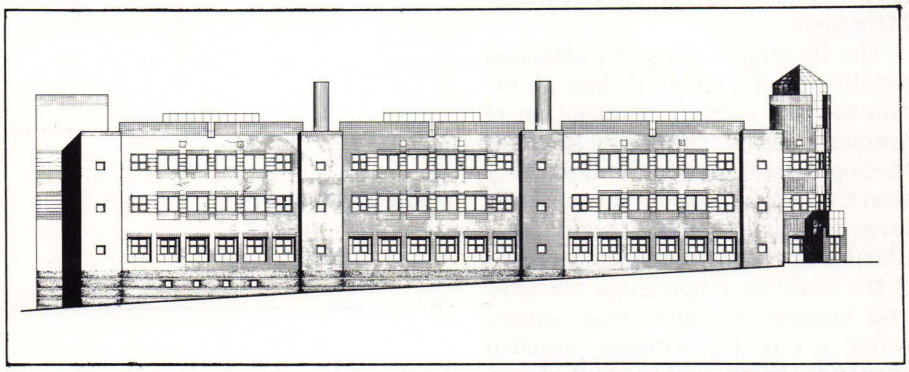
Offices of faculty and graduate students are located across the corridor from their respective research laboratories. Even the roof is designed as a working platform for research; one section is constructed to take large floorloads.

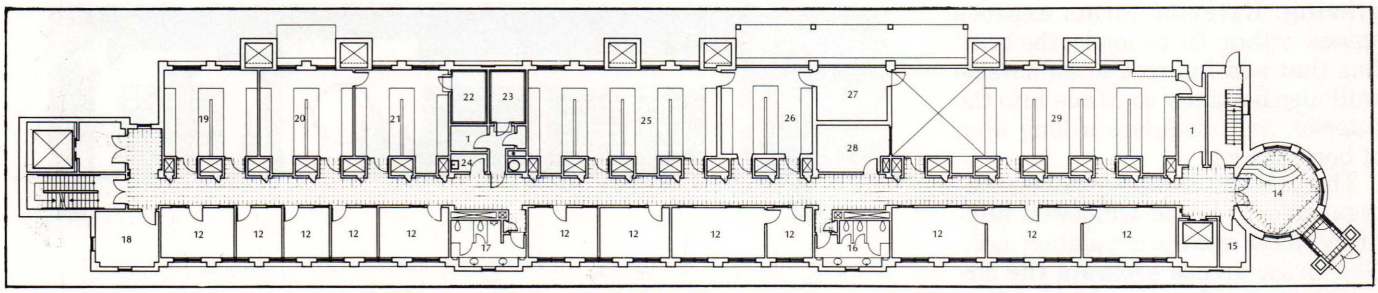
Material for research is brought into the building at the basement level, which takes advantage of the site's slope. After classification, samples are distributed to the appropriate laboratory. Explosion-hazard areas have "blow out" walls and blast deflectors. Exhaust ducts are grouped at the outside wall and lead to the roof through vertical shafts on the exterior of the building.

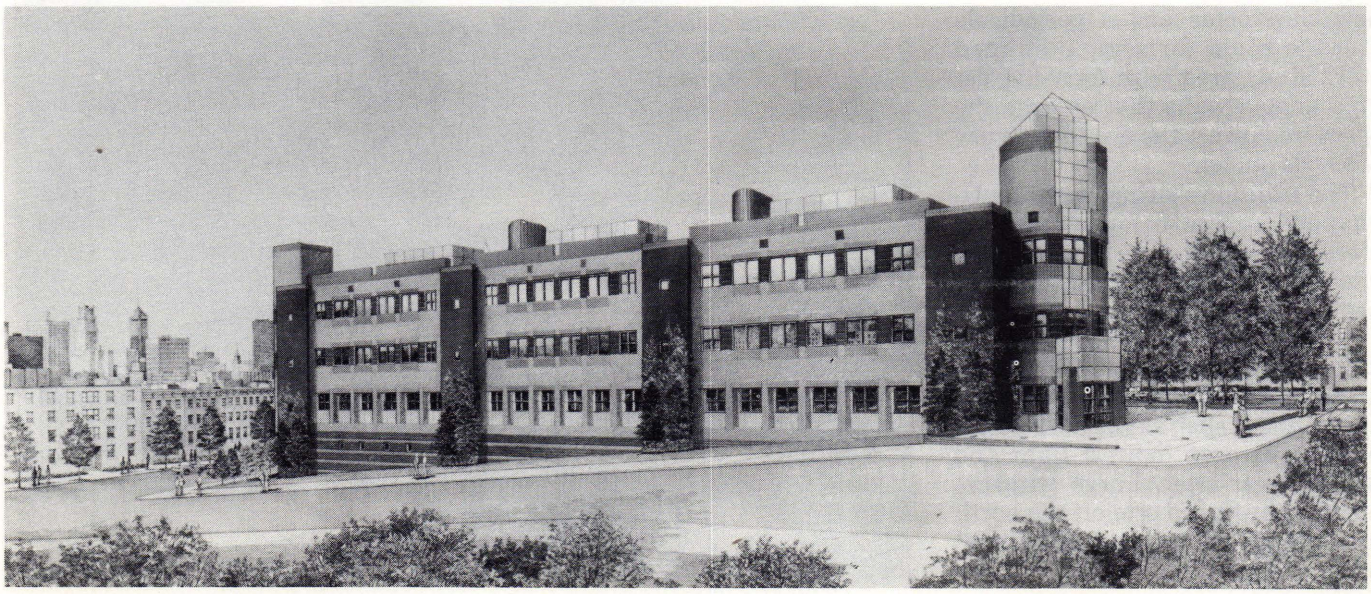
These vertical service shafts also serve to break up the long facade of the building, and reduce its scale. Walls composed of brick and block of various colors and textures refer to surrounding buildings. The new building's masonry skin is peeled back in places to reveal an aluminum plate skin that alludes to the high-tech nature of the Center.

The corner tower above the entrance orients the building to the rest of the campus and provides the focal point for a larger complex. In the future, wings perpendicular to the base building will accommodate expansion.

The siting, close to the thoroughfare, reinforces the urban streetscape. The new building thus becomes not only part of the university, but also part of a renewed urban fabric.







James Caldwell High School Library

West Caldwell, NJ

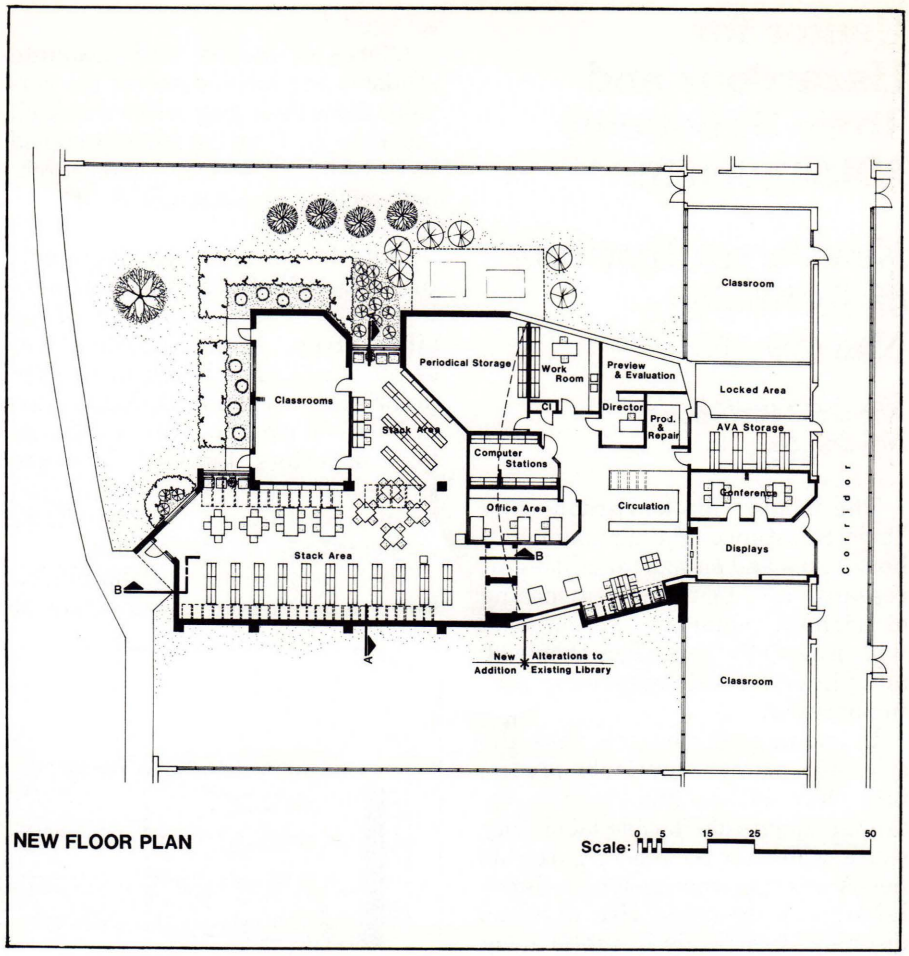
Armstrong Jordan Pease, AIA, PA
Somerville, NJ

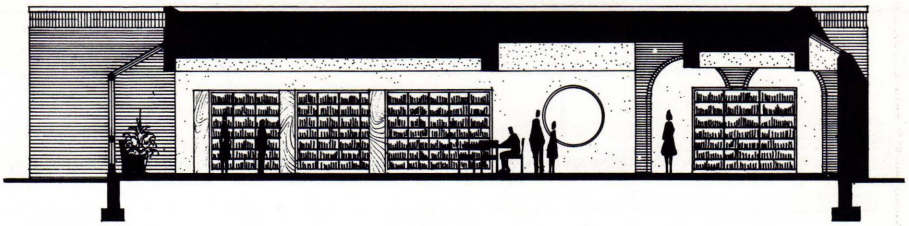
In making alterations and an addition to the James Caldwell High School Library, the architects sought to give a collegiate atmosphere to a one-story, red brick school dating from the 1960's. "Unlike the bland, vapid, typical high school library, with its controlled and confined atmosphere, the new library's design psychologically expands the students' horizons," said AJP architect Vincent Montrasio.

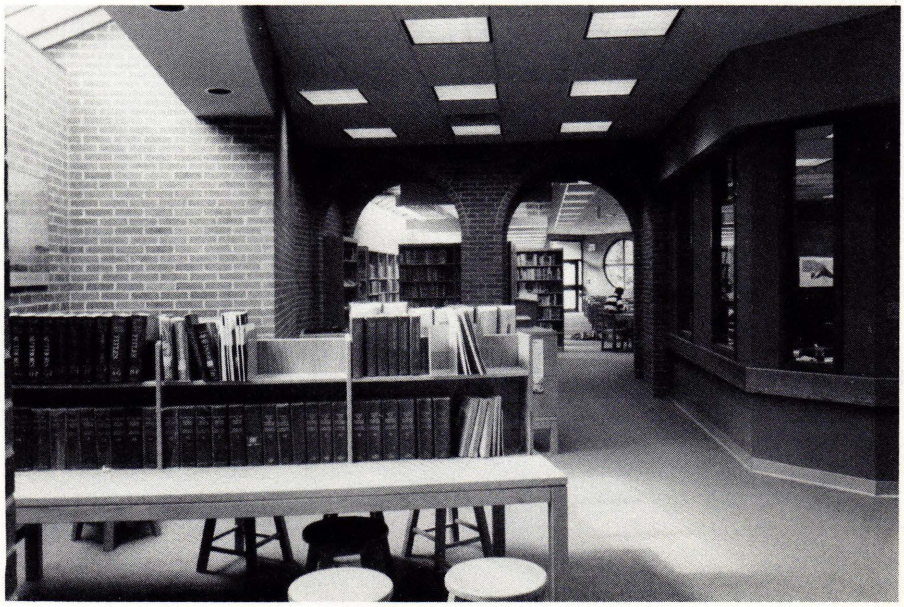
The library, evoking an attached pavilion in a courtyard, has an organized yet playful composition of geometric forms. The design suggests the sophistication and freedom of research toward which the school's largely college-bound student population is encouraged. The interior of the building emphasizes textures and variety of space with angled walls, a circular window, punched openings, brick arches, and sloped glazing. Exterior forms express spaces within; for example, the brick fins that add interest to an outside wall also partially continue into the interior, and modulate a long area of book stacks.

The existing library has been reorganized to house windowed auxiliary offices and the circulation desk. New brick arches separate the circulation area from the stacks. Two new classrooms and a periodicals storage room form an L-shaped stack/study area with forty-five-degree angled walls that enlarge the space and direct the eye to the view of woods outside.

The addition's siting, within a U-shaped courtyard formed by two classroom wings, posed a particular challenge. The fire code regulations prohibited windows on the walls closest to the existing buildings. Thus, the architects used high, slope-glazed windows that act as skylights. To the south, such skylights give the book stack area indirect light and winter solar heat. Large windows facing the wooded site on the north and northwest provide additional natural light.







Miami Lakes Child Care Center

Miami Lakes, FL *Fig. 1*

Rotwein & Blake, PA
Union, NJ

At the Miami Lakes Child and Parent Enrichment Center, designed to serve as a prototype for a nationwide chain of childcare centers, everything is scaled down to a child's point of view. The interior spine of the building is marked by a succession of window openings, to give the feeling of a small village streetscape. The abundance of glass and an absence of any high walls or hidden corners enable the children to be visible at all times.

The building's roof is marked by six concrete tile pyramids, each of which demarcates the "homeroom" of a separate age group. All rooms, except the one housing the youngest age group, offer direct access to the outdoors.

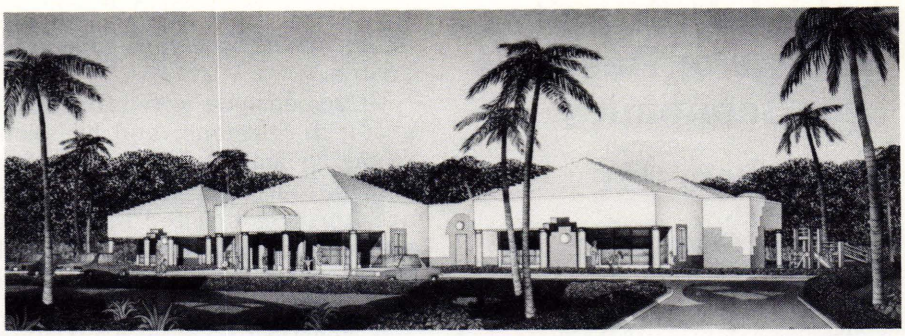


Fig. 1

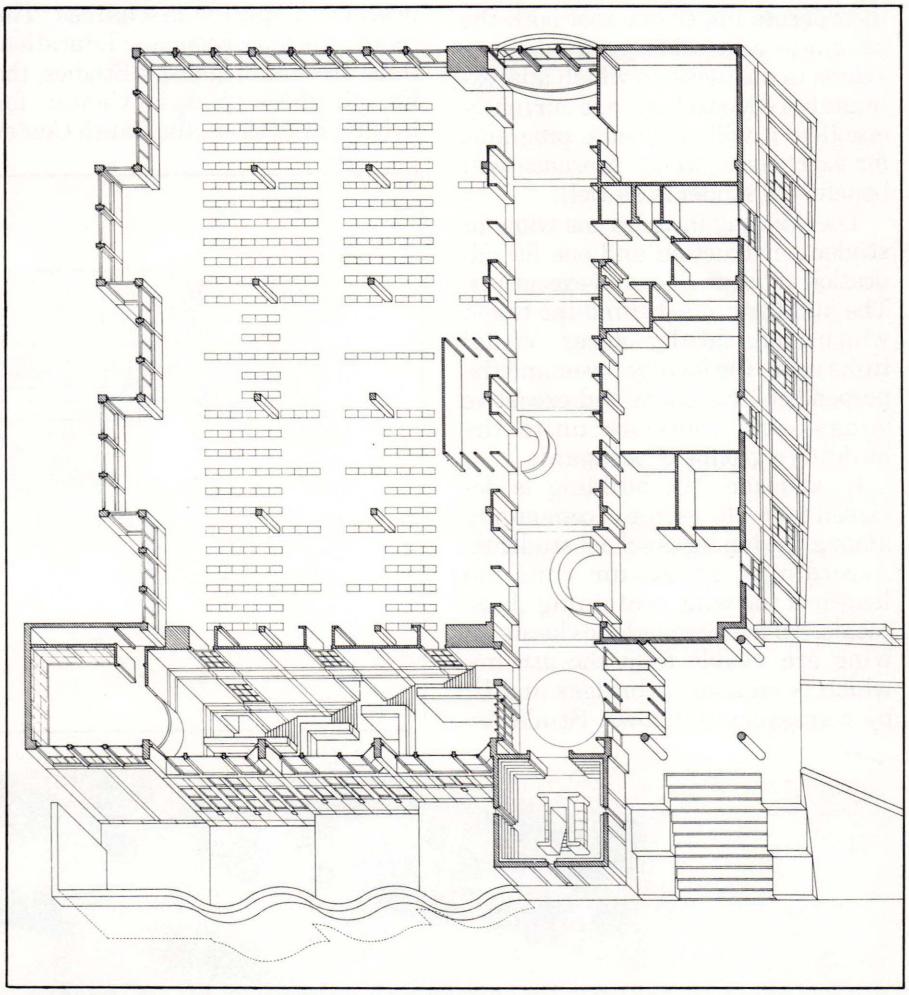


Fig. 2

Muhlenberg College Library

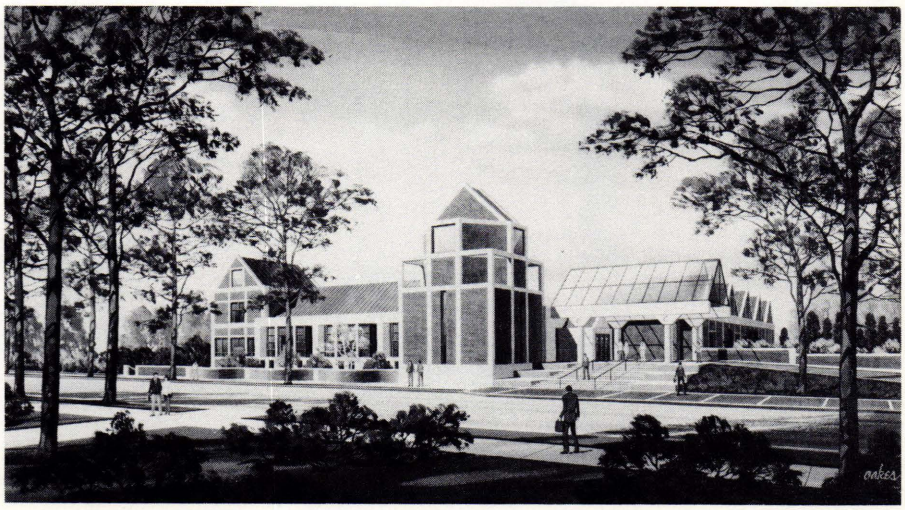
Allentown, PA *Figs. 2 & 3*

Geddes Brecher
Qualls Cunningham, Architects
Princeton, NJ

The 7,000 sq. ft. library is the new focus of the Muhlenberg campus, and is designed to adapt to changing curricula, teaching methods, and technology. Flexible loft space allows various arrangements of study carrels and of bookstacks that can hold 300,000 volumes. The building also has audio-visual facilities, security controls, and electronic telecommunications.

Terraced sculpture gardens, gabled reading alcoves, and a reading room tower enliven the exterior. To blend with the turn-of-the-century traditional buildings on campus, the three-story library is nestled in a hillside.

Fig. 3



Lehigh University College of Business and Economics

Bethlehem, PA

The Hillier Group
Princeton, NJ

The new College of Business and Economics at Lehigh University will incorporate under one roof both the graduate and undergraduate programs in business, in which approximately 1400 students are currently enrolled. It will also house programs for executives, whose presence will benefit the students as well.

The building includes one wing for student instruction and one for education of the professional executives. The auditorium is behind the tower, which holds faculty offices. Visual links unite the faculty tower and the perpendicular student and executive wings—and therefore unite the building's groups of occupants.

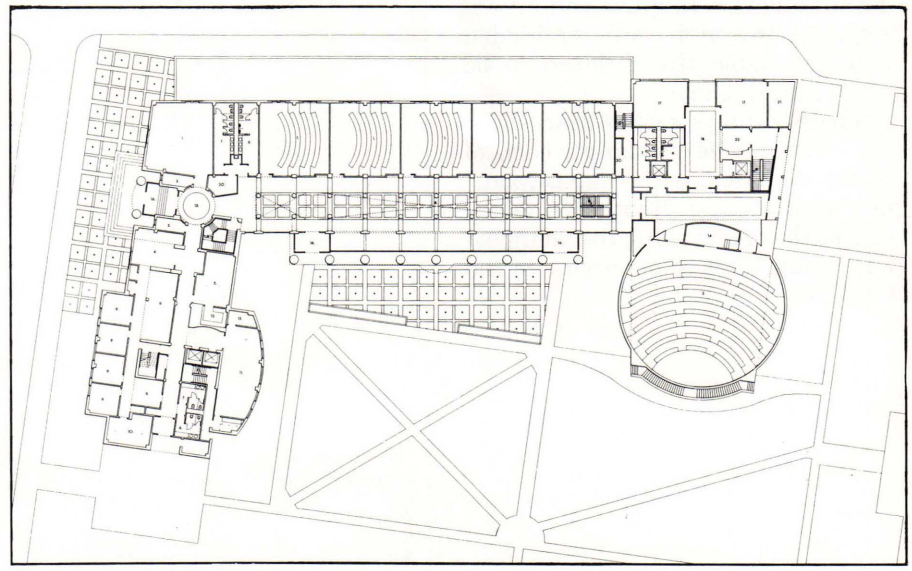
In addition, the building is designed to create a sense of community among the business school students. Accordingly, an atrium runs the length of the wing containing classrooms. All four levels of the classroom wing are visible from the atrium, which is crossed by bridges and lit by clerestory windows. Students, faculty, and executives can also gather in the courtyard outside the atrium.

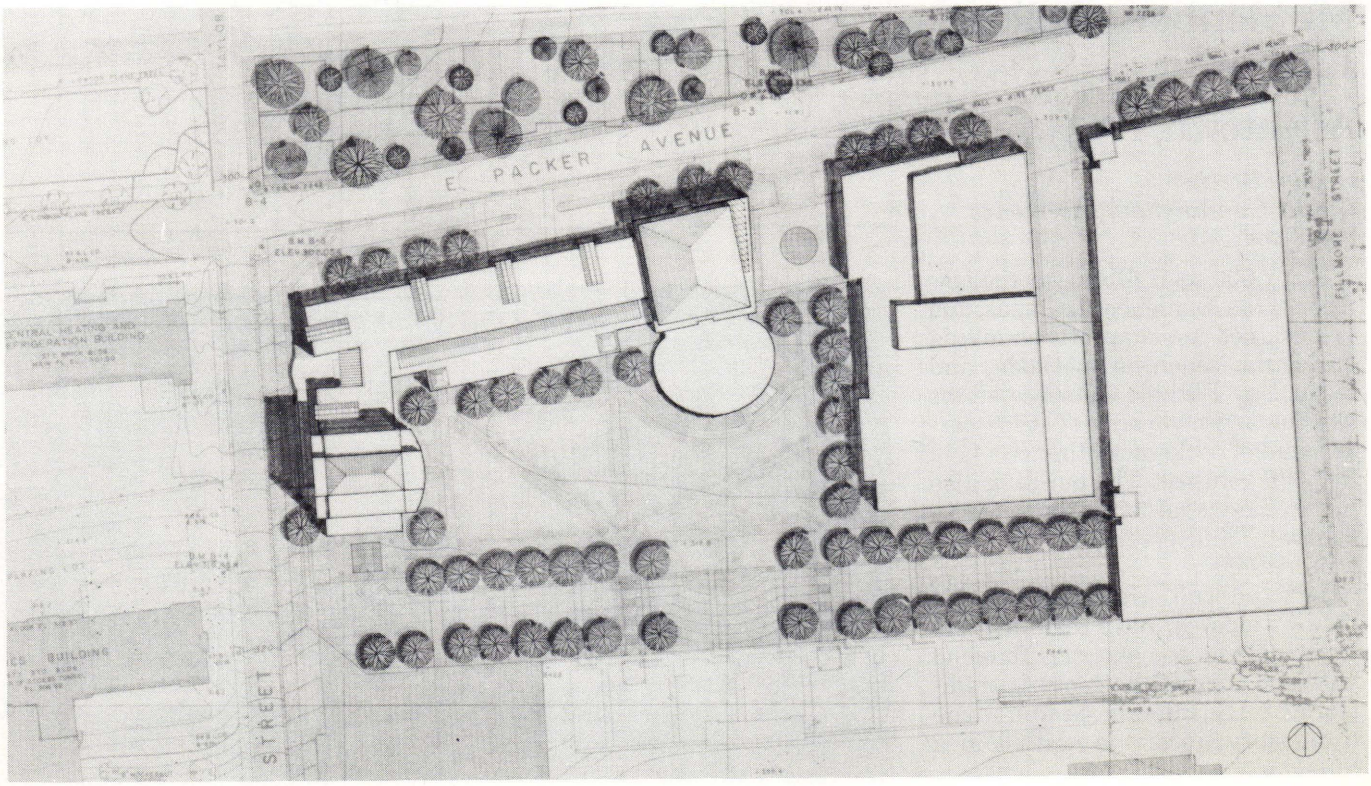
Classrooms are tiered to promote group discussions, and breakout rooms for smaller discussions face onto the courtyard. On the third floor are libraries devoted to different areas of business: economics, small business, etc. Projecting bays mark these libraries.

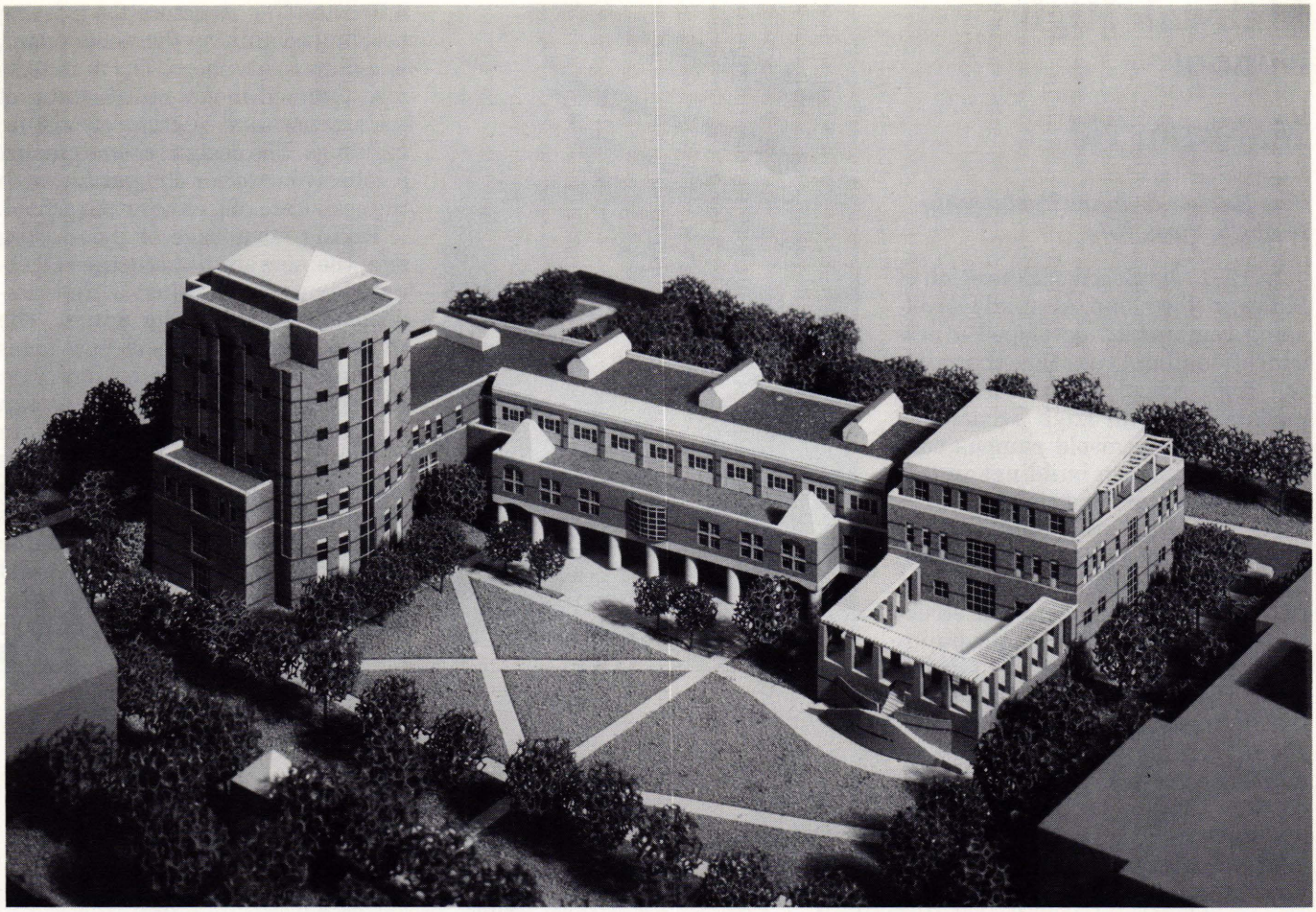
A major feature of the new College is five research centers, offering education in specific disciplines. The centers include Economic Education, Innovative Management Studies, the Fairchild/Martindale Center for Private Enterprise, the Rauch Center for Executive Development, and the Center for Entrepreneurship.

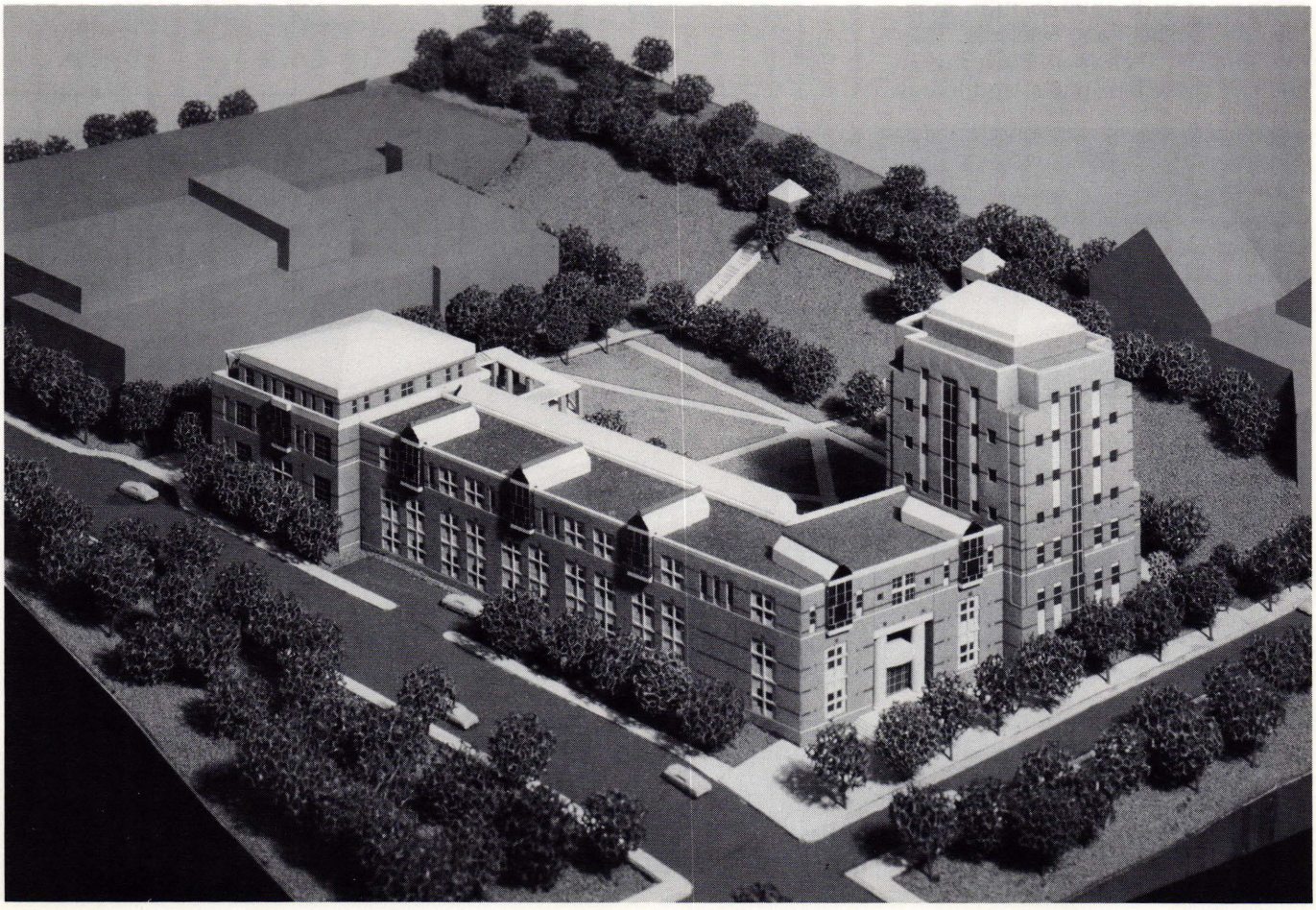
The building itself is on the site of a stadium that will be torn down. Another building to the west will complete the quadrangle that the College of Business and Economics partially encloses. An elevated roof terrace is over the auditorium, which faces into the courtyard.

The building, on the edge of the campus, faces the town. Yet it also responds to older campus buildings. It echoes existing buildings by using sloped metal roofs, large masonry units with brick banding, window tracery work, projecting bay windows, and, most noticeably, the tower.









Mahwah High School

Mahwah, NJ

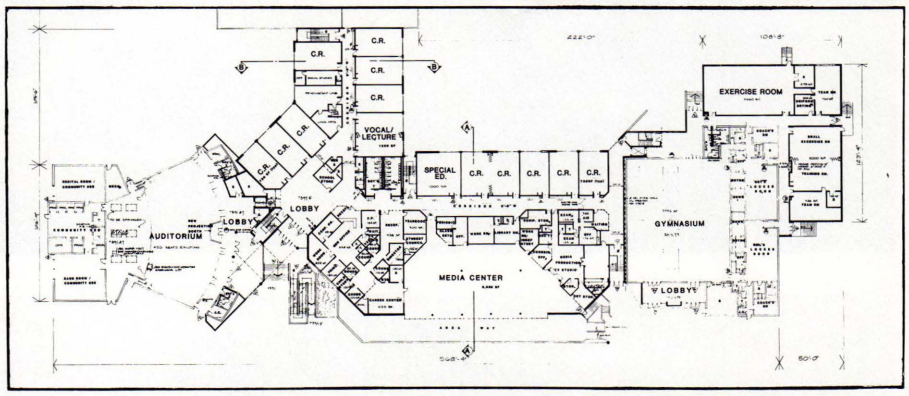
The Harsen & Johns Partnership
Rochelle Park, NJ

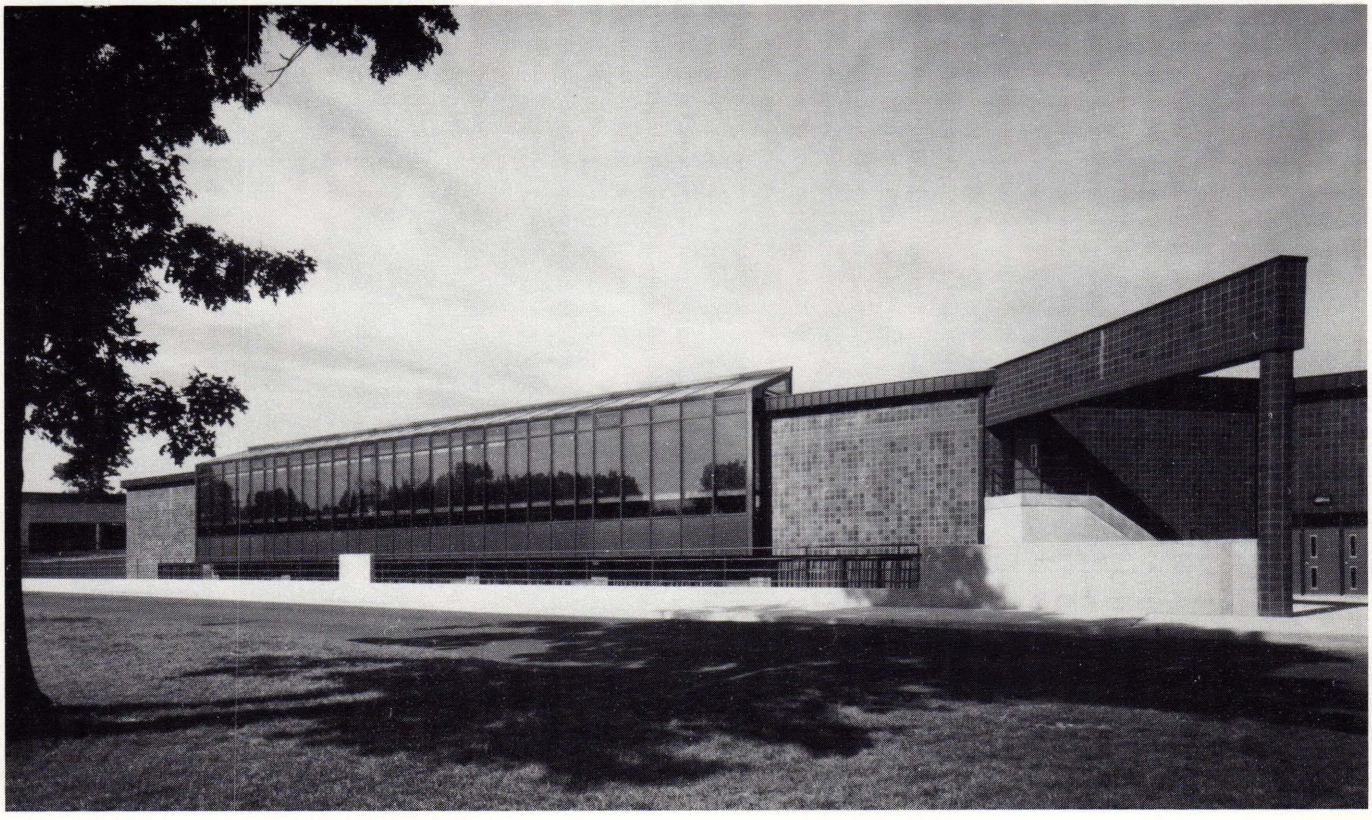
In 1981, the Board of Education of Mahwah Township, a rapidly-developing community, developed a new educational program that the existing high school could not accommodate. Mahwah High School was a twenty-one-year-old campus consisting of thirteen buildings in fair to poor physical condition.

At that time, the high school's buildings were poorly insulated. Curtain walls had full-length, single-pane window coverage; each structure supported a flat roof; the buildings lacked vestibules. The sloping site of the campus, in a mountainous setting, exposed the buildings to strong winter winds. The cost of maintenance was high, and in times of energy shortages, operating costs escalated at an unacceptable rate.

The architects decided to demolish nine of the existing buildings, but to retain the more expensive existing components: the auditorium, gymnasium, kitchen, and cafeteria. They designed a T-shaped building to connect these four parts, and left as a freestanding structure the existing building containing the wood, metal, and automobile shops. The architects also planned major refurbishing of the exteriors and interiors of existing buildings. The design scheme created a cohesive exterior compatible with the corporate offices near the school.

Taking advantage of the sloping site, the new single structure is situated to protect against winter conditions and prevailing winds. The front of the high school now faces southeast. A media center/library on the second floor became a design feature of the educational program and of the building's exterior. It has a greenhouse wall with masonry floors and columns, and uses ducts with small fans to direct heat to the classrooms below. Solid insulated masonry and minimal use of windows also reduces exposure to winter conditions. ■





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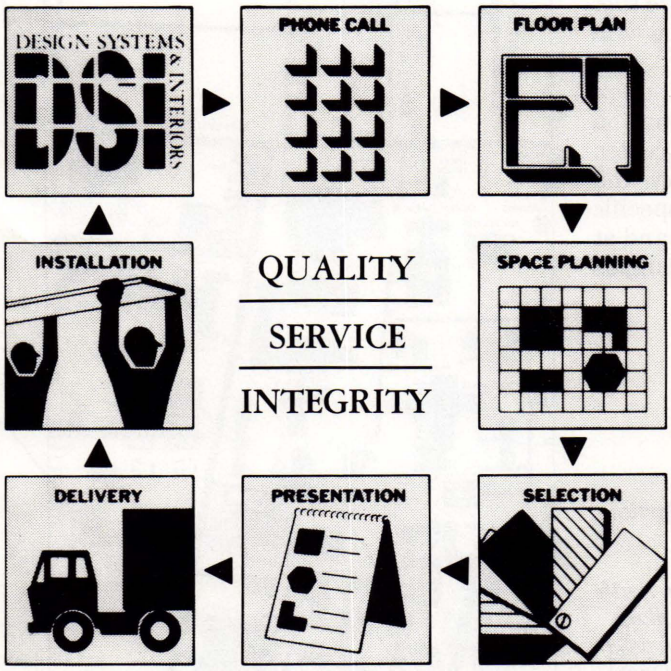

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New Buildings At Princeton University

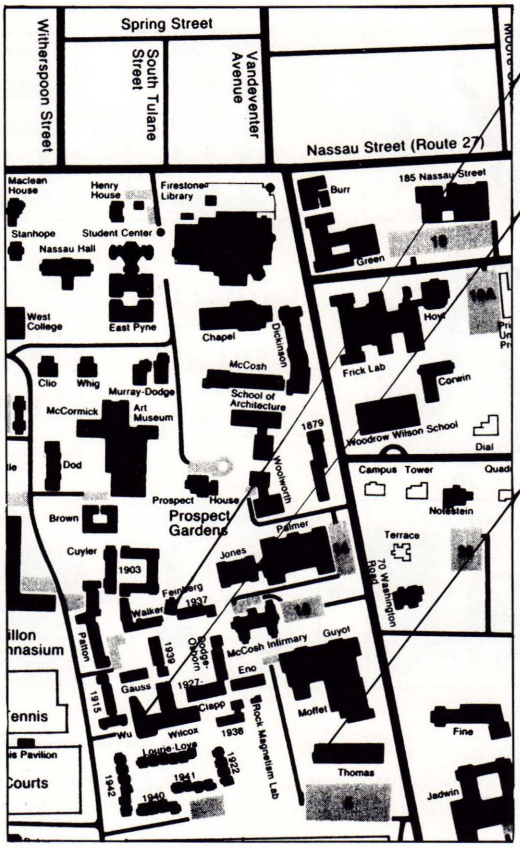
Princeton University, the setting of some of New Jersey's finest buildings, has recently engaged in a capital expansion program. The University has commissioned a number of very talented architects, some well known, others not. The goal is to meet today's educational needs while adding to the legacy of good buildings, and to recognize that a campus is an academic village with its own planning concerns.

This Critique, the third in a series, examines three recent buildings on campus: a dining hall/student center, a molecular biology laboratory, and a small dormitory. Each has specific programmatic requirements, and at the same time influences the campus plan.

The tour of these buildings took place on July 22, 1987, and was comprised of ANJ Editorial Board members Robert D. Cerutti AIA (RDC), Gerard F.X. Geier II, AIA (GFXG); Philip S. Kennedy-Grant AIA (PKG); and John Doran AIA (JD).

The following comments were made during the tour.

Gordon Wu Hall, designed by Venturi, Rauch and Scott Brown and completed in 1983, is the centerpiece of a newly-designated residential



Feinberg Hall
Tod Williams

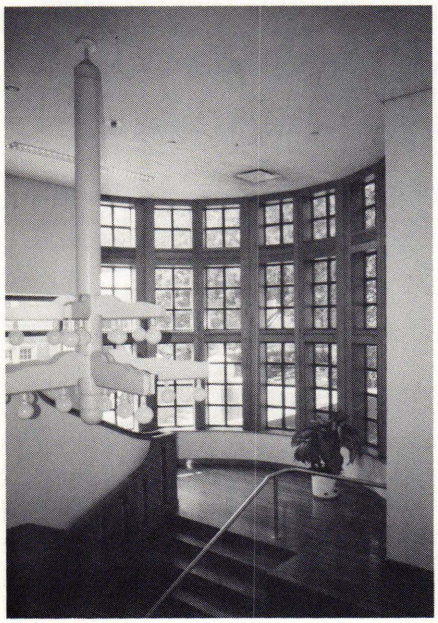
Gordon Wu Hall
Venturi, Rauch & Scott Brown

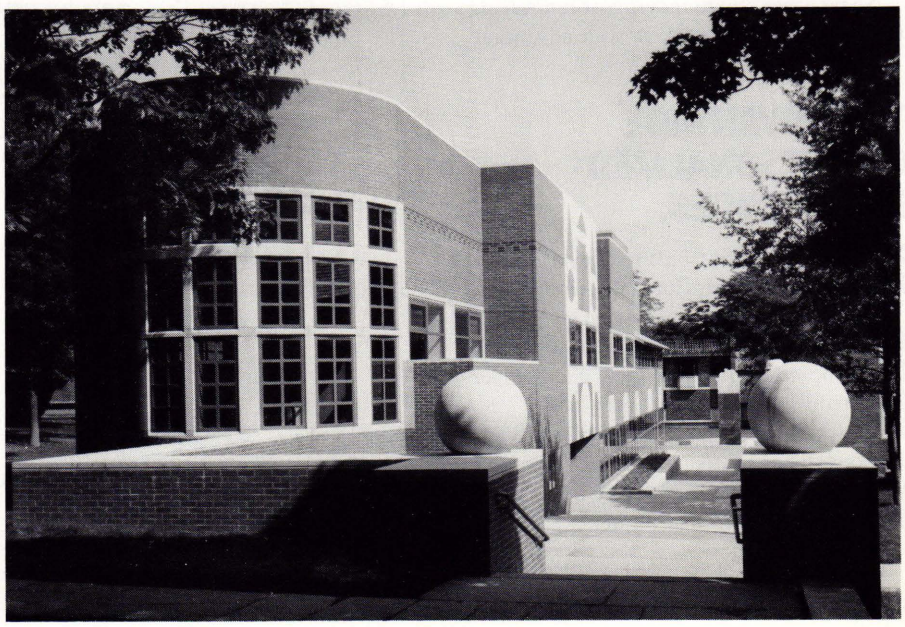
Lewis Thomas Laboratory for Molecular Biology
Payette Associates and Venturi, Rauch & Scott Brown

At right: Princeton University - Partial Campus Map

Bottom right: Wu Hall - view from north showing entry spheres leading to plaza with entry under the geometric marbles. Grant stair hall is to the left and Tiger column beyond marks the intersection of two major campus walks.

Bottom: Wu Hall - grand stair at north end of the building.





complex, Butler College. The brick building's main entrance, ornamented with marble, serves as an entrance to the entire college complex; to the building's south a memorial column inscribed with a tiger acts as the symbolic center of the college. The building, a visual hyphen connecting the dormitories, provides a focal point for Butler College's social life.

Inside, a dining hall trimmed in light oak, and with a glazed west wall and south bay, evokes the English Gothic style. Opposite the dining hall entrance, a broad stairway provides an informal gathering space and indoor amphitheatre, and leads up to a wide bay window on the northern end. A lounge, college master's offices, and library with arched windows are on the second floor.

RDC: The tiger column and plaza next to Wu Hall terminate the major north-south axis and mark the intersection of that axis with a major east-west axis, College Walk. Wu Hall sits at the intersection of those two axes. The building really relates to College Walk, as does the molecular biology building. Notice how Wu Hall's west facade is smack up against the north-south axis.

I think Venturi, Rauch and Scott Brown (VRSB) is intentionally trying to express this in the tautness of the west facade, as opposed to the north and south facades, which have a lot of depth, more like a Tudor Elizabethan building such as McCosh Infirmary. This facade is taut, right down to the smallest detail—the flush keystones, the flush windows, flush marbles at the entrance. There's no relief work at all.

GFXG: But there's much more depth to the detailing if we walk inside the courtyard. Elements are recessed.

RDC: This south wall has nothing to do with the internal plan. What's especially awkward is the connection from the other direction, which is visible from College Walk. Venturi turns his back on Wilcox Hall, a modern building that has Gothic motifs imposed on it, because there's very little thought about the connection to it. He's addressing 1915 Hall with its similar brick, limestone trim, scale, and details.

As you look at the west facade, notice the big spheres, which act as a kind of gateway. *Continued*

PKG: As a gateway to what? That is the termination of this axis.

RDC: To a whole series of plazas.

GFXG: It becomes a gateway in both directions—that's really the significant thing about it. It's marking the major change in level along this path.

RDC: Let's look again at this axis as it descends. There are three different treatments of walkway systems, and I doubt it's haphazard. There's a series of steps at the gateway so you literally go down to a plaza that has a bench and picnic tables, and that I think is intended as an area for viewing the building. Then where there's absolutely nothing going on in the facade, there's a ramp step that stops right at the entry and then continues as a sloped sidewalk. There are three distinct ways of going down, instead of a sidewalk sloped continually down. And the only indication of entrance is a void along the west wall, in contrast to a portico that would come out and greet you.

PKG: Decode this facade!

RDC: There are a number of stylistic influences on this building. One is definitely a modernist curtain-wall feeling of the ribbon window. The other is an Elizabethan or Tudor influence that comes from Collegiate Gothic in general, or from the McCosh Infirmary. The marbles over the entry are a queer decoration. The articles that I've read on it have made an analogy to the flat decorative overmantels that were prevalent in Jacobean or Elizabethan times. The other influence is the large arched window, which is on another major axis over the service area. It looks a lot like the Villa Malcontenta. It is a semi-circle or arch divided into three parts: small bay, big bay, small bay.

JD: How about the Oriental influence? Isn't that overhang reminiscent of Japanese architecture—a little moon gate here.

RDC: There's no sense of the entry decoration ever landing or being supported. Another interesting aspect is how the expansion joints, which need to go where the building changes in elevation from 1 to 3 stories, go smack through the key-

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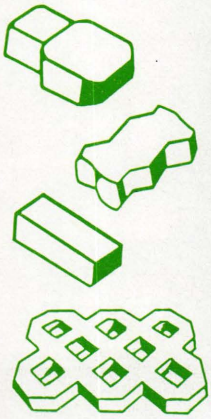

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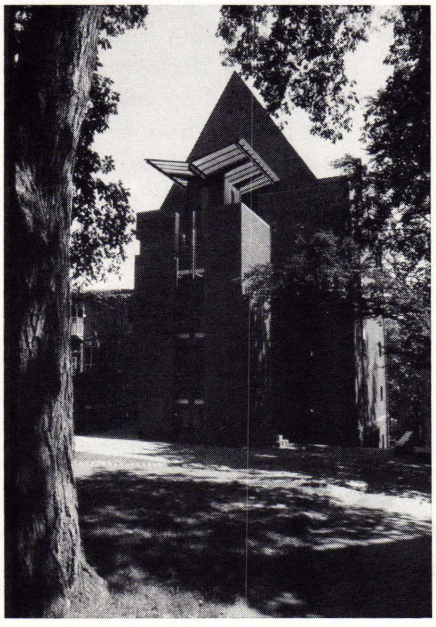


At top: Wu Hall - view from south showing long west facade, with keystones over dining room windows and semi-circular window in library. Wilcox Hall is at the right.

Above: Lewis Thomas Labs - view from west along College Walk.

At left: Feinberg Hall - view from north quad.

stones at any given point. That really reinforces the idea that the keystone is decoration, and that the expansion joint is there because it has to be there. And if it falls through the keystone, so what.

GFXG: You look at the organization of the facade and there are incredible overlaps and plays with the symmetries of the building. At this end the keystones that are cut by the control joints are symmetrically placed around the portion of the building that projects. Then you move down to the next bay...

RDC: ...and the keystone is centered on that.

GFXG: Not only is it centered, but you get a larger, wider keystone that is centered on the bay with the sloped roof over it, that itself centers on the thermal window. But when you are looking at the building from the end of the walk where we started, you don't see any of the symmetries at all. You just see this continuous system that at first looks consistent and regular, with the keystones marching along.

RDC: The east-west axis is reinforced by the loading dock, by this keystone which is the center of the roof overhang, by the semi-circular window, and by the fact that the pediment goes up and looks like a brow or a forehead.

PKG: My initial reaction is that Venturi emphasizes the loading dock because it happened to be on the axis of this walk. Here we're standing at the cross axis celebrating a loading dock below.

RDC: Classic Venturi. Downplay the monumental and celebrate the ordinary.

JD: But isn't it really a matter of where's the loading dock going to go on this location? So if it's going to be here then you make it part of the design.

RDC: He made a deliberate statement. He didn't have to reinforce the loading dock with any other axial type of element, but he chose to.

PKG: I don't care if it's classic Venturi or not, I question the rationale behind it or his philosophy. The overblowing

of it. You can do that and be more subtle and to me it would be more effective.

RDC: What surprises me about Venturi is that he didn't shift the loading dock three feet out of symmetry to really annoy you. He has done a number of moves like that in the past.

GFXG: There are subtle shifts in this elevation.

RDC: This raingutter could have been an interior leader, but he chose to put it off-center and not balanced. But what it all adds up to when you look from the tennis courts is an implied axial symmetry, whether it's off 6 inches or a foot.

PKG: When we talk about the gate, the plaza, the ramp steps, and then the ramp, we're discussing an issue of speed. We're slowed up there, we're slowed a little bit less at the entrance, but there's a void where the current will create an eddy and you'll get sucked in. Down here where we're creating this three-story monumental thing, we're slipping right on by on the cross axis so as not to be in the way.

GFXG: You have to look back at some basic Venturisms about sign and symbol, and at the tendency in post-moderism to overdo the symmetries and the use of historic form. This is a comment on that, in that historic forms are there but they're not used symmetrically. They're used as symbols. And we'll all stand around here analyzing this and say that the keystone is off by six inches and why is he doing that, but the whole point is that for the public who looks at this building it's not even an issue. It's kind of an overlapping of the modernist philosophy that things can go anywhere where they need to be and of appliquéing of classical elements or symbolic elements for their own sake, having nothing to do necessarily with the function of the building or the way it's put together.

RDC: I'm not sure that's completely true. I think it has a lot to do with internal organization.

PKG: The outside is dictated by the circulation. This wall is put in this space, with the sheer quality, because this is where people are flowing by. This is a river. A river of folks.

RDC: He wants you to slip by the major cross axis before you even know it. I think this is an extremely sophisticated building that is probably an architect's building.

GFXG: It functions on both levels. I think this is a collage of ideas that is assembled skillfully.

RDC: In my opinion, the colossal classical buildings of Alan Greenberg are a little off-putting. If you stood on the central axis of that, you'd be very uncomfortable. It's so powerful and literal. Wu Hall is all implied and symbolic. When we're standing right here in the plaza the south bay functions really well, because there's a slight shift in the major east-west campus walkway, College Walk, which connects the science complex with the residential colleges, and goes on to the tennis courts. In the south bay, Venturi introduces a slight kink, deflects you around the building, and redirects you along the axis. The building could have been kept entirely off it, but it just juts its nose very slightly into this whole walk

system and acts as a pivotal node.

PKG: He is not being receptive; he is acknowledging the circulation by sticking his nose into it.

GFXG: I think it's very consistent with the rest of the building.

JD: Let's all go inside.

RDC: The impression I have in walking into the building, unlike in a modernist building that is supposed to play down the inside-outside, is that you definitely sense you are inside a building. There's a very rich theme of wood that is not expressed so much on the outside, and that suggests an interior that is not modern. And this is the classic grand stairhall of a Tudor building. Actually, these bleachers that we're sitting on are intended for socializing in the stairhall.

JD: The arches upstairs, in the library, have nothing to do with the room, so obviously they are responding to the axis.

RDC: I like the use of clerestory light down the hallways, which makes it very light even though you can't look outside. I think it's another commentary, that you don't look out onto Wilcox.

The plan is not really a classical plan in that there is a series of rooms and portals that let you in from each one to the other one. But it's not a modern space that is entirely open and almost undefinable. It's half-way in between. It's got classical elements, but it's very fluid; one space bleeds into the other.

GFXG: There are even elements of Richard Meier's planning in the single-loaded corridor systems. Look at Hartford Seminary, a building much on the same size scale as this building. My recollection is that the circulation ideas have a lot of similarities.

There is a consistent approach here in the library to the relation of the outside to the inside. The planning, generally, is more functional. The meaning of the room is layered onto that by the addition of detail like chair rails, carrels, thermal windows that appear only on the library, and balconies as a kind of study loft.

RDC: Looking over the dining hall, Phil, do you see that line of ceiling lights? The one that happens to fall over the axis is cruciform. You can see that Venturi uses the bay window to suggest a two-story volume that includes the library above the dining room.

PKG: Food for the body, food for thought, it's all connected.

RDC: Placing these two layers of columns so close to each other is a modernist reference.

GFXG: It's not really structural. But the point is that the columns serve to mark the line of the building on the inside from above and the fact that there is a kind of flexible skin on the outside moving in and out above this level.

PKG: In an older building's dining hall, you would have thick columns and in-between intercolumnation. Now it's wide open, because we don't need the thick masonry walls.

RDC: The thickness of the traditional wall is suggested by the thin layer of space that separates the main dining hall from the outside, so that

the main dining hall doesn't literally front on the exterior curtain wall. It's a kind of transition zone.

JD: Let's walk down to the microbiology building.

Lewis Thomas Laboratory (1985) was a joint project of Venturi, Rauch, and Scott Brown and Payette Associates; the former firm was responsible for the exterior, and the latter for the interior. Unlike Wu Hall, with its monochromatic brick walls, the molecular biology laboratory is a precast-concrete building with patterned brick banding set horizontally between the rows of windows. On the uppermost level the facade has large-scale checkerboard patterns with varying degrees of contrast, and has large openings for air-intake vents. Exhaust stacks top the building, and on the stepped-down southern side of the roof is a row of greenhouses.

On the north facade is a Gothic-style cutout above the wooden doors of the main entry. Inside, laboratories and offices are located along the perimeter, and lounges with built-in window seats and blackboards are at the east and west ends. Light oak similar to that in Wu Hall's interior accents the hallways and lounges.

RDC: Here, instead of a figural flatness, Lewis Thomas Laboratory has an absolute flatness along College Walk. VRSB senses the length of the axis and the length of the tangent of his building to the axis, and expresses it as flatness on the north facade. This is a lot like Wu Hall in that it's a long rectangular building expressed by slightly bowed elements at the two short ends. The south end faces out into open space, and has these very deep, highly articulated windows, almost like brise-soleils. I think you can see the analogy right away. There is real solid, concrete depth to it. It's a free elevation, facing south, with no encumbrances, no references, nothing.

GFXG: Then again there's the same issue as in the Wu Hall-Wilcox connection. The two planes of the longer walls are expressed as a thickness and the pattern turns the corner, but the walls have nothing to do with each other. They don't line up; they don't necessarily intermesh; they are expressed as totally individual and separate elements. They just crash together at that corner.

RDC: And the facades are coded by different brick patterns. I think the north and the south have a similar one and the east and the west have another similar one, so you never see the two patterns side by side. The checkerboard gives it the Ralston-Purina look.

GFXG: Having just been in Italy, I particularly notice the patternmaking on the facade. Venturi has been doing patternmaking for some time and other architects are now starting to explore it. It's really a shame that it dropped out of favor for so long, because there is an incredible amount in the older Classical and Gothic buildings in Europe. Now, when you present a building to a client and you have a pattern on a building, you almost have to apologize to the client or make excuses for why you're trying to do it.

JD: In doing a research building for NJIT, we're using patterns of brick and block on essentially flat facades. When I was trying to explain this

to NJIT's President, I mentioned this building in particular. He said, "I'm getting used to that now, and I can see that without too much cost you can get some real interest and attract some attention with it." Having seen it, he was prepared to accept the patterns.

RDC: There's a tradition of patterned facades right on this campus. The Palmer Lab building has a Flemish bond of red and deep-blue alternating patterns. The Lewis Thomas Laboratory ornament is confined to ribbons around the building, reinforcing a sense of a ribbon window in a modern building.

JD: There's such a contrast between the richness of the brick pattern and the simplicity of the checkerboard. Simplicity isn't quite the word. It's like a real falling-off in quality.

RDC: I think it has a lot to do with Venturi's interest in Las Vegas and signage. He likes buildings that can be read. It's the billboard that's read from the distance. There are two scales going on. The little brick scale is the scale you can appreciate up close; the big checkerboard is the scale that you see way across the athletic field or, from the other side, driving on Washington Road.

PKG: It says, "Bob's Place."

RDC: Knowing Venturi, there's no question that he has that interest in signage and in reading two levels at once.

PKG: You can see, if you look at the building with that in mind, the billboard disengages from the rest of the facade. Just like Gordon Wu, it has the same really rich palette of materials: brick limestone, the pewter-colored windows, stone base, wood entry.

GFXG: Again similar to Wu, the entry is recessed with some kind of a symbolic element that is very stylistically abstract, an entry piece set over the door.

RDC: It's completely flush. It doesn't have any change in plane, no matter what the ornament.

GFXG: Totally unsupported.

RDC: Seemingly weightless. This is even more dynamic than the Gordon Wu entry because it really looks like three Gothic arches that have been sawed off. It's not even a sense of weightlessness, it's a sense that they did come down to the ground and they were sawn.

GFXG: It seems as if it is missing its keystone, and is ready to fall down any second.

RDC: It is missing its columns. It's like one of those Giulio Romano mannerist maneuvers in which there's a sense of falling apart.

GFXG: Then that entry piece is even further developed by the disintegration out into the brick pattern. The pattern grows smaller and smaller as you get further away. You suddenly realize that this is nothing but an appliqué.

RDC: An ornament. It's just a sign, a billboard. It's a billboard that refers to an historical style, or a big flashing sign that says "ENTER." Another interesting thing is that the large-scale openings of the vents, which

I'm sure are functional in ventilating a laboratory space, are expressed on the third floor. That's a level that you see from a distance, and the scale of the openings is meant to be read at a distance. I think that's deliberate, because they could have put the louvers on the roof.

GFXG: The other interesting notion about the louvers is that in this case they are pulled back very far. The opening in the wall is expressed as an opening in the wall and the louver is something that sits back behind that.

RDC: It expresses the hollows of that whole upper story, which is just mechanical systems. It's a big empty space. It's not really human-occupied space like the rest.

GFXG: Now this pattern on the third floor is interesting as a contrast to the big checkerboard pattern. It is similar but it is running bond of a larger scale. Half is the checkerboard and half the brick pattern.

PKG: Inside the Thomas Laboratory, the treatment of the floor is very simple, but it's thoughtful. Very subtle. And if you think about it, on the floor are the same kind of characters as on the outside banding.

RDC: The organization of the building includes this two-story hallway on axis with the two entrances, which are on two different levels.

PKG: This two-story hallway is closed but open, so you're not walking through the dungeon of the building. It's wide enough so that two guys can stand out here and say, "Well, in my experiment this is what I was doing..."

RDC: The south entrance is the parking entrance. A classic dilemma of the symbolic entrance and the actual entrance.

PKG: John and I were talking about strength as we came over here. One of the appealing things is that this is a very coherent, strong idea. And I don't see anywhere that it makes a significant compromise from the overall idea. He's saying, "Here's my pattern. I do it on the walls. I do it on the floors. It's heavy, massive, bold. Here it is, like it or not. I don't care." I'm not trying to be flippant. I really think that's very good. When we compare that attitude with a typical practice, as represented by our firms, that's not an easy thing to do. You want to get it built. You gotta do it on time. You've got a budget.

RDC: I think the University as a client recognized that it had a very high caliber of architecture.

PKG: Regardless of that fact...

GFXG:...they still had to get it built within a budget.

JD: But you have to start with a strong design. You have to have a concept, the idea, before you can sell it to anybody. I don't think people are as resistant to architecture as we would like to think.

RDC: I don't know that the richness that you see in the building necessarily adds up to a lot of money.

FGXG: I think Venturi has become...

RDC: ...extremely skillful about using pattern and other inexpensive ways of giving richness and life to a building.

GFXG: I think that what Venturi is doing is saying, "Let's use quality materials but use a modern building technology with them." This goes back to the same dialogue that we've been talking about in other ways, dialogue between modern technology and traditional, and combining those

two things in a way that is consistent with his philosophy of the building. Look at the the retaining walls. A lot of architects would never be willing to bare the steel-formed concrete on a building that is otherwise brick and limestone. But not in this case—he's patterned it. He has controlled it to an extreme degree, but it's just poured concrete, a retaining wall, and that's OK. And it happens again at the loading dock at the end of this building. The same thing happens at Wu Hall where the loading dock is just poured.

PKG: The other thing is if you look at that promenade where the folks are walking on the outside, that's where he puts the wood. At the doors, at the entrance. The touchy-feely materials are where the people are, not on the fourth-floor window sill.

RDC: On the interior, they have embellished the public areas with rich wood trim, paneling, and ceilings. At the two far ends of the building where the student lounges are, the deep-set windows are embellished in wood, and all the laboratory spaces that are in between along the corridor wall have wood. But inside the labs are just pure functional space with exposed spiral ducts and hanging lights.

The exposed electrical raceways in the ceilings and all that, why try to control it, you're going to have to get into it practically every day, so don't put a ceiling in. They know when to stop.

Let's walk over to Feinberg Hall.

Feinberg Hall, a forty-bed dormitory, was designed by Tod Williams and completed in 1986. A tower measuring forty ft. on each side and eighty ft. tall, it creates a gateway to another newly-defined residential college. According to the architect, "By inserting a small tower in a constricted, sloping site, we make a commitment to infill and thus celebrate the dense, almost urban condition of the site."

The building has bearing walls clad in ironspot aubergine brick, greenish-grey slate trim, and a steeply sloping standing-seam copper roof. On the outside, to the north, is an attached elevator tower. Acting as an alternate entry is a firestair, with walls that shield it and hold up an inverted steel and wired-glass canopy.

On the ground floor are rooms suitable for handicapped students or for a resident assistant, and a central living room for large gatherings. The top two suites have their own circulation, reorienting the direction of movement, and share a living room that has a thirty-foot-high ceiling and that overlooks the quad to the south.

GFXG: This building is by Tod Williams, of New York. It's stripped-down, very tightly controlled, and has a relative lack of ornament. The horizontal ribbon of stone as a base and the little strips in between the central windows just barely make a nod at the architecture on campus.

PKG: What is your feeling about the deflection of the angle? It's not parallel to the facade.

RDC: I think it's recognizing this courtyard, and the access from the quad above. I think the north facade of the building is on axis with the upper quad.

GFXG: The shift rotation also allows this corner to leak a little bit, so that you can go down along the front of this longer dorm here. If the building had been pulled back this way, you would have had a tight little corridor

here between two buildings. But just flipping that around a little bit opens the whole corner up and allows it to leak off. I think it also allows the building to exist as an object as well as an enclosing element.

PKG: This is the partially-opened door between those two buildings.

RDC: But it also helps reinforce the idea that it's a very small building, and had it tried to blend into either of the two buildings next to it, you would hardly notice it. It would look like an addition to either one of them.

GFXG: Feinberg Hall's brick relates to a lot of the other brick buildings, but the purplish color of the brick is tied into the stone of this older dormitory. It's much more striking in its contrast to the modern dormitory.

RDC: It has to stand out because it's so small. It can't really be a background building. It has reinforced the courtyard to the south. It's created a courtyard to the west. And it's also reinforced the courtyard to the north.

PKG: And this wall is parallel to the dorm in the upper level, the upper quad where maybe the orthogonal grid is more important.

GFXG: That's a real European influence, the wired-glass cover. You see covered arcades and covered patios of wired glass in Europe all the time.

RDC: You also see open exterior stairs and exterior elevators a lot in Europe. The style is very rationalist, reminiscent of Mario Botta's or Louis Kahn's work.

GFXG: Because of the steepness of that roof, it almost looks like it's falling back at you. It's amazing.

PKG: I think it's really very successful from the campus plan point of view and in terms of the facade. It doesn't try to imitate the 30's, as the earlier 50's and 60's buildings tried to do, even though it uses the same material. There's a little bit of a pattern in the windows but they're not heavily mullioned.

RDC: It's a definite object-building, especially in the north quad. Whereas the other ones are background buildings, with Gothic facades defining the enclosure.

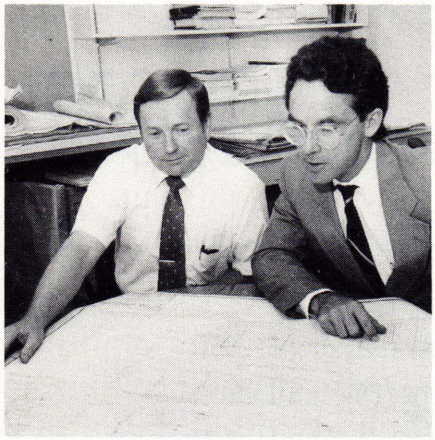
GFXG: Almost all the buildings are very heavily landscaped or have got strong ivy growths on them.

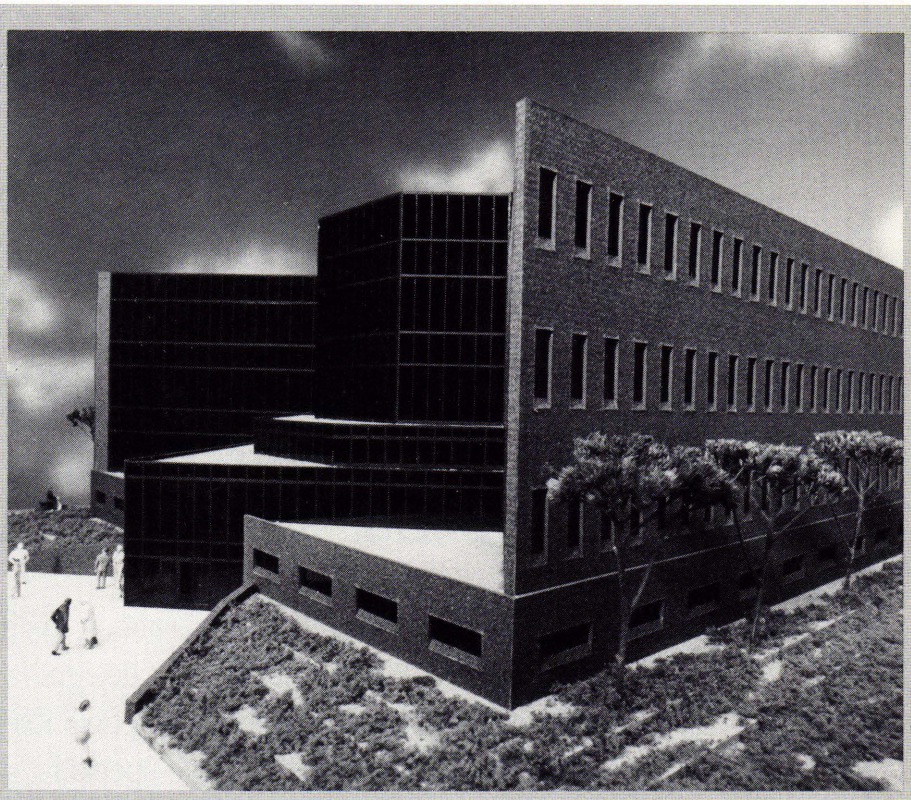
RDC: This will get it, too.

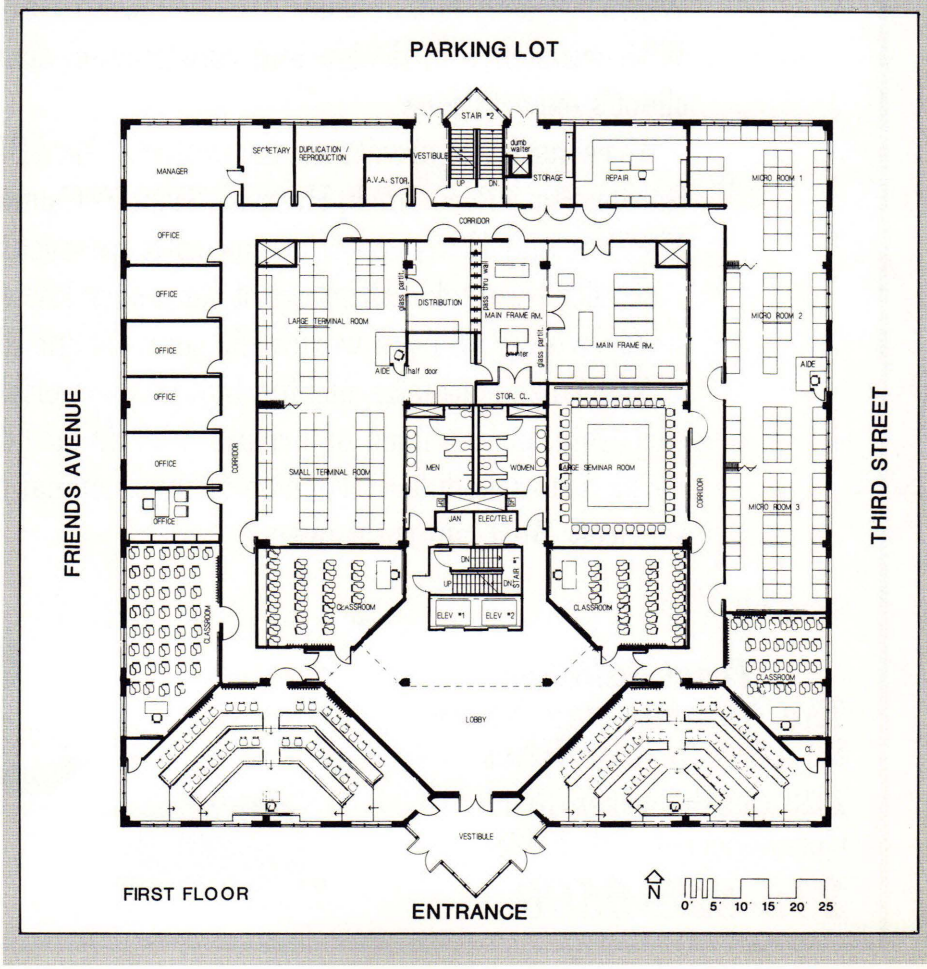
GFXG: But not really, because there's no planting around it, there's no strip. So this is going to remain as an object in this space. ■

Conversation With a Client

As part of its effort to become one of the leading scientific and research institutions in the country, Rutgers, the State University of New Jersey, has fifteen projects in the design phase and more than ten projects under construction. ANJ Editorial Board Chairman Philip S. Kennedy-Grant, AIA, recently interviewed Donald S. Bolinger, Special Assistant to the Associate Vice President for Facilities at Rutgers.







After retiring in 1986 from the Civil Engineer Corps of the U.S. Navy, where he had spent the previous twenty-eight years, Donald S. Bolinger did not move to a quiet retreat. Instead, he joined Rutgers in the midst of its current construction boom, which holds more than an academic interest for New Jersey architects.

The civil engineer explained that in the past few years Rutgers's Division of Design and Construction, once a single office, had been split into separate offices, each under the jurisdiction of a different organization. The two offices are now in closer contact. "Shortly after our new Associate Vice President for Facilities arrived in April," said Bolinger, "the design division was incorporated under him, so he now has a Division of Facilities Design and a Division of Facilities Construction."

Bolinger outlined the way in which Rutgers carries out a typical new project. "Once planning is done, a concept document is developed by the Office of Capital Planning, a separate

Rutgers Business and Science Building
Camden, NJ

The Tarquini Organization
Camden, NJ

The ruling concept of the Business and Science Building at Rutgers University's Camden campus is a sculpted cube with brick faces. At places where the faces of the cube are broken, the surface material changes to glass. On three sides of the cube (the sides and back of the building), punched windows break the brick planes and echo the shape and scale of the windows around the campus.

Behind the curtain wall of glass across the front are faculty offices with southern exposure. Lecture halls, classrooms, and a computer room are clustered around a lobby that soars beneath a two-story space frame. The remainder of the building houses science labs, classrooms, and the campus's mainframe computer.

The front facade's projecting and receding glass planes enhance the sculptural effect of the building. And, like a sculpture, the building will sit atop a landscaped berm pedestal.

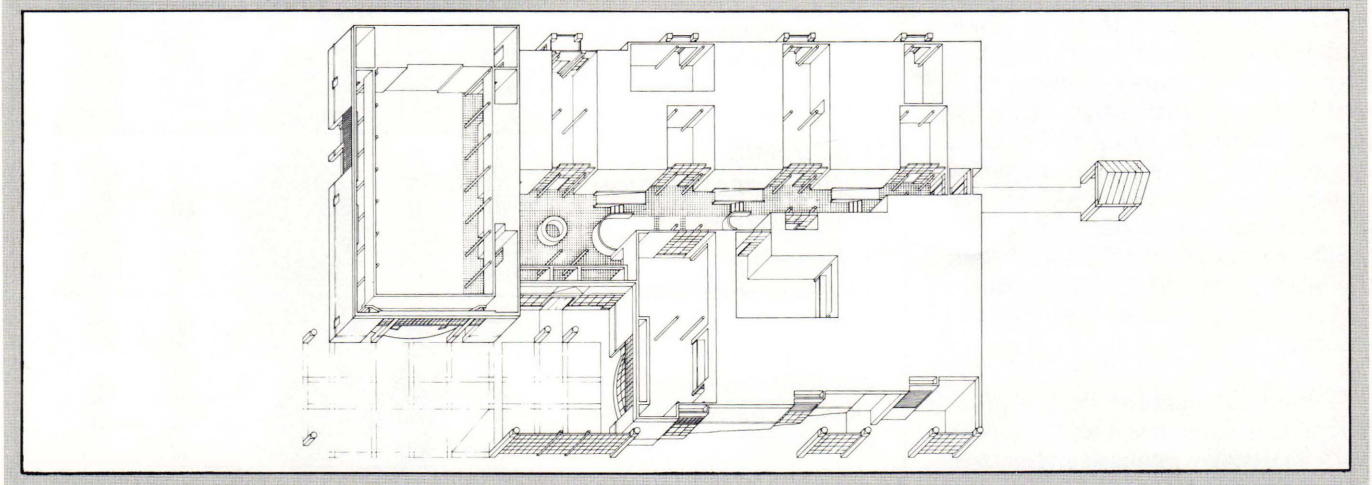
Livingston College Student Center,
Rutgers UniversityPiscataway Township, NJ

Geddes Brecher Qualls Cunningham
Princeton, NJ

The design for this new student center evolved from the need to integrate many diverse program elements, ranging from a student radio station to a snack bar, within a one-story building. In addition, the architects had to connect two required entrances: to the north a bus stop, marked by a kiosk, and to the south an entry plaza related to the campus's walkway system.

A central spine, resembling a street paved with quarry tile, links the two entrances and ties together the offices, recreation areas, dining room, etc. Doors and windows of these rooms open onto the central concourse, which includes a series of lounge areas. A system of skylights running east to west illuminates the building.

Since the site slopes down north to south, the architects positioned rooms that needed higher ceilings at the southern end, and stepped down the floor. At this end is College Hall, divisible by partitions and offering study space in seating alcoves around its perimeter.



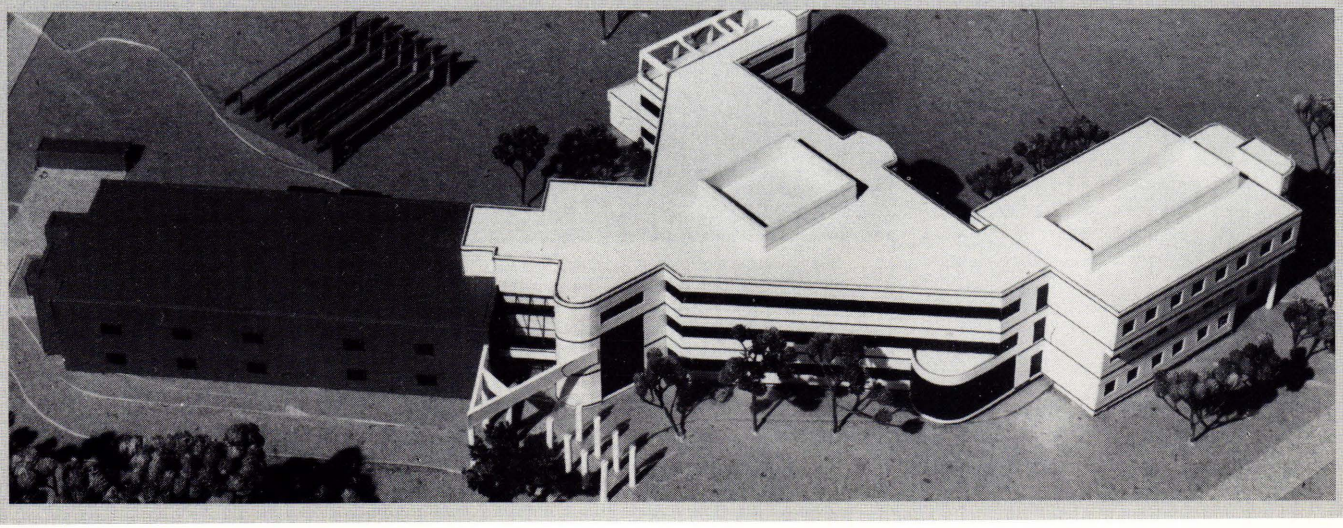
Rutgers University Environmental and Natural Resources Building
New Brunswick, NJ

Chapman & Biber, AIA
Summit, NJ

The Environmental and Natural Resources Building is divided by function and design into three distinct areas. These areas are the centrally-located offices and teaching facilities, the computer/remote sensing center wing, and the research laboratories wing, which houses chemistry equipment and products. Flexible laboratory spaces will allow faculty members to adapt the laboratory size and configuration to current and future research needs.

An open arcade directs pedestrian flow into a three-story atrium/lobby, which also serves as a new entry for the existing attached building. Public spaces in the new building will allow interaction among groups working in the new center.

To break up the facade, the new building is at an angle to the old building, a brick box. Brick on the new building will be of different shapes and tones, and will form painterly patterns. A semicourtyard in back will begin the enclosure of a portion of the flat, open grounds.



organization. When that concept document is approved by our Board of Governors, it comes to our office, and then the Division of Facilities Design goes through the architect search, negotiates an agreement with the selected architect, and follows through and coordinates the final design project. After that project has been designed and bidding documents are available, it goes to the Division of Facilities Construction. They take it from the bidding process through the end of construction in the field."

Although Rutgers's in-house architectural staff used to handle smaller projects, it is currently farming out almost all its work. "Right now the in-house staff is fully occupied in coordinating and managing outside contracts," Bolinger said.

The process of selecting architects from outside the Rutgers staff varies, but usually starts with the Division of Facilities Design's file of architect brochures and organizational staffing forms. When a project has been approved for design, one of the staff architects goes through the file and picks out twenty or thirty firms that specialize in or have experience in the type of project being planned.

Bolinger noted that the office makes an effort to keep this file up to date. When he arrived last September, he asked each firm with a brochure more than a year old to send a new one. "In the last six or seven months, since the President announced this $330 million program, and it has been in the papers, we've been inundated by calls from firms up and down the East Coast. Every time they call, we ask them to send in a brochure. We've built up our file two- or three-fold in that period of time."

In the second step of the architect search process, a preselection committee goes through the twenty or thirty brochures and chooses six or seven firms considered to be best qualified for a particular job. This committee interviews representatives of these firms, and makes a short list of three. A special subcommittee of the Building and Grounds Committee of the University Board of Governors interviews these three. "The Board makes the final decision on the architect, and while they may ask for our recommendations, they pick whomever they feel is the best of the final three," Bolinger said.

What, in the eyes of the Rutgers staff and administration, makes an architectural firm best qualified for the job? "Generally we would not select the firm for interview unless they have shown previous experience in the particular type of design we seek," Bolinger explained.

He cited two current projects, both joint ventures between Rutgers and the University of Medicine and Dentistry of New Jersey. One is a $28 million Center for Advanced Biotechnology and Medicine, and the other, the Environmental and Occupational Health and Sciences Institute, a $16 million building intended primarily for toxicology research. "On both those projects we looked for firms that were specifically oriented toward research laboratory design. On the first project, the architect was from Boston; the second one is The Hillier Group from Princeton. All things being equal, we would like to give our work to New Jersey architects. But if we feel that the best firm is from out of state,

then that becomes an important consideration."

Another consideration might be the firm's experience in working for the State University itself. "It appears that the firms who have done business with us in the past, on and off or frequently, have a better feel for the administrative and contractual portions of their performance. Several firms here for the first time have questioned our policies and our way of doing business, our agreements. We've had some difficulty with them in working out an agreeable relationship. It may be that if they're selected for projects in the future, it will be easier to work with them.... We tend to wait until a firm's design has been constructed before we consider asking them back for a future interview."

Bolinger pointed out that the fee for the project is not a criterion for selecting architects to interview, but that the Facilities Office has begun sending copies of the fee range in interview announcements to firms that it is seeking. "As part of the interview process, we ask them if they are comfortable being able to design within that fee range.... Along with that we're sending out a copy of our Owner-Architect Agreement, because we've had several firms, since I've been here, who have tried to make so many changes in the agreement that we wouldn't recognize it."

Asked whether the size of firms is a factor in selection, Bolinger responded, "It depends on whether they have an engineering staff in-house or use consultants. It really doesn't matter to us; we're pretty familiar with most of the major reputable mechanical, electrical, and structural consultants. If a firm who doesn't have that in-house capability tells us who they plan to use, we'll work with them on that."

Once a firm is selected, it must work with a concept document that Bolinger describes as "fairly complete in determining the scope of the project (square footage and the budget)." The architect consults the department members who will be using the facility to make sure that their needs will be met.

Each of the Rutgers senior project architects has several assigned design projects, and works with them from the outset. The senior project architect participates in the selection of an outside architectural firm, and then becomes the official point of contact between the University and the chosen firm. The senior project architect works closely with the firm on the final version of the concept document, during the program design phase, and through the schematic design development.

"Once we get into the working drawing phase the [Rutgers staff] architect does not have that much frequent contact with the consultant," Bolinger remarked. "During the time of scheduling it's up to the architect to coordinate the review of the plans and specs and to set the initial criteria with our engineers, who will get involved in those criteria and in review of the design. The operating forces who have a stake in maintaining the facility once it is completed are also involved."

After the design is complete, how does Rutgers deal with a budget overrun? "It depends on the nature of the project itself and the funds that are available or that could be made available," said Bolinger. "If

it's a $6 million job that comes in $50,000 over, there's a possibility that additional funds can be provided to award the contract. The money would come either from somewhere else in the project budget or, if necessary, the University administration would approve some additional funds. We give strict guidance to the architect that we expect him to come in on budget or under. If it comes in over, our agreement calls for him to redesign it, at his expense, to come within the budget."

When the bids come in and meet the budget requirements, the job is forwarded to the Facilities Construction Office. Later, after the project is built, the design, construction, and maintenance divisions jointly conduct a post-occupancy evaluation. Bolinger said that about eleven months after the building has been accepted from the contractor, before the twelve-month warranties for the operational equipment expire, the staff architect, the design architect, the contractor, and the facilities maintenance people go through the building. "So we do have an opportunity to see how the building is working. Is it really what we wanted for the user; is he happy with it? If not, then we'll take those suggestions and comments and try to incorporate corrections into future designs."

In addition to accommodating the needs of the University departments, Rutgers has an overall goal of preserving or furthering the aesthetic coherence of each of its campuses. One method is by pursuing plans such as the Campus Environmental Enhancement Program, which includes new landscaping and facade work. Another approach is careful planning of new construction.

"Whenever we have a new facility being constructed on one of our campuses, we tell the architect that it has to be compatible with as many of the surrounding buildings as is possible," said Bolinger. "Each campus has its own distinct architectural theme, so we try on each of those campuses to maintain that theme for a dominant effect."

He cited the example of the Kilmer campus's Livingston College, which was largely built in the late 1960's through the early 1970's. "We do have a new business school currently being designed there, and we've advised the architect, The Hillier Group, that

it has to fit in with the theme."

However, harmonizing with existing architecture is not always simple. Bolinger pointed out that campus styles may range from Colonial to neo-modern. "Some buildings are in the precast style of the 50's and 60's. In fact,we've got one building that looks like a bomb-shelter; it's almost completely poured-in-place concrete. We are considering designing a facade for it.

"Our biggest problem is on Busch Campus. We have such a variety of different architectural styles and colors that it's very difficult for an architect to achieve compatibility. We do want to ensure that whatever they design there is not going to be a monument to that principal's ego....

"Brick color selection has been so much of a concern, particularly on the Busch Campus, that our Building and Grounds Committee has become involved in making that final choice for various facilities." Bolinger added that the Facilities Office is requiring that full-size mockup wall sections of major projects be built to show the color and compatibility of exterior walls.

Bolinger listed a number of Rutgers projects, either recently built or still under design, by New Jersey architects. "CUH2A has designed several facilities for us. The most recently-completed facility is some student housing, which is now occupied and appears to be very usable and well-designed. Under construction now and about twenty percent complete is the Center for Ceramics Research, in connection with our engineering school. Adjacent to that is, under design, a Laboratory for Fiber Optics Research."

The recently-completed Athletic Training Facility, designed by Nadaskay Kopelson, is an addition to the existing training facility (see ANJ 3:86, *Recreational Facilities*). Bolinger noted that the drainage structure around the building had to be modified after construction, but added, "The design itself is very attractive and a good facility for the users."

Other projects underway include the Camden campus's Business and Science Building, designed by the Tarquini Organization and now under construction; Faridy Thorne Maddish's design for an addition to a gym on Camden campus; and Morton Russo Maggio's design for improvement and expansion of the Cook/Douglass Colleges recreational facility. Chapman and Biber is designing a $9 million Natural Resources Building for Cook/Douglass, and Leo Mahony a student center for Cook. The Electrical Engineering Building, designed by Rothe-Johnson Associates, is nearly complete; Williams & Widmer has under construction a $4 million, single-story research laboratory.

"The University is attempting to attract world-class scholars," Bolinger emphasized. "Through support of the State High-Technology Commission, we are in the process of attracting them, and we've been fairly successful in having them come to the University. And as an adjunct to their arrival we are building new facilities for many of them."

The growth of Rutgers will not, therefore, end with the twenty-five projects currently in design or under construction.

"It looks like in the next year we have another ten projects coming up that could equal another $100 million-plus," Bolinger concluded. "We're going to be busy for at least the next five years. It's a very exciting program." ■

NEWS

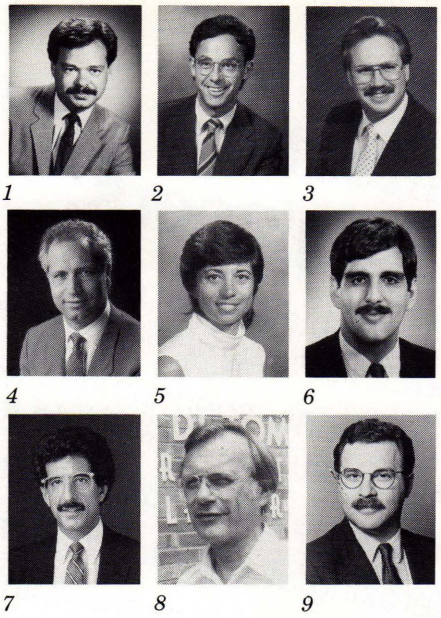
Thomas Calvanico, Esq., has been appointed general counsel for The Ryan Group of Middletown and New York City, and, as a member of staff, will work with both TRG's staff plus their clients on contract proposals, document reviews, and all other legal matters including claims, litigation, and disputes.

Philip S. Kennedy-Grant, AIA, John J. Crandall, AIA, and Carmine Cerminara, AIA, currently Associates of the Bedminster firm, Barrett Allen Ginsberg, AIA, PA, have been promoted to Partner.

Marie Wolff, an Associate, has been promoted to Senior Associate of the firm.

Leon J. Paboojian, AIA, has been appointed a Senior Associate of The Gilchrist Partnership of Leonia. He has been an Associate and Project Architect since 1984.

Paul L. Gallis has joined Rothe-Johnson Associates of Edison as an Associate with the position of Director of Marketing and Business Development.



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1- *Thomas Calvanico, Esq.*

2- *Philip S. Kennedy-Grant, AIA*

3- *John J. Crandall, AIA*

4- *Carmine Cerminara, AIA*

5- *Marie Wolff*

6- *Leon J. Paboojian, AIA*

7- *Paul L. Gallis*

8- *Henry Puzio, AIA*

9- *Bruce Hendler, ASLA*

Henry Puzio, AIA, Architects League of Northern NJ/NJSA President, received the Vegliante Award, the League's highest accolade, presented annually for outstanding contributions to the advancement of architecture as a profession.

Herman C. Litwack, AIA, was the recipient of the 1987 School of Architecture, NJIT, Recognition Award, presented annually by the school for outstanding contributions over the years to the School. He received a framed drawing from one of the talented students at SOA. Other architects who have received this award in the recent past are *William M. Brown, Jr., AIA, and Harry B. Mahler, FAIA.*

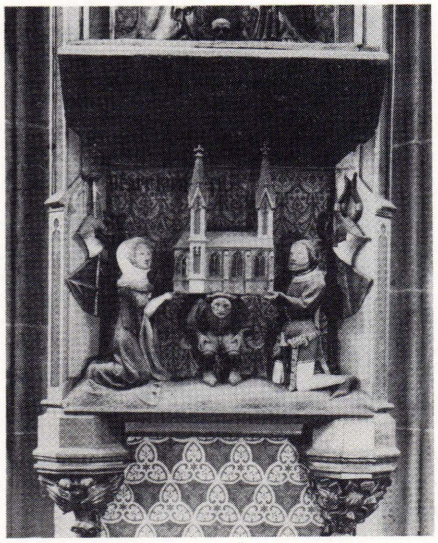
Bruce Hendler, ASLA, Director of Planning and Urban Design for the Grad Partnership of Newark, has been promoted to the position of Associate.

Book Reviews

The Architect: Chapters in the History of the Profession
Ed. Spiro Kostof. New York: Oxford University Press, 1977.
The Image of the Architect, by Andrew Saint.
New Haven: Yale University Press, 1983 and 1985.

When Spiro Kostof produced his historical survey of the profession a decade ago, no one had attempted such a task for fifty years, since M.S. Briggs's *The Architect in History* (Oxford, 1927). Believing that this still-interesting volume needed to be brought up to date, Kostof and selected colleagues re-examined historical aspects of the profession in the light of new scholarly discoveries and a contemporary perspective that included the Modern movement. Since Briggs had excluded the American scene in favor of the British one, the latter half of the newer book also tackles the history of the profession in the United States: the influence of the Beaux Arts and the Bauhaus schools, the rise of the large architectural office, and the progress of women in architecture.

Ten years after Kostof's *The Architect,* we have in hand (by now in paperback) Andrew Saint's views on the changing role of the architect over time. Where Kostof begins with ancient Egypt, Saint restricts his focus to the past two hundred years, and chooses to explore the literary side of the profession as well. From such authors as Dickens, Hardy, and the less well known "writing architects," Saint culls delightful excerpts. In accordance with his title, he amply illustrates his book with actual physical "images" of architects, rather than of their buildings.



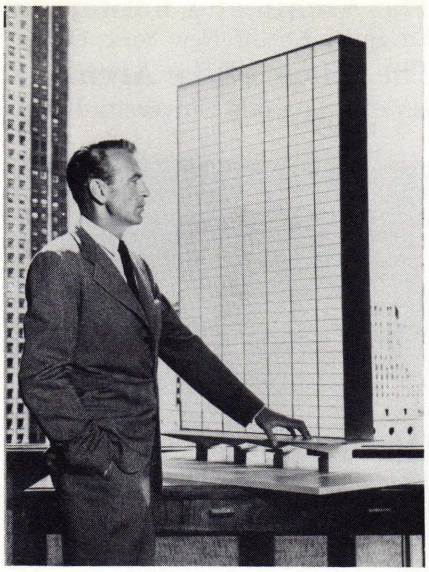
Relief commemorating the founding of Ulm Cathedral in June 1377. The mayor of the city, Ludwig Krafft, and his wife rest the model of the building on the shoulders of the architect. (Fig. 22, pg. 82 from The Architect.*)*

Both books originated as lecture courses. Kostof's course took place at the University of California, Berkeley in 1974, at a time when, he writes, many students of architecture were questioning the nature and relevance of the profession. (Not a little of this unrest might well have been due to the fact that this year saw the lowest point of the economic slump of the Seventies). Perceiving a gap between the smugly-established and these young architects, Kostof attempted to bridge it by inviting other scholars to contribute

to a course in the history of the profession up to 1965. Rather than focus on the profession's products, Kostof and his collaborators surveyed its practitioners, and asked for each historical period: what did an architect do? How was he educated, and how did the public perceive him?

Saint's *The Image of the Architect*, which stems from a course he gave at the Architectural Association in London the year after Kostof's book first appeared, is less strictly historical in its sources. Rather than make a straight chronological survey of the history of the profession, Saint organizes his subject matter into various portraits: chapters titled "The Architect as Businessman," "The Architect as Gentleman," and so forth. In keeping with this eclectic approach, the opening chapter, "The Architect as Hero and Genius," is composed of a lively exegesis of *The Fountainhead* (in both novel and movie form), followed by a brief discussion of Frank Lloyd Wright as the presumed model for Howard Roark, the film/book's strong-willed protagonist. Saint then jumps backward in time to unveil the "Myth and the Medieval Architect," as interpreted by such 18th- and 19th-century writers as Goethe and Ruskin. To examine still deeper roots of the profession, we must return to Kostof's book.

Merely identifying the architects of ancient times means doing archaeological detective work, in the face of two historiographic hindrances: the lack of a clear professional category and the attribution of much built work to the rulers under whom it was accomplished. In *The Architect's* first chapter, "The Practice of Architecture in the Ancient World: Egypt and Greece," Kostof contrasts the enviably exalted role of the chief state architect in ancient Egypt ("At times, there was no more powerful official after the king") with the more nebulous domain of the architect in Hellenistic Greece. Kostof tells us that many of the famous Greek architects are actually known primarily for other achievements: Archimedes, for example, was a great military engineer, and other architects commonly performed surveying, hydraulic engineering, and town planning tasks. As William L. MacDonald points out in the next essay, "Roman Architects," we do not even know which architects' names to attach to such



Gary Cooper as architect Howard Roark *in "The Fountainhead." (Fig. 1, pg. xii from* The Image of the Architect.*)*

major Roman monuments as the Colosseum, the Pantheon, and the Baths of Caracalla!

The question of the exact nature of the architect's contribution to the creation of a building intensified during the Middle Ages, according to both writers. Kostof, who covers the much less well-documented history of Byzantine and Islamic architects as well as Western history, calls the story "complex and still not free of mystery," whereas Saint refers to "myth." The tenuous line between the mason and the medieval architect who had arisen from the craftsman's ranks has led to widely disparate views of Gothic building as the product of, on the one hand, communalism and the *Zeitgeist,* and on the other, a single monastic genius or saint. Only during the Renaissance, beginning in Italy, did architecture first emerge as an independent, structured profession. Kostof devotes three chapters by other writers to this period. Indeed, the entire book to this point provides a useful background for Saint's volume.

Although the two books are decidely complementary, they do cross paths in their respective chapters on the 19th-century professional architect in England. In fact, the same 1788 quotation from Sir John Soane, that epitome of the professional architect, appears in both:

> The business of the architect is to make the designs and estimates, to direct the works and to measure and value the different parts; he is the intermediate agent between the employer, whose honour and interest he is to study, and the mechanic, whose rights he is to defend. His situation implies great trust; he is responsible for the mistakes, negligences,and ignorances of those he employs; and above all, he is to take care that the workmen's bills do not exceed his own estimates. If these are the duties of an architect, with what propriety can his situation and that of the builder, or the contractor be united?

Inasmuch as Soane was defining the role of the architect, he was also attempting to protect it from further encroachment. Yet the hazy boundaries between the roles of builder-contractor, architect-designer, and related practitioners are still ambiguous, and the apparent nebulousness of the architect's functions as seen by outsiders is necessarily a theme of both books.

The issue of architectural education is personalized in Joseph Esherick's vivid memoir in *The Architect* about attending architecture school at the University of Pennsylvania during the Depression. As a detailed account of a student's progress through the Beaux-Arts system, working on *esquisse-esquisses* with teachers such as Paul Cret, this absorbing chapter provides a glimpse inside a particular school half a century ago. As with many of the historical trends and tidbits one finds in these two books, "*plus ça change...*"

Spiro Kostof's book, as a collection of ten different voices, smoothly edited for continuity and completeness, reads as a straight historical reference work, in contrast to Andrew Saint's more polemical volume. Saint's final chapter, "The Influence of Imagination in Architecture," addresses the apparent contradictions between the claims of business and those of art. He proposes a new ethic, that of "sound building," in which multi-disciplinary collaboration with a comprehension of changing technology could be practiced without excluding creativity. Saint calls idealistically for reform of a social system that leaves architects feeling frustrated and powerless; in the absence of these changes, he challenges architects to reformulate their own ideologies "in the light of their true position." No small task, to be sure, but one for which both books reviewed here can continue to provide much illumination, with models as varied as Pecksniff, Pugin, and Portman.■

by Callie Hancock, RA