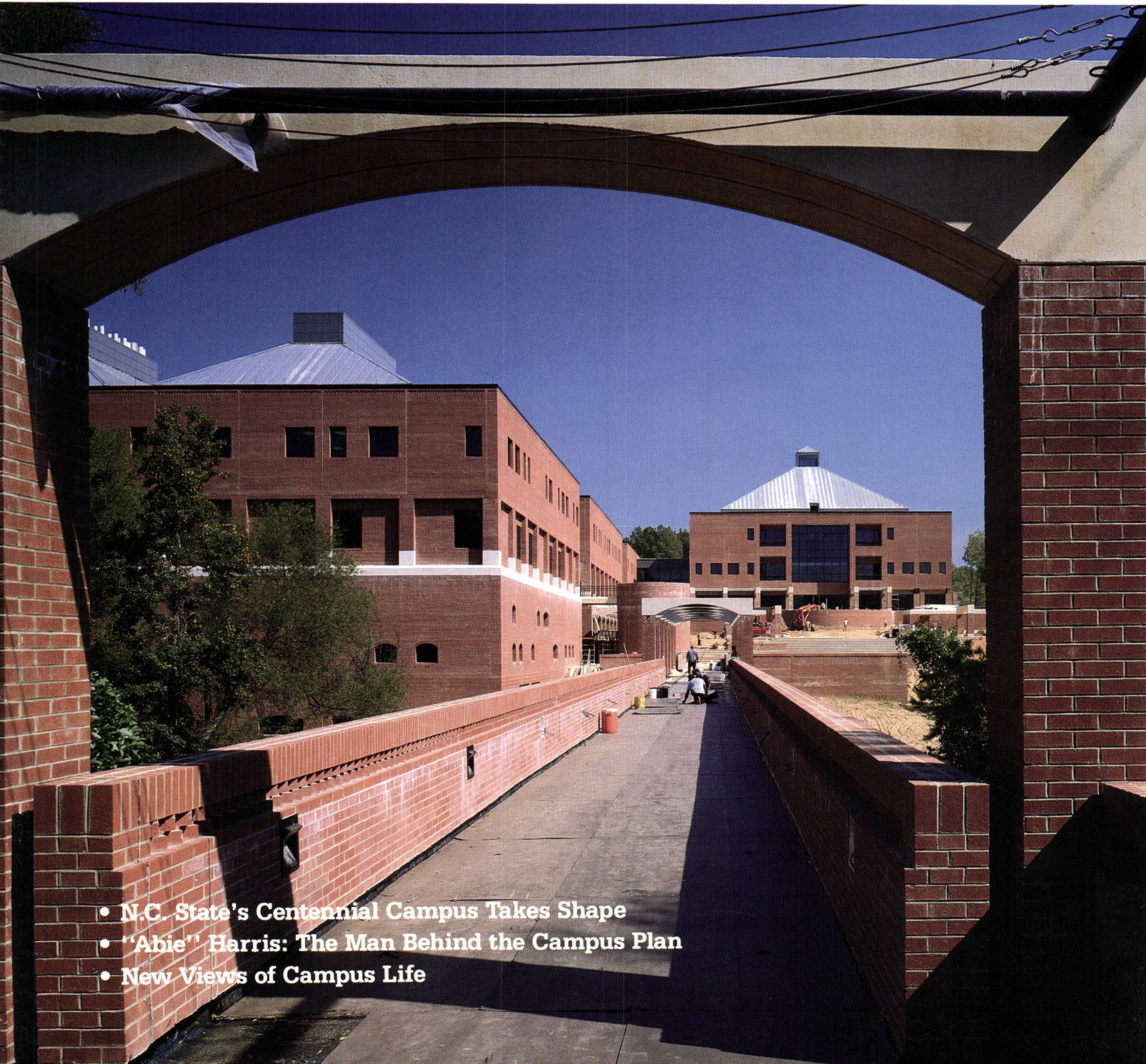


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- "Abie" Harris: The Man Behind the Campus Plan
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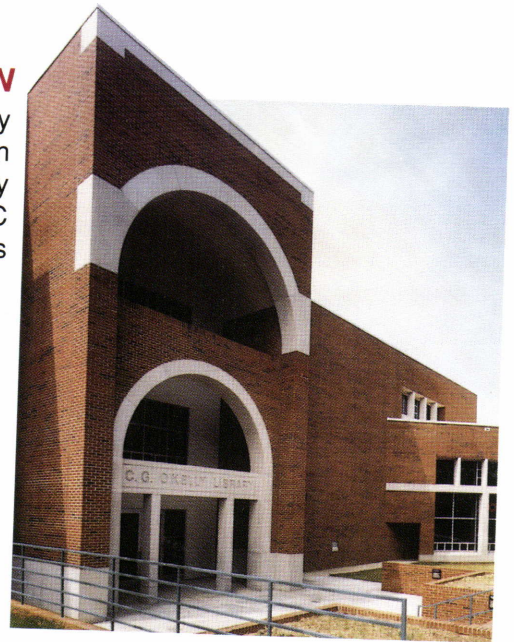
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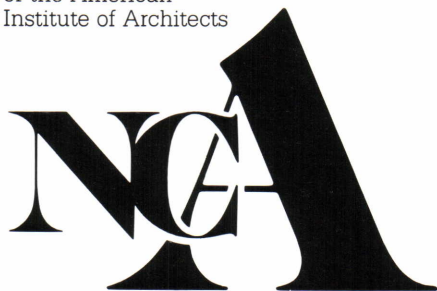
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New campus amenities deliver atmo-  
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*This new basketball court at Davidson  
College is for fun and fitness, not for  
setting records.*

*Cover: N.C. State's new Centennial  
Campus is about connections, physical  
and metaphysical. In the first cluster, now  
being developed, a pedestrian bridge  
spans a ravine to link two research  
buildings with the new College of Textiles.*



Photo by Jerry Markatos

Edwin F. "Abie" Harris, N.C. State's campus  
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N.C. State University's architect and  
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# Centennial Campus: Arranging Meaningful Encounters



Photo by Allen Weiss

*Research I, paid for with research grant money, was fast-tracked to become the first completed building on the new campus.*

Thomas A. Dow of N.C. State University was awarded a \$15 million research grant to develop technology for manufacturing processes that demand high-precision measurement and control. He needed highly specialized laboratories and space for researchers—and he needed it fast.

The university had to provide the lab space or lose Dow and his grant. One possible option was erecting temporary space.

But Dow's project fit exactly the concept of N.C. State's planned Centennial Campus, and his grant offered a great opportunity to get the campus underway. Research funds would pay for the building. The big question was how to get the building up fast enough.

In private development, the answer would be to fast-track. But this was on state land, and the state, with its bidding system, does not permit fast-track construction.

Except in this case.

University officials and architects O'Brien/Atkins Associates, PA, of Research Triangle Park were able to work out plans with the State of North

Carolina to make Research I the first state-owned project that was fast-tracked instead of traditionally bid.

Dow now presides over the Precision Engineering Center in a building that was completed and occupied in 1988, the first to open on the new campus, located just southeast of N.C. State's main campus on property that once belonged to Dorothea Dix Hospital.

The College of Textiles, designed by Walter Robbs Callahan and Pierce Architects, PA, of Winston-Salem, will accept students in January. The Research and Technology Development Building, designed by Bohm-NBBJ of N.C. Inc. in Research Triangle Park, is nearing completion.

"They always say you don't have a campus until you have three buildings," says Wesley A. McClure, AIA, of Bohm-NBBJ. "We're working on the third building, so I guess that will make it a campus."

The Centennial Campus—whose concept has been long debated, awaited, criticized and praised—is becoming a physical reality. In January, 1,000 students and faculty

will turn off Avent Ferry Road onto Varsity Drive, many entering the new campus for the first time.

The campus is designed to provide an intimate mix of public and private research facilities, linking academic inquiry and private-sector technology in an alliance that benefits both.

That concept has worked well at the University of North Carolina in Chapel Hill in a collaboration between the School of Medicine and Glaxo Inc.

Glaxo approached the university with the idea of paying for a laboratory facility on the medical school campus. After completion, the drug research and manufacturing company would occupy the building for five years, with an option to lease all or part of it three more years. After that, the building would revert to the medical school for ownership and use.

The medical school was planning its own Molecular Biology Research Laboratory facility, and the Glaxo offer effectively added 8,000 square feet to the lab at no further expense to the state. Since the design was already under way, it was duplicated for the Glaxo facility. The commingling of



funding sources produced, in essence, two buildings joined by a shared lobby and elevator core. Architect RS&H, with offices in Greensboro and the Research Triangle Park, designed flexible laboratory space in the buildings so researchers could move in and out without requiring major modifications.

Four years of experience with this cooperative venture in which academic and industry researchers interact daily has helped dispel some of the concerns surrounding the Centennial Campus in Raleigh.

The Centennial Campus concept, however, goes well beyond the Glaxo example. And it expands upon the research park concept, in which corporate research and university research are affiliated but take place on separate campuses.

"Ten years ago, every university started a research park," says Claude E. McKinney, special assistant to Chancellor Larry Monteith for Centennial Campus development. "The difference here is the integration of campuses and in having housing for more than students."

The idea is that corporations will benefit from the availability of graduate students to work on their projects, graduate students will gain employment opportunities, faculty will be enriched by the integration of academic and private-sector research

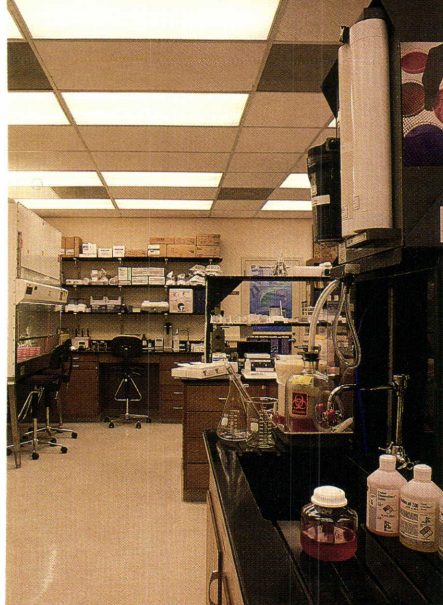


Photo by Greg Loflin

*A laboratory in a joint facility by RS&H Architects-Engineers-Planners at the University of North Carolina for Glaxo Inc. and the medical school.*

and the sum will be greater than the parts.

Even the Raleigh Chamber of Commerce is enthusiastic because of the potential for incubating new companies at the new campus.

"All of this is possible because of the research strength of the university," McKinney says.

In 1989, *Business Week* listed N.C. State University among "The Academic Elite"—12 schools that have attracted the most industry dollars for research. Industry spent \$12 million on research at N.C. State in 1988, and the industry's share of the school's research and development funding was 12 percent. The number of doctorates conferred in science or engineering was 210.

Slated for development over the next 20 years, the Centennial Campus will be the first of its kind in the nation. It's been called an academic "New Town," a research PUD.

The new campus is located on 1,000 acres of prime real estate just southwest of downtown Raleigh and southeast of the main campus. The 75-acre Lake Raleigh lies at its center.

The master plan—developed by a five-discipline team headed by Carley Capital Group of Washington—calls for a dozen or more academic clusters, with a three-minute walking radius. The clusters will consist of public and private research facilities, apartments for corporate and student use, pedestrian walkways, courtyards and greenways.

Corporations are especially intrigued by the housing, McKinney said, because living arrangements are often a problem for researchers sent to work on projects for a short time.

A village center, planned for Lake Raleigh's eastern edge, will include restaurants, a hotel/conference center and retail stores.

The plan was developed around the land's natural features; roads and development are to follow natural contours. It preserves the breeding ground for local wildlife and migratory birds around the lake.

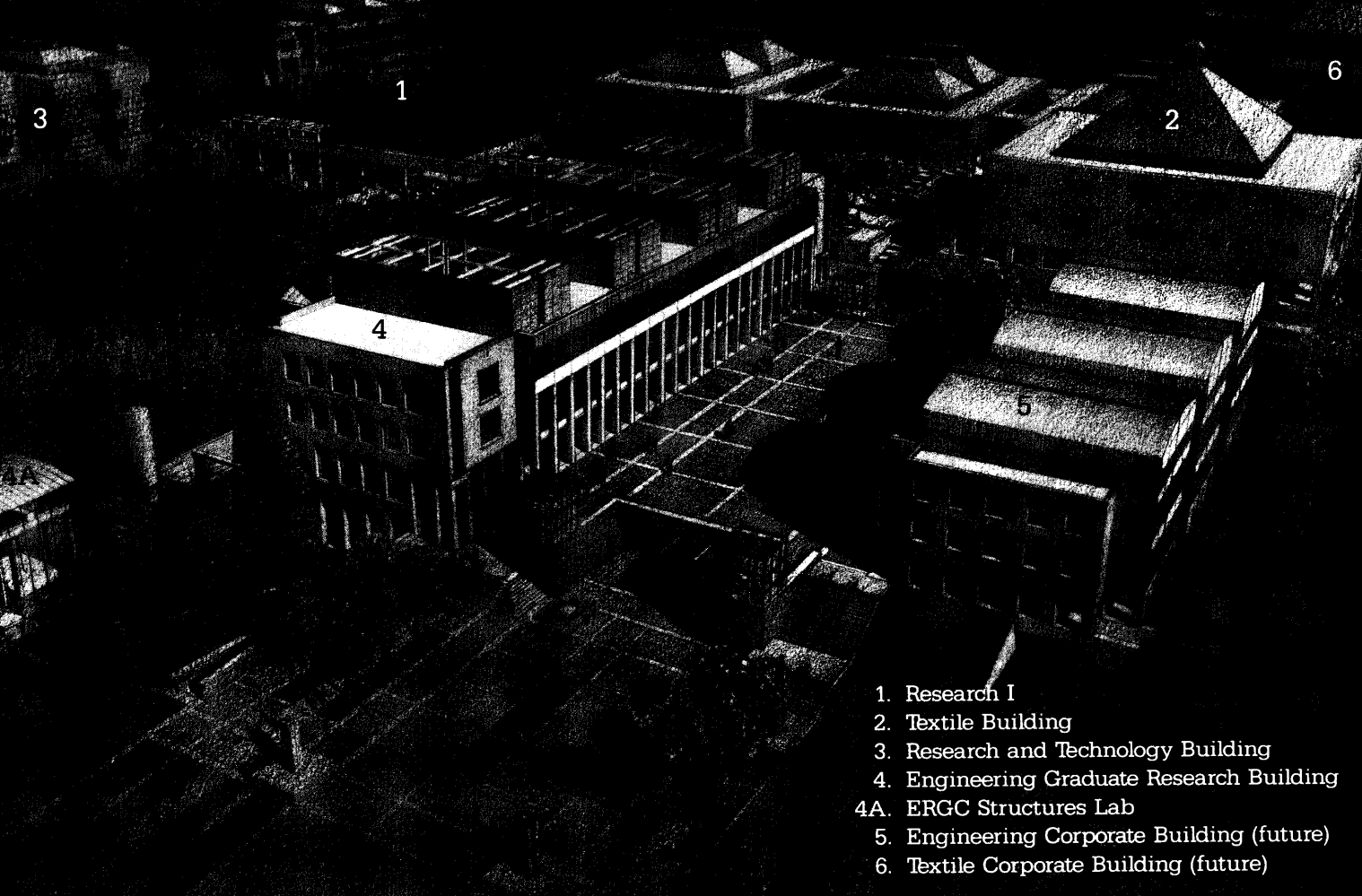
The buildings are being designed by different architecture firms, in the

*The new College of Textiles, the first major university facility to open on the new campus, will bring a thousand students and faculty onto the campus in January.*

Photo by JoAnn Sieburg-Baker







1. Research I
2. Textile Building
3. Research and Technology Building
4. Engineering Graduate Research Building
- 4A. ERGC Structures Lab
5. Engineering Corporate Building (future)
6. Textile Corporate Building (future)

belief that a variety of approaches will lend vitality and can be unified through the spaces between the buildings, a respect for context and a great deal of teamwork.

"We intend to build a campus—a community of places arranged to nurture communication through encounter and interaction," Edwin F. "Abie" Harris Jr., FAIA, the university's architect and campus planner, wrote in the design and development guidelines for the new campus.

"It's a microcosm of the total campus, a rational decentralization," Harris says. "This big campus is broken down into smaller units, human-scale units. There's 20 years of campus planning in that nutshell."

Steven Litt, the architecture critic for *The News and Observer* in Raleigh, thinks those years of experience paid off.

"Given its current direction," Litt wrote earlier this year, "Centennial Campus could well turn out to be a showcase of urban planning that blends the modernism of NCSU's main campus with new ideas that set a powerful example for the rest of the Triangle as it approaches the 21st century."

## An Academic Cluster Takes Shape

What one can see of the first cluster rising on the Centennial Campus are two research buildings on the west bank of North Creek and the College of Textiles on the east bank. A long, brick pedestrian bridge spans the intervening deep ravine.

Research I, a 35,000-square-foot building, was designed as a research incubator. Constructed on a fast-track schedule, the building had only one assigned user—the Precision Engineering Laboratory on the ground floor—until well into the construction.

Since it was essentially a speculative laboratory building and had to respond to a variety of potential research needs, O'Brien/Atkins designed all systems to be changeable, organized and easily accessible without disruption to other tenants. Thus the building is zoned with mechanical spaces on one side and offices on the other, with lab space in the middle. The mechanical systems have dedicated horizontal and vertical areas that are completely accessible.

Within the length of the building there are three vertical zones that

culminate in a penthouse under pitched roofs.

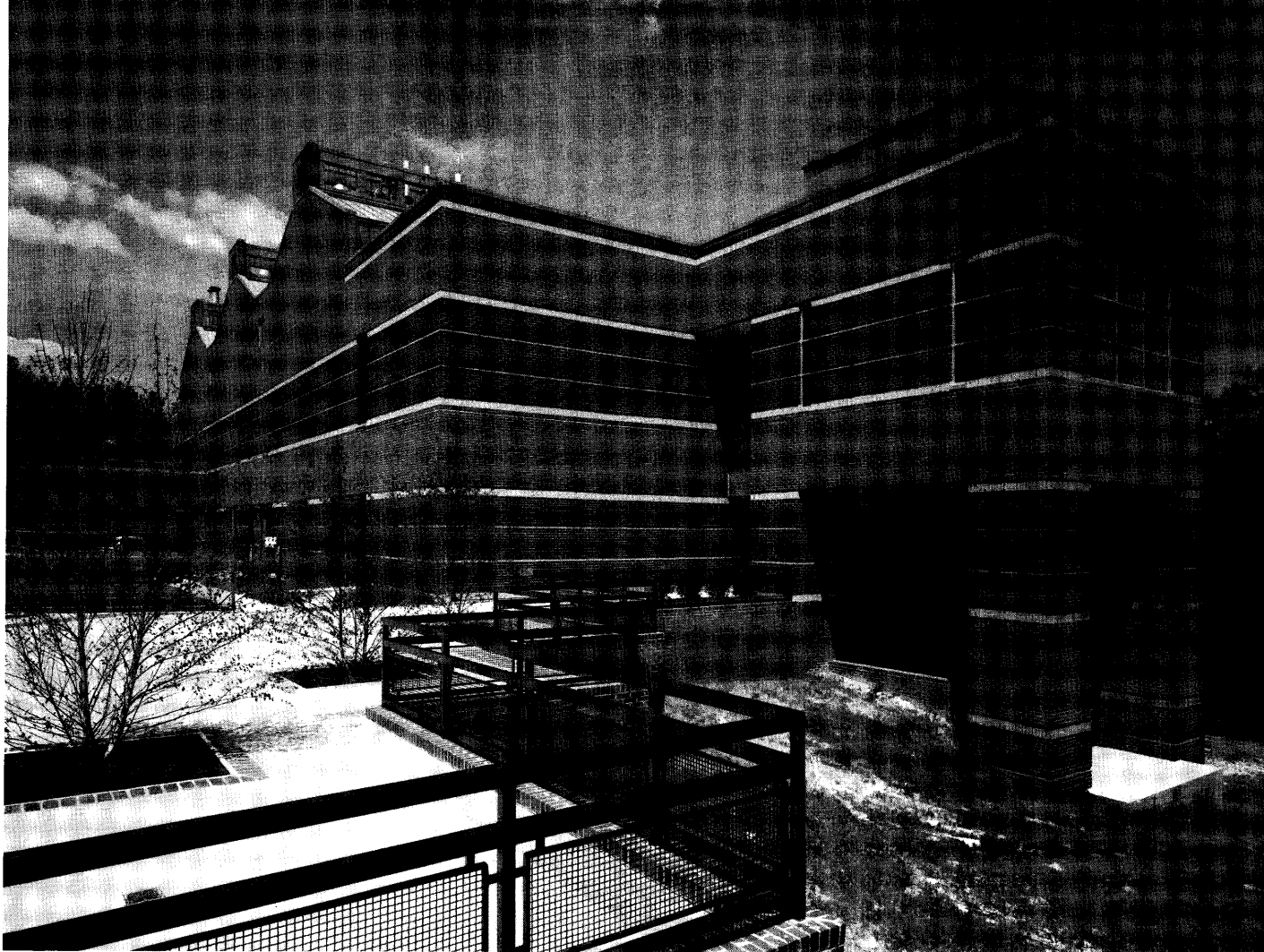
A consideration of function and site resulted in the building having two, very different faces. On the uphill side are parking, service, mechanical and utility spaces—and a severe, utilitarian face. Horizontal brick bands tie the building together and reduce the scale of an otherwise sheer wall.

On the downhill side are offices, conference rooms, lounges and other people spaces. Hipped roofs respond to the sloping terrain. On this face, the horizontal bands become windows for views of the ravine and trees.

The end of the building next to the bridge and pedestrian plaza suggests a tower, with a major conference room on its top floor for use by all occupants.

Besides the Precision Engineering Center, the building houses the Center for Advanced Electronic Materials Processing and the headquarters for AKZO Corporate Research America Inc., a Netherlands-based chemical company. The building was funded entirely with private research money.





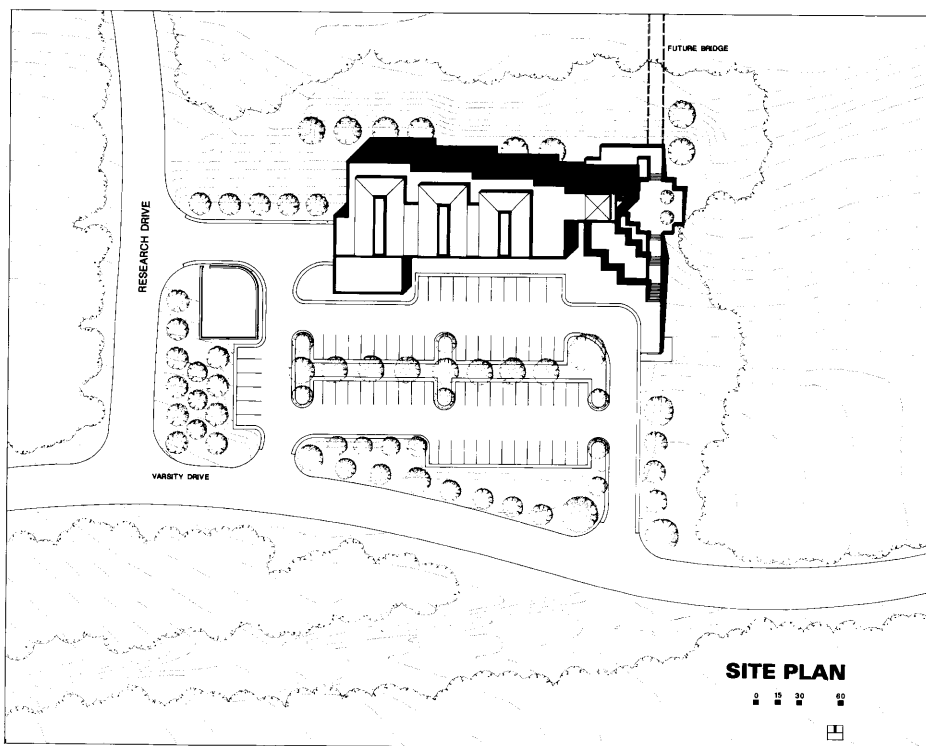
Across the pedestrian plaza from Research I is the \$5.8 million, 45,000-square-foot Research and Technology Development Building, which is scheduled to open in the spring. It will house the Mars Mission Research Center, a joint program of N.C. State and North Carolina A&T State University selected by NASA as one of nine university projects nationwide. NASA has committed up to \$8.4 million to the center's work over five years.

In addition, Research and Technology will provide space for biotechnological research, including P-3 containment, animal-holding facilities and wet labs. It will also provide offices and laboratories for the Business Innovation and Technology Advancement Center, an incubator for start-up companies that is supported jointly by N.C. State and the Raleigh Chamber of Commerce.

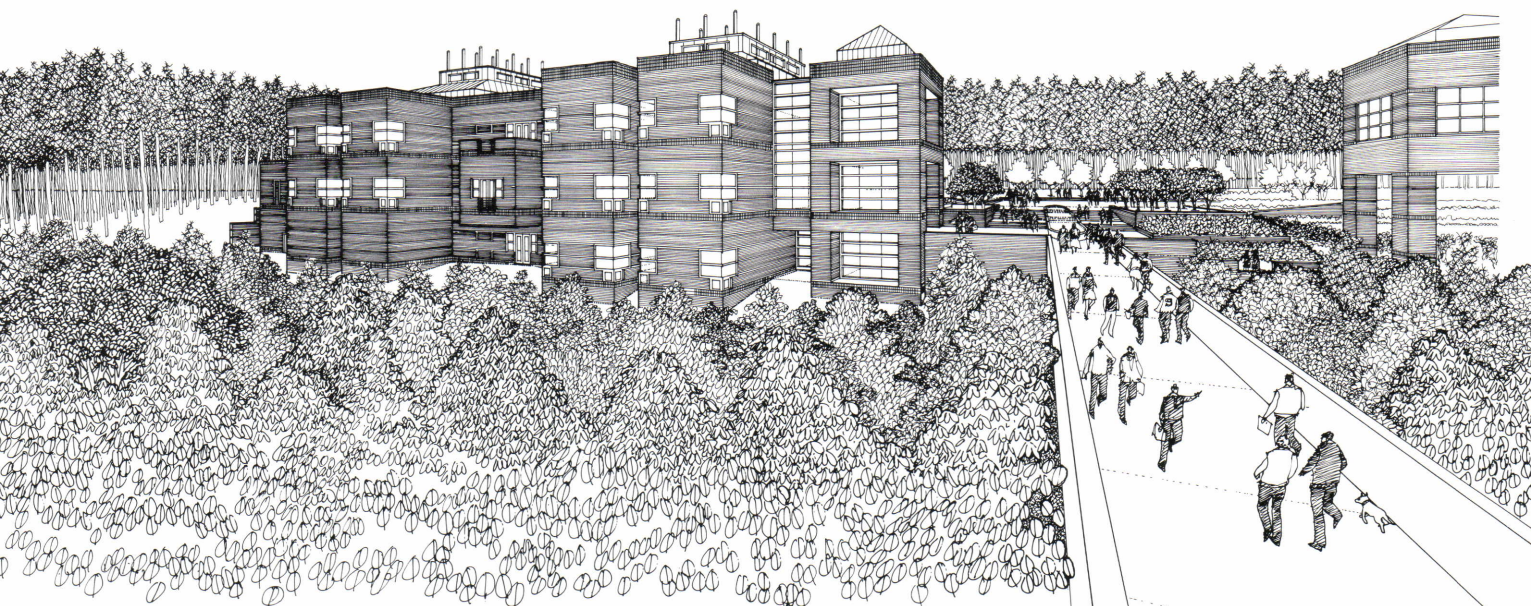
Architect Bohm-NBBJ of N.C. Inc. clustered laboratory functions into two suites in separate wings. Each wing houses three floors of research space.

The lab suites are appended to the west side of a main circulation spine

*Research I, built to provide highly specialized laboratory space for one tenant and speculative lab space for others, establishes certain themes for the campus—open outdoor plazas and architectural rooftop interest, where penthouses house mechanical equipment and ventilation systems.*







*Drawing above shows the pedestrian bridge that spans a ravine to connect two research buildings, Research and Technology (left) and Research I (right), with the College of Textiles. Drawing, right, shows the arrangement of lab space in Research and Technology into two three-story wings on the "back" side, leaving the front for office and service areas.*

that runs north and south from the visitor entrance to the service core. Office and service functions are located on the east side of the spire.

Conference and break areas are concentrated at the heart of the building to encourage interaction among researchers of different disciplines.

The building opens onto a small plaza from an open, lantern-like tower. The offices overlook the ravine. Laboratory suites are clustered on the street side, looking to the plaza and a landscaped court between the lab wings.

In 1985, the N.C. State School of Textiles received state funding for a much-needed renovation and expansion. Just a few months later, the state gave the university 780 acres of Dorothea Dix Hospital land, the idea for the Centennial Campus was born and the School of Textiles was destined to move to the new campus as its first major facility.

The new school is designed to give the largest university-based textile school in the free world a modern image, one that will serve an industry with a pressing need for new research and technology.

With 298,000 square feet in all, the



\$22 million school forms its own cluster—a series of four interconnected buildings designed to function as one large building.

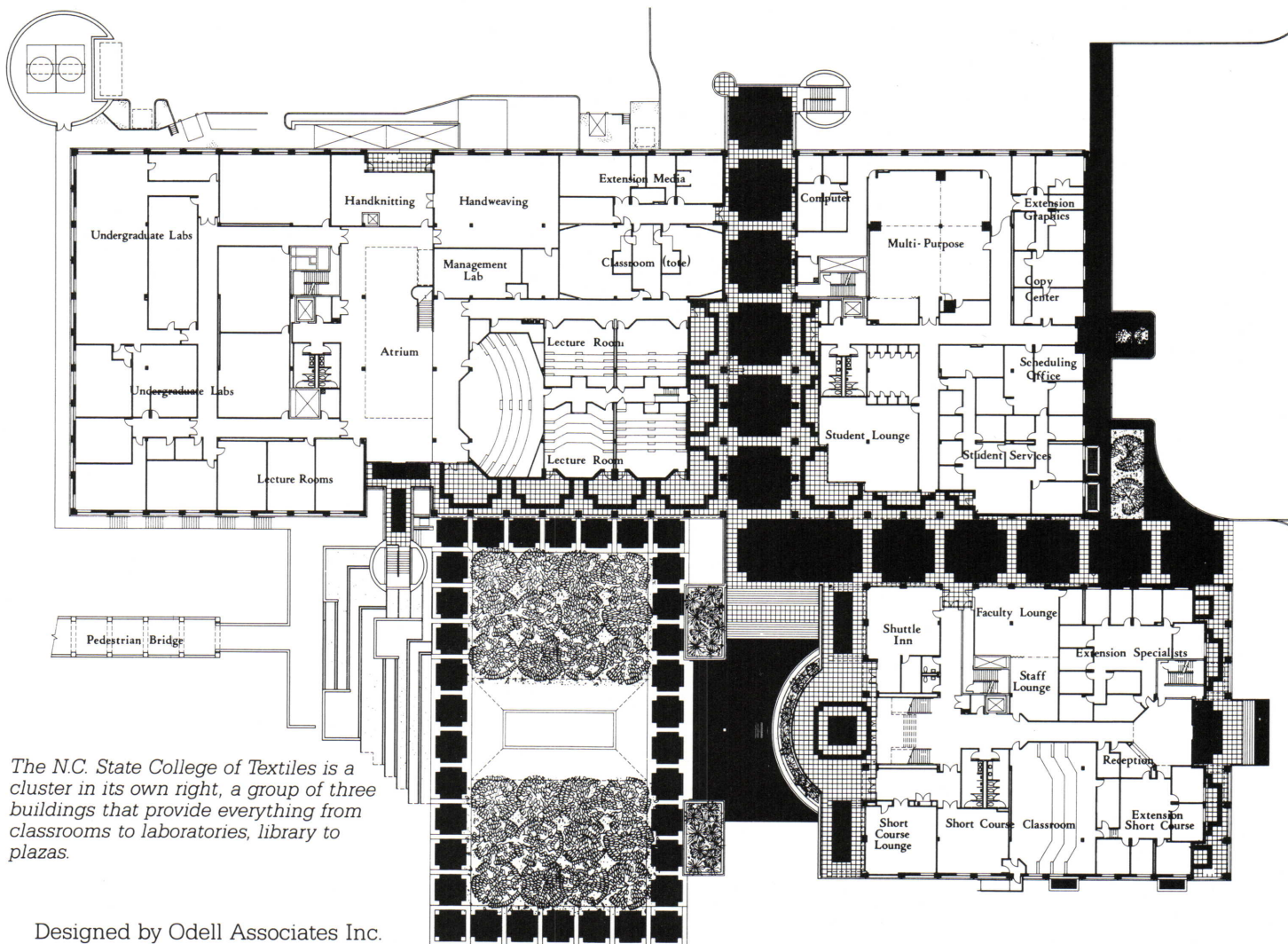
Classrooms, undergraduate laboratories and textile extension programs will be gathered at the courtyard level. Process labs and heavy equipment will be on the lower floors to contain the noise. Administrative and faculty offices will be grouped together on another level. A library with a vaulted ceiling will overlook Lake Raleigh and the woods.

State-of-the-art laboratory space, the latest technology, teaching areas, courtyards and gathering spaces make the new school a self-contained university.

Soon graders working south of the textile school will hint of more to come. The General Assembly has funded \$3 million for site work for the Engineering Graduate Research Center, raising hopes that construction money will follow in the 1991 full session.

The center and the brainpower it would assemble are considered essential to drawing corporate research teams to the new campus. The building, in the planning stage for 10 years, would be the first new engineering building to be funded at N.C. State in 25 years—even though the number of engineering degrees the university awards has doubled in the past decade.





*The N.C. State College of Textiles is a cluster in its own right, a group of three buildings that provide everything from classrooms to laboratories, library to plazas.*

Designed by Odell Associates Inc. of Charlotte, the project actually consists of three buildings: a 130,000-square-foot, four-story graduate laboratory building, a structures-testing laboratory and a five-level underground parking deck under a plaza that has a view of the lake to the south.

Envisioned for the site across the plaza is a corporate research building in which corporate scientists will work with engineering faculty and graduate students.

With that in mind, Odell Associates ended up with a linear building facing

the large courtyard space and the future building, with the idea that corporate and university researchers would mix after-hours on the plaza.

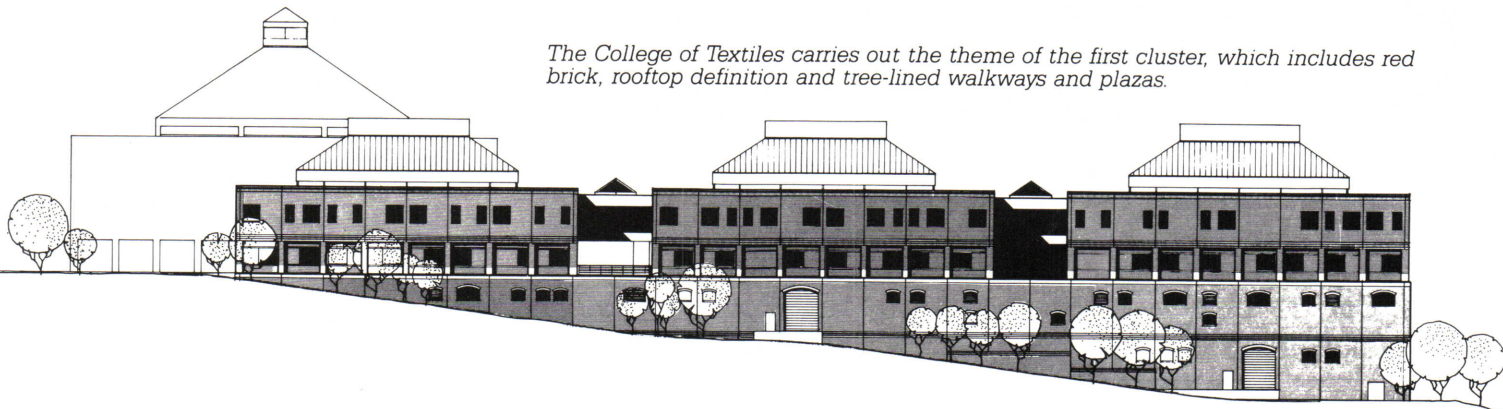
Like other buildings in the cluster, the engineering center was given mechanical penthouses, establishing a roof line presence. And like the other buildings, this one is in brick.

The circulation in the main building corridor runs north and south and faces the courtyard with a wall of glass. From the plaza, one can look in and see movement. On the plaza, glass

cubes with lights that glow at night mark the elevator wells and entrances to the parking deck.

The structures lab contains a massive wall that is 20 feet wide, 30 feet tall and 6 feet deep. On it, concrete beams and other structural elements will be attached and tested for strength and other qualities. Because the testing wall is, in itself, an impressive structure, the architects chose to house it behind glass walls, so people could see the wall and the activity within.

*The College of Textiles carries out the theme of the first cluster, which includes red brick, rooftop definition and tree-lined walkways and plazas.*





## Pizza, Suites, Ice Cream and Nautilus Campus Life is Not What It Used to Be

Life on North Carolina's university and college campuses is getting better all the time. Institutions once overwhelmed by the sheer numbers of students are now competing for a dwindling supply of college-age men and women.

Instead of serving up services bulk-style, they are listening to what students want and taking cues from the choices students are making for themselves off campus. The results are institutional facilities without an institutional feel and service that stands up to outside competition.

### Food for Thought

Remember the old college dining hall, where you trudged like soldiers through a line while servers filled your plate with artery-clogging institutional food? Then you ate quickly so you could escape the clanging and jingling of metal trays and forks and head for a place with character—a downtown coffee shop or your own cluttered room.

Today's college students are leaving that scene behind. On campus, they now get choices between salad bars and pizzas, burritos and gyros. They eat in places with ambiance and linger to talk about philosophy or listen to live entertainment.



Photos by Simon C. Griffiths

Two renovations at Elon College by Moser Mayer Sutphin Associates, P.A. of Greensboro illustrate the trend toward food service that competes with off-campus choices.

The Varsity Grille, an 1,800-square-foot, \$150,000 renovation, combines a contemporary design theme with traditional architectural features. Existing Palladian windows were trimmed in color. One Palladian window, framed out by a barrel vaulted ceiling with dropped soffit and defined by four columns, is used as seating for eight or a stage for entertainment.

The Back Door in Elon College's Harper Center, a 1,710-square-foot, \$180,000 renovation, delivers a rustic tavern-like ambiance, nightly entertainment and pizza.



*"In the late '70s and early '80s, a lot of food-service operations in universities began to fold because, unless the universities forced the student to buy the food service, they went bust. Now most are operating as a profit center, and they are having to compete with retail food-service chains, fast food, malls and restaurants. They are having to look and act like those establishments. And that's a complete departure from the institutional-type of food-service operations we've seen in the past."*

Talmage R. Payne, AIA  
Moser Mayer Sutphin Associates, P.A.  
Greensboro



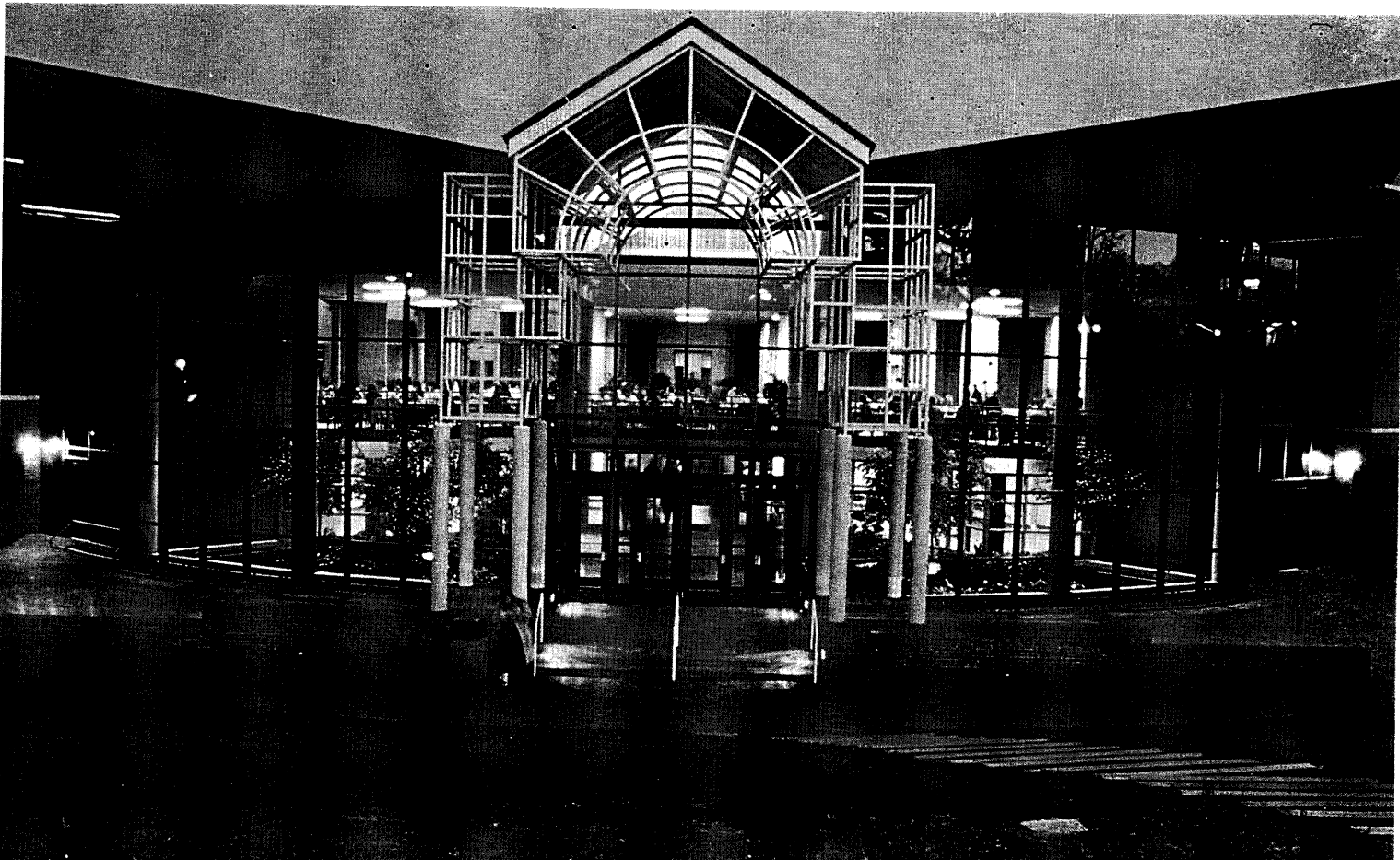
Photos by JoAnn Sieburg-Baker

*A 6,000-square-foot renovation in Duke University's East Campus Student Union by Moser Mayer Sutphin gave students a seven-shop international food court that rivals those found in many shopping malls. Durable finishes—Corian counter tops and ceramic tile wainscoting—mixed with custom-designed awning and soffits for a bright contemporary look designed to update, but not compete with, Duke's Gothic Revival style.*

*At the University of North Carolina in Greensboro, Calloway Johnson Moore, P.A. joined four old dining halls with a central serving area in a \$7.1 million renovation that infused the spaces with a new spirit.*

*In late 1988, the school opened its modern dining facility of 100,000 square feet. The main entrance features a contemporary glassed atrium enhanced by a picturesque overhead trellis, which is supported by a series of small concrete columns.*

*Soft interior colors, attractive wooden chairs and tables and dining options that include an ice-cream parlor, a bakery, a pizza parlor and a corner deli have ensured the new hall's popularity.*





## Stagestruck

College theater. That's where you learn to deal with bad acoustics, obsolete lighting and sets that won't budge when they are supposed to glide. They call that character-building.

Students at the North Carolina School of the Arts in Winston-Salem may well have the opposite complaint. Some fear that Performance Place, a multi-theater complex designed by Calloway Johnson Moore, P.A. of Winston-Salem, may spoil them for working later on life's real stages.

Performance Place has a 464-fixed-seat, thrust/proscenium stage drama theater and a 200-movable-seat experimental arena theater. A 175-seat "black box" theater is to be added later. All theaters share lobby and support spaces, which are designed for future expansion.

Working closely with New York theater consultant and acoustician Peter George, the architects provided state-of-the-art acoustics, lighting and theater equipment, carefully controlled sight lines, specially-lined and silenced ductwork and a wire-mesh grid catwalk that gives complete access to lighting and rigging.

## The Campus Hub

What better place to appeal to students' changing interests and concerns than in the student center?

Wake Forest University's newly-opened, \$10 million University Center is a case in point. The 101,000-square-foot center was designed in the Georgian style common to all other buildings in the central campus area, but the activities it houses are strictly up-to-date.

The building has five levels, all connected by way of an open rotunda with a grand staircase, topped with a lighted dome. The first level focuses on exercise and wellness—with racquetball courts, a Nautilus room, a room for aerobics, yoga and karate and locker rooms.

The second level, which features entertainment and food, has a real Pizza Hut, a coffee house with a stage for live entertainment, a snack bar and food court, a game room, listen-

*"I think the people who operate the universities and colleges have grown to realize they have to offer more than basic buildings for their students because expectations are different these days. There is more competition among colleges for students, and this is a way to appeal to the student."*

James O. White, AIA  
Calloway Johnson Moore, P.A.  
Winston-Salem

*Performance Place, N.C. School of the Arts in Winston-Salem  
Architect: Calloway Johnson Moore, P.A., Winston-Salem*

ing room, video room and movie theater which shows movies every night.

The third and fourth levels house student activities, student government, meeting and conference rooms. The fifth level is home to the radio station, newspaper, magazine and year-book staffs and activities.

More signs of the times in the new center include computer outlets in every room, cable television outlets, a meeting room fitted up with 50 telephone outlets for fund-raising and other activities, a meditation room and a variety of audio/visual components to be used for entertainment and teaching.

*Clifton L. Benson Student Center, Wake Forest University  
Architect: Calloway Johnson Moore*







Photos by Jerry Markatos



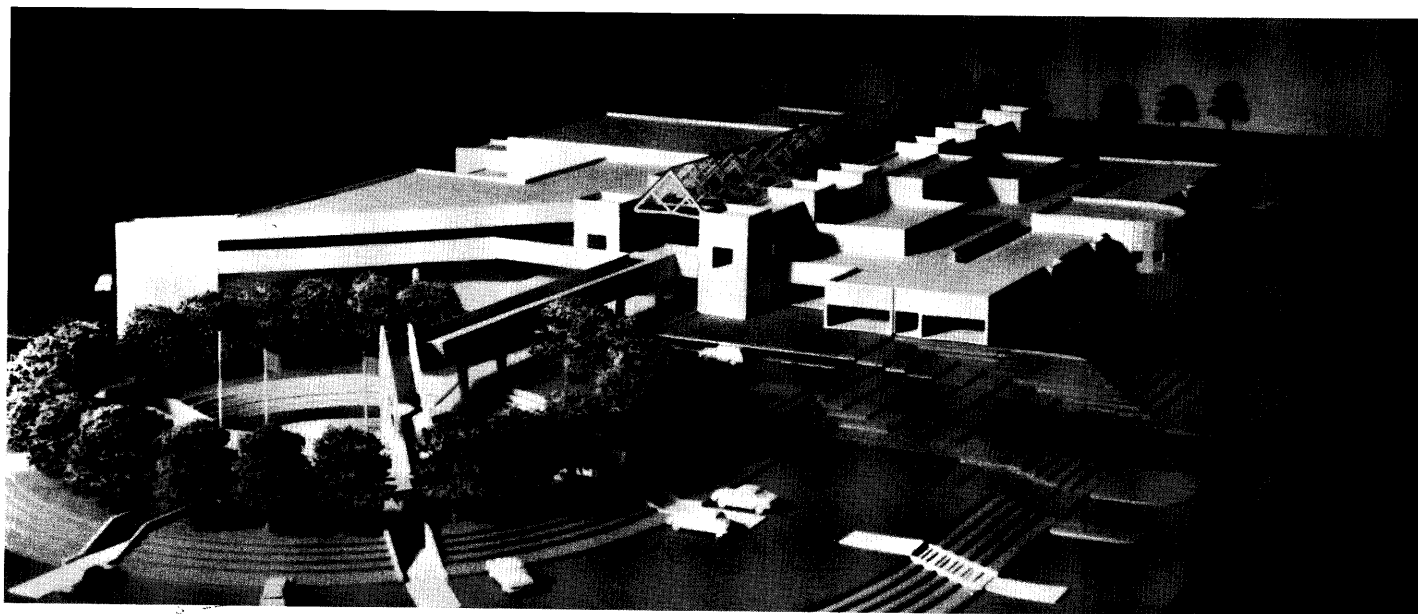
At Duke University's Bryan Center Student Union on the East Campus, a \$750,000 renovation and expansion of 4,000 square feet by Dail Dixon & Associates of Chapel Hill bestowed new prominence on a bookstore and provided a state-of-the-art sound and television studio.

The Bryan Center is a heavy, precast concrete structure with a natural-textured slate floor—a strong visual environment. The project doubled the size of the Gothic Book Store and established its own entrance (its previous entrance was through the student store). The challenge was to create an entrance that would not be dwarfed by its environment, one that would establish an image for this important retail operation.

"We designed a gate, really. We have called it a 'reduction' of the Gothic arch style that pervades the campus," says architect Dail Dixon, AIA.

In the middle of the bookstore is a lounge area, an informal space for teas, book signings and readings.

On Duke's campus, space above ground is at a premium. So, in a \$1.2 million project, Dail Dixon and Associates developed a crawlspace under Reynolds Theater in the Bryan Center into a 14,000-square-foot sound studio and a studio for the student television station. The light and engaging entrance to the subterranean space was located in a valley between the sheer precast stone wall of the Bryan Center on one side and Duke Chapel on the other.



In January, the University of North Carolina will open its new \$14 million William and Ida Friday Continuing Education Center, located on a pastoral track of farm land about two miles from the main campus. The center, by Lee • Nichols Architecture, is the first of several buildings planned for the new satellite campus. Others to come include an amphi-

theater and a performing arts center.

The center serves as a symbolic educational link between the university and the community. The center will provide administrative offices, meeting and conference rooms, classrooms, computer labs, wet labs, a library and media center, a theater, an 800-seat auditorium and a restaurant/dining room. The building will

be equipped with a sophisticated audio-visual and telecommunication system.

The building's focus is a 300-foot, two-story interior lobby with a continuous skylight along the main axis. A series of 12 towers establishes an order for the various functions along the lobby.





Photo by Greg Loflin

### Pump Up, Pump Down

Once intramural sports were delegated to tired old gyms and back lots. Other fitness activities, such as weight-lifting and aerobics, were established in make-do spaces.

Now fitness and intramural competition are coming into their own in keeping with the emphasis society places on staying fit and active—for everyone, not just first-rate athletes. As new facilities replace the old, these activities are securing their own made-to-order spaces.

*At UNC-Greensboro, the New Health, Physical Education, Recreation and Dance complex combines academic and athletic activities in the same arena, providing a real life setting for the study of sports medicine and physical education.*

*The \$16.2 million project by ENG/6A of Asheville was a complicated renovation pulling together two outdated gymnasium buildings. One was transformed into a home for UNCG's nationally recognized sports medicine program, with training rooms, lockers, a specially equipped research gymnasium, laboratory and offices.*

*The second gym was retrofitted to house the university's expanding School of Dance programs and includes dance laboratories, a theater and teaching/rehearsal studios, as well as an NCAA-sanctioned pool. A 2,300-seat spectator gymnasium for inter-collegiate sports competition and an intramural sports gymnasium complete the complex.*



Photo by Joseph Ciarlante

*The new \$17 million Baker Sports Complex at Davidson College, designed by Little & Associates Architects of Charlotte, builds on the theme of active participation and socialization. Davidson wanted a facility for participatory sports—not a spectator sport complex.*

*The complex is designed so that a student walking in can see a range of activities from the lobby—students swimming, dancing, playing racquetball or intramural basketball. Students can stop and chat, set a date for a challenge match or exchange classroom notes—or they can take a seat and watch the activity.*

*"I think there are two areas where we are going to see increased changes in the future: a continued shift toward multi-use facilities, and the creation of real-life work environments for teaching—trying to reduce the transition between an educational environment and the real world when a student graduates."*

Douglas R. Campbell, AIA  
ENG/6A Associates  
Asheville





Above: Student housing at Davidson College. Below: Housing at the University of North Carolina-Charlotte. Architect: Little & Associates, Charlotte.

*"Dormitories—they used to be so noisy, you had to go away from there to study. In the '60s, any music under 120 decibels was not important to anyone, and that drove more people out of dormitories. Students began moving away from campuses."*

*"Now we're seeing a gradual migration back to campuses, and a lot of that came about because of economics. But, coupled with that, students are no longer happy with noisy dormitories. They want privacy."*

*"When we ask students about these things—about common spaces, laundry, game rooms, amenities—the one they don't want to give up is private rooms, one room per person."*

Grover C. Meetz Jr.  
Little & Associates  
Charlotte



### A Place More Like Home

Campus housing is beginning to look a lot more like apartment complexes than dormitories.

Two housing complexes designed by Little & Associates of Charlotte make use of the apartment and suite concepts to meet student needs and compete with off-campus housing. Special attention paid to sound control, security and computer tie-ins

make these new residential units especially attractive to students.

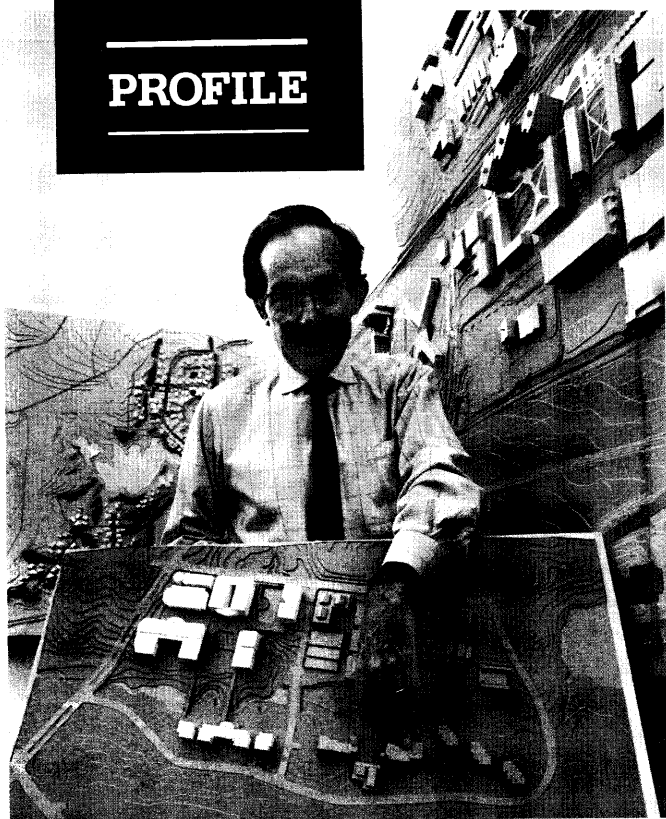
New dorms at Davidson College by Little & Associates Architects of Charlotte consist of three related buildings, each of which has 34 apartments with four private bedrooms and a common kitchen and living area, providing a total of 144 beds for \$3 million.

A three-story, \$7.3 million housing

unit at the University of North Carolina in Charlotte, by Little & Associates, combines 46 apartment-style units, with private bedrooms, with 59 suite-style units in which two students share a room and four students share a kitchenette and living area. In the common areas, students benefit from two computer rooms, five meeting rooms and four informal lounges with views onto two recreational areas.



## PROFILE



### “Abie” Harris: Vital Spaces Keep His Campus in Context

In the early 1950s, the North Carolina State School of Design was housed in old army barracks that barely provided warmth and shelter. They were neither attractive nor especially functional.

“What’s so ironic,” says Edwin F. Harris Jr., FAIA, who attended the school from 1952 to 1957, “is that it was a great place to get an education. We could personalize the space. We could nail into them, paint them. We could do with these buildings anything we wanted to. There was no uptightness about it; we could manipulate the space.

“New buildings—particularly bad buildings—are more restraining,” he says. “They require you to take care of them, and yet they don’t inspire you to create your own space. The army barracks wouldn’t meet any of the standards that, as bureaucrats, we would bring to educational spaces. But I find myself sympathetic to places like that.”

For 20 years, Harris—who is called “Abie”—has directed the campus planning office, managing the process of building and renovating the university’s facilities to serve the largest student body in North Carolina—more than 25,000 students.

N.C. State has 27 projects in the planning stage, more than \$100 million worth of building. That, Harris says, is a typical load. His work is to coordinate the efforts of many architects and keep them in touch with the needs of the whole campus, not just individual buildings.

These buildings must be designed to meet strict functional guidelines and conform to codes and standards. But, as Harris works with architects and planners, he keeps in mind the lesson of the army barracks.

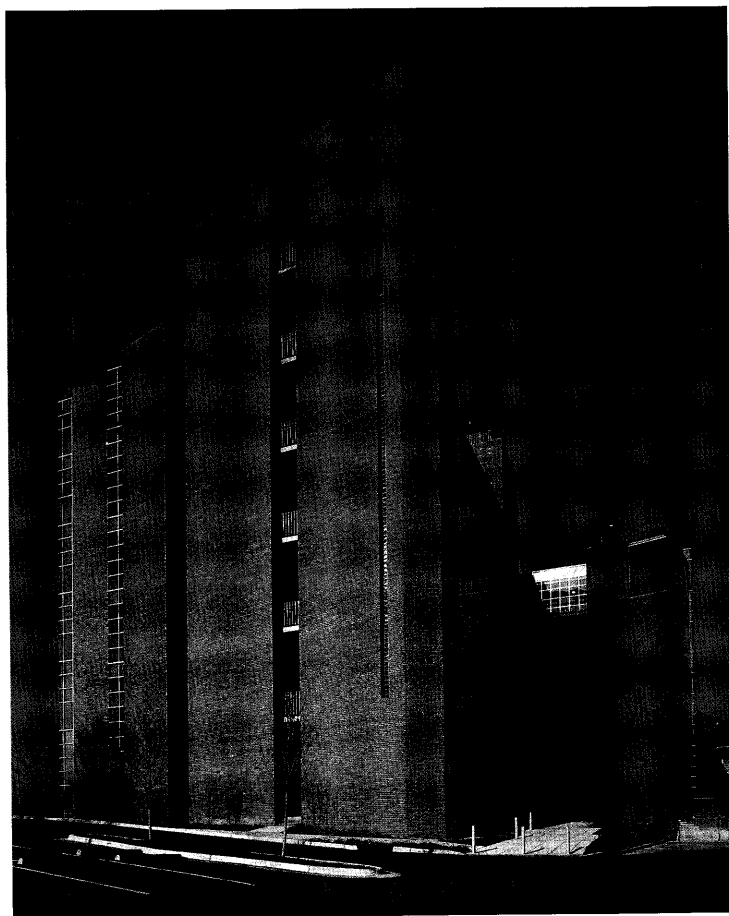
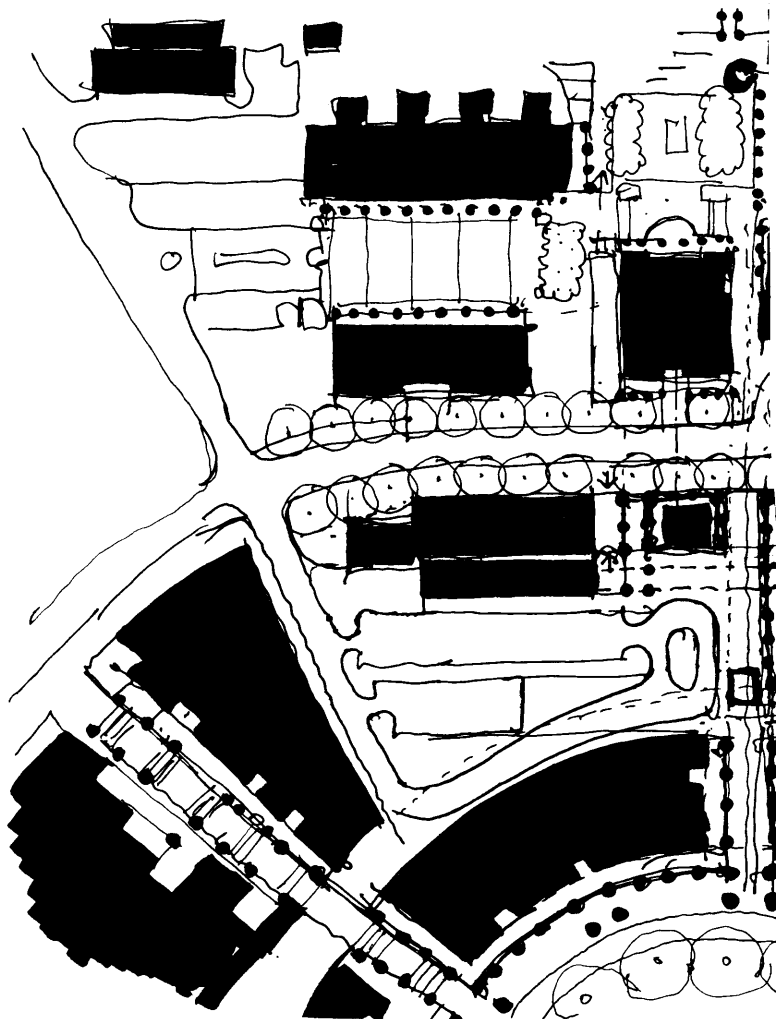
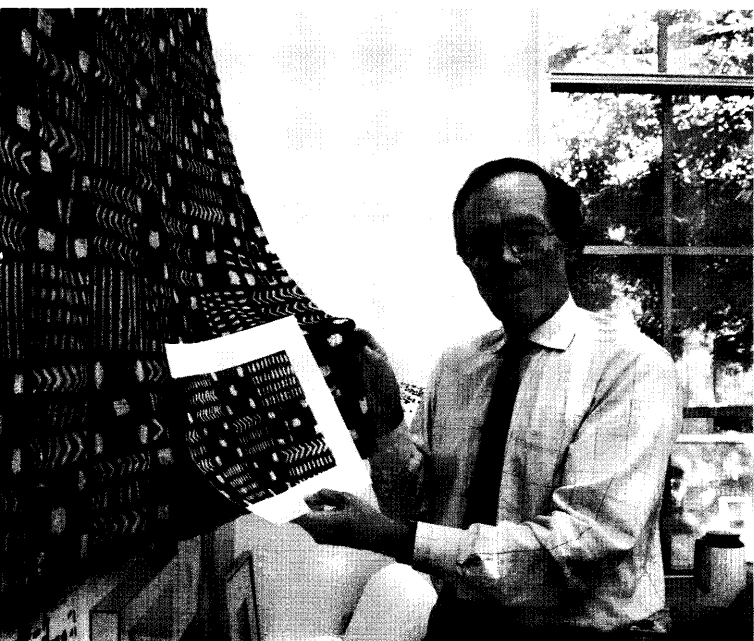


Photo by Stanley Capps

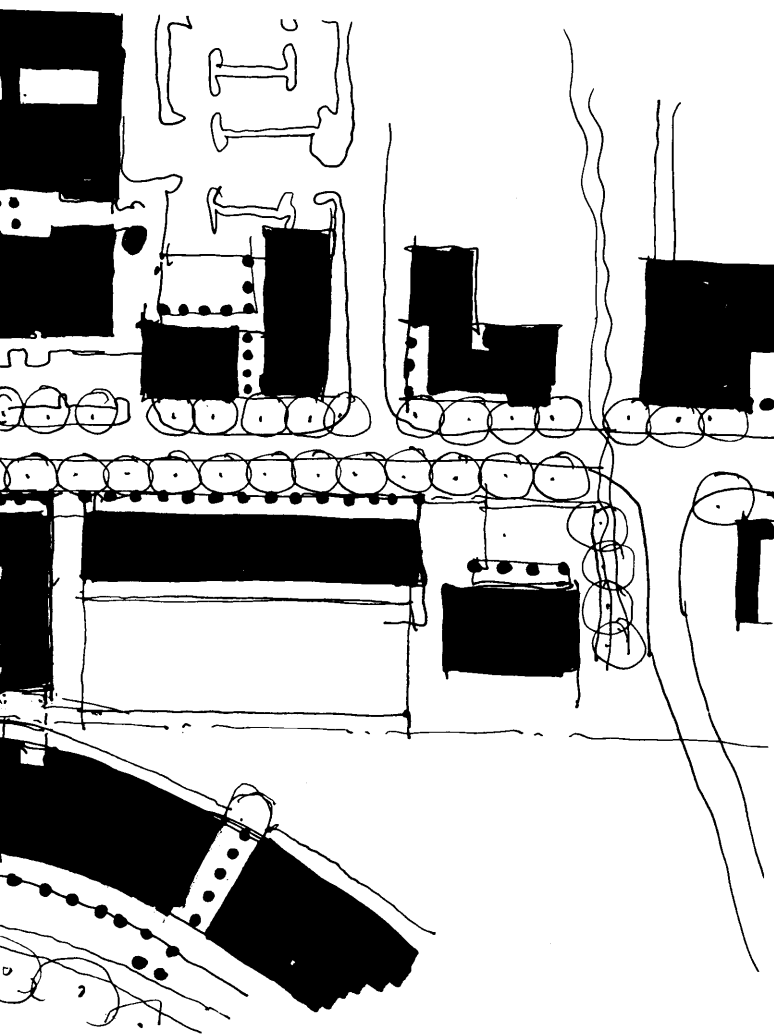






Photos by Jerry Markatos

Above: "Abie" Harris shows the pattern from an African tapestry that will be used in the pavers for the African-American Cultural Center. Left: The new Natural Resources Research Center by Jenkins • Peer Architects, Charlotte, defines an entrance to the campus and already has become something of a landmark. Below: A planning drawing by Harris of N.C. State's Centennial Campus.



"The trump cards architects have to play with are the spaces in between the required functional areas that are so driven by the mandates," he says. "They are the spaces we can organize that create what we call 'a sense of place' in a building. A lot of that takes place outside."

Harris is one of the old-timers of the School of Design, which was founded in 1948 by the late Henry Kamphoefner just as modern architecture was finding its way into architectural education.

Harris, the son of an electrical contractor in Elkin, graduated with a high school class of 52. He was awestruck to land in the academic community of world-class architects, painters and sculptors that Kamphoefner had assembled to preach the new architectural gospel.

Harris has never really left the academic environment. In 1957, he married his high school sweetheart, Patsy Graham. Ten years later, he settled into a house in Cameron Park, a turn-of-the-century neighborhood next to the N.C. State campus.

There he raised his two grown daughters—Wren, a marketing director for an Atlanta law firm, and Melissa, who followed his footsteps to the School of Design, then went to Berkeley for a master's in architecture. She is now teaching architecture at the University of Michigan.

After his first marriage ended in divorce, in 1979 Harris married Susan Arrendell, who has a doctorate in plant breeding from N.C. State. Now Harris, at the age of 56, has two sons, 6-year-old Alex and Edwin Arrendell Harris, who is almost 2.

"I'm having my own grandchildren," Harris quips.

The designer in him can't help but note the symmetry—first two girls, now two boys growing up in the same house. Alex attended Raleigh Preschool on Ridge Road, the same school his daughters attended years ago. Harris, Robert P. Burns, FAIA, and Benjamin B. Taylor, AIA, designed the school, which won an NCAIA Design Award.

When he finished his architectural education, Harris went to work for Horacio Caminos, an Argentine architect who was a professor at N.C. State. Harris worked with Caminos on a university for Buenos Aires and a hotel in San Juan.

Then he won the Paris Prize in Architecture, a traveling fellowship, and spent 1959 traveling in Europe and studying at the Beaux Arts in Paris.

"I knew just enough French to get me in and out of the door," Harris says. "I was known as Mr. Coca-Cola. I was living on the Left Bank and having a wonderful time traveling and drawing."

The pattern of drawing while traveling stuck. And the drawings have earned Harris some recognition. In September, his drawings were included in an exhibit at Columbia University called "The History of History in American Schools of Architecture, 1865 to 1975."

Daughter Melissa is addicted to the drawing habit as well, Harris says. A few years ago, the drawings of father





Photo by Joseph Ciarlante

*An infill N.C. State parking facility by Lee Nichols Architecture, Charlotte, marries function and safety with a friendly facade.*

and daughter were exhibited together at N.C. State's Student Center Gallery and on tour in Eastern North Carolina.

After Harris returned from Paris, he served six months in the Army. Then he worked for a Raleigh architecture firm and was licensed. And he taught drawing in the School of Design.

He joined the staff of the university planning office in 1966. At the same time, he practiced architecture for two years in partnership with Burns, now head of the architecture department at the School of Design. In 1969, Burns and Harris joined with Taylor to found the firm Envirotek Inc., but the two left the Raleigh firm a couple of years later.

Early on, Harris built a reputation as a creative designer.

"I used to think it was a shame he decided not to practice architecture," said Craig D. Leonard, AIA, of Bohm-NBBJ of Raleigh, a firm with a presence on the N.C. State campus. "But then I began to realize how much impact he has over the buildings on the campus, and I realized his talent is by no means wasted."

Harris continues to enter design competitions. In 1986, he won the \$5,000 grand prize in a competition for a master plan for the University of Miami.

"In the past five years, I've done four or five of those," Harris says. "I crank them out in a studio in my basement. It's the antithesis of what I do at State, with committee meetings, meetings with architects and that sort of thing."

He also competes as a runner. In August, he and four friends drove to Indianapolis to compete in the National Masters. Harris finished fourth in the 800-meter race and sixth in the 1,500-meter race. He runs 6 to 8 miles a day, much of that hard interval work.

"I'm serious about running," Harris says. "I don't know how I could do without it. It's like eating."

All this sustains Harris' life as a campus architect and planner—a career path he has never regretted taking.

"I feel, like a lot of architects, there's no short cut for really being in a place and drawing inspiration from it," he says. "I ran this morning through the Centennial Campus."

"It's not possible to do what I do without being closely involved. There's certainly a level of magic in it, but it's also part of living, seeing and feeling what's going on and sensing the needs for improving it."

In 1987, Harris' peers made him a Fellow in the AIA for his contribution to campus planning.

"I'm very proud of that," he says.

Harris says the cornerstone of his work in campus planning is the attention he pays to spaces between the buildings, the areas defined by the buildings.

"We've tried to decentralize the campus into a lot of landscaped courtyard spaces," he says. "We try, through programming, to orient the activities of the buildings to generate a sense of vitality in these spaces. We think there's an obligation that these buildings talk to the people in these spaces."

Over the years, Harris has seen attitudes toward architecture change—for the better.

"There's a growing concern about what a place looks like and how it feels to be there. . . . If we do a bad building now there is an awareness of that. To fall even to a mediocre level is a disappointment."

"In the 1950s, attention went to signature buildings. Now a campus is a good example of context, as opposed to signature buildings. Now, somehow, the buildings are subservient to the total place. As far as campus architecture is concerned, that's an enormous improvement."

*Harris in his office in Primrose Hall near the bell tower.*

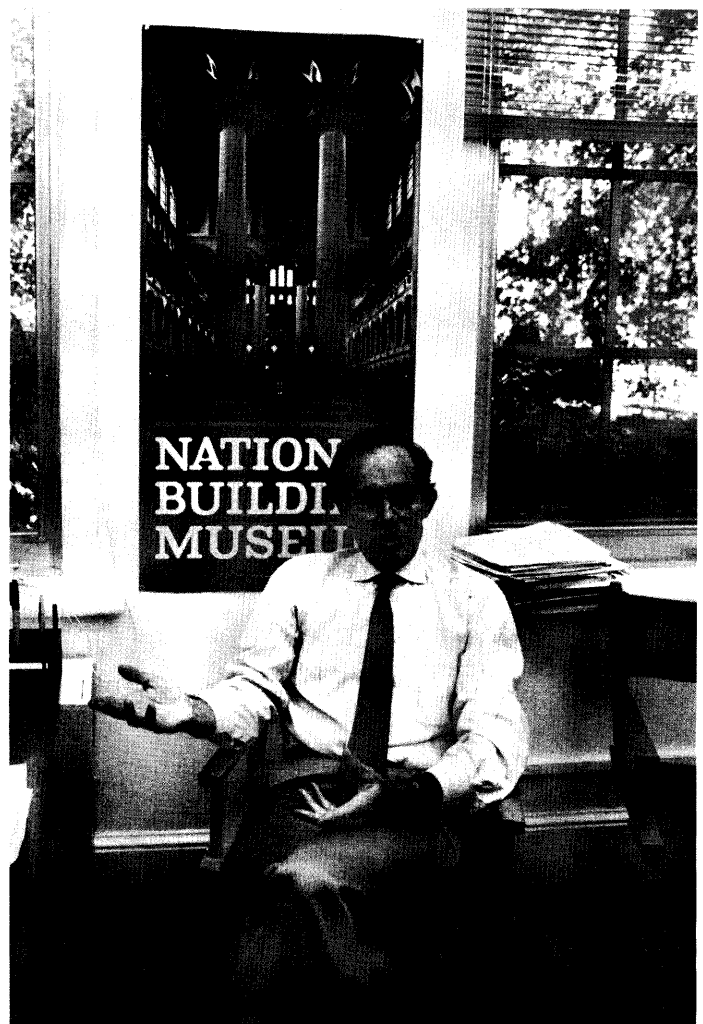


Photo by Jerry Markatos

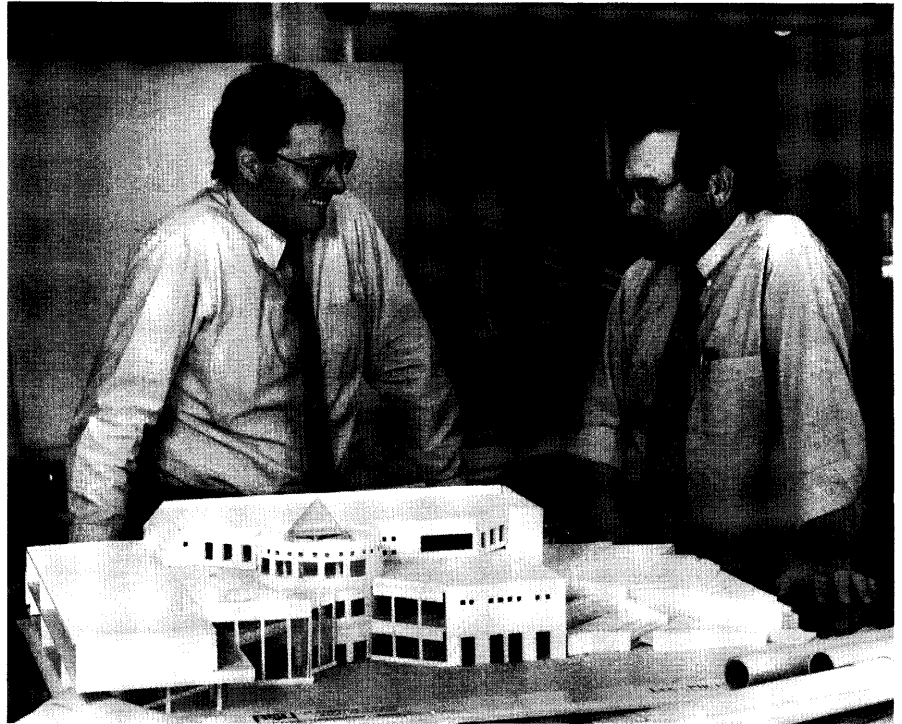


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*Don Lee, FAIA, and Bill Nichols, AIA, are principals in Lee Nichols Architecture, a Charlotte firm founded in 1969. Don Lee is past president of NCAIA. Bill Nichols is past president of the Charlotte chapter of NCAIA. We value our relationship with their firm and appreciate their willingness to talk to you about us.*



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## The Building That Lassoed the Sky: Matthew Nowicki's Dorton Arena

By Ernest H. Wood III

*From Architects and Builders in North Carolina: A History of the Practice of Building by Catherine W. Bishir, Charlotte V. Brown, Carl R. Lounsbury and Ernest H. Wood III.*

*This account of the design and building of one of the state's signature buildings from the newly-released Architects and Builders in North Carolina: A History of the Practice of Building illustrates the careful detail and narrative style that the authors have brought to a soundly academic work analyzing building as a craft, an industry and a profession from 1650 to the present.*

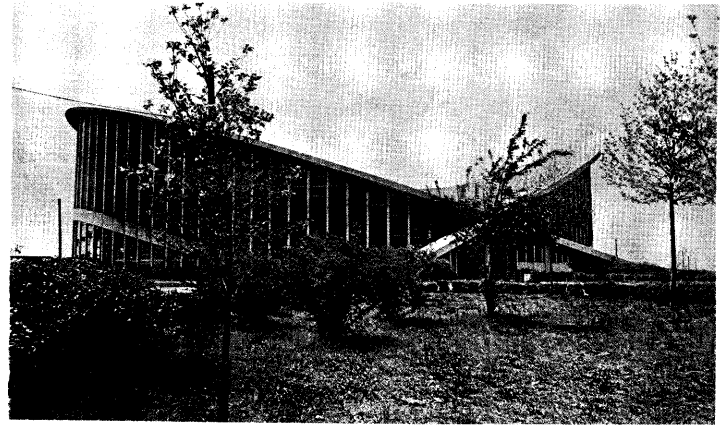
*The research project, which was funded by The National Endowment for the Humanities, has been more than a decade in the making. The first American book to survey the entire practice of building, it has been praised for its new approach to the study of architectural history and for providing a model on which future regional or national studies might be based.*

*The book's authors are Catherine W. Bishir, director of the North Carolina Architecture Project of the Historic Preservation Foundation of North Carolina; Charlotte V. Brown, the director of the visual arts program at North Carolina State University; Carl R. Lounsbury, an architectural historian at the Colonial Williamsburg Foundation; and Ernest H. Wood III, an architecture writer for Southern Living and former editor of North Carolina Architecture.*

*The book is available for \$37.50 in book stores and from The University of North Carolina Press, P.O. Box 2288, Chapel Hill, N.C. 27515-2288.*

In the nineteenth century, the North Carolina State Fair was a showcase of agriculture and the mechanical arts, where the accomplishments of the building industry were on exhibit alongside the accomplishments of agriculture. Despite war and depression, fairs symbolized both progress already made and hopes for the future. A hundred years later, North Carolina remained a largely rural state, though its towns and cities had grown dramatically. As the nation emerged from World War II, there was again great optimism for the future.

It is appropriate, then, that the building that should emerge as a symbol of this new era would be on the State Fairgrounds in Raleigh. Designed by Matthew Nowicki, a young Polish architect who arrived in the capital city in 1948 as acting head of the architecture department at the new School of Design at North Carolina State College, the J.S. Dorton Arena was both a challenge and a triumph for the state officials who commissioned it, the architects and engineers who designed it, and the contractors who erected it. It was a key not only to the vision of the fair but also of agriculture, for in the postwar period, rural North Carolina made rapid economic and architectural strides in its efforts to catch up with development in the rest of the state. The arena brought



*Dorton Arena, the signature building of the North Carolina State Fairgrounds.*

the cutting edge of architecture into the public view at a time when architects zealously believed that their work could change the world. Clients, contractors, workmen, and architects each had their own niche in building, but in the early 1950s they shared a common goal—to find the future.

At first known simply as the State Fair Arena, the building also had a simple function: it was a place for judging livestock. Yet looming over the fairgrounds, which were then and are now populated by thrill rides, hot dog stands, midway games, and souvenir shops, the building had a majestic presence. It was used for the first time in 1952, even though it was incomplete. Reported the *News and Observer*: "They took the wraps off the 85th edition of the N.C. State Fair yesterday morning at 10 o'clock, and the eyes of the early fairgoers popped right out. Every fair boasts of some new fashioned addition to its facilities, but this year's has been an unusual innovation. The parabolic arches of that architectural wonder, the state fair arena, catch the spectator's eyes immediately, no matter where he alights from his car."

If the general citizenry greeted the building with the same amazement they felt for the midway shows, the architectural community displayed a level of excitement that would greet a pioneering scientific discovery. Nowicki had created a design based on a revolutionary use of the forces of tension and compression. Two parabolic arches interlocked at their bases and leaned away from each other, supported at the top by a network of cables and on the sides by only a few vertical columns. The arena received wide publicity in the architectural press, and the American Institute of Architects gave the building an honor award of 1954. As the *Student Publication of the School of Design* noted in its first issue, which was dedicated to Nowicki: "The clients wanted a fair facility that would advertise North Carolina as a progressive state and they wanted no copy of anything done before."

Attention to the arena—and its architect—was heightened by Nowicki's death in an airplane crash in 1950. The design as it now stands, slightly altered with added



vertical supports, was completed by associate architect William Henley Deitrick of Raleigh and engineers Severud, Elstad, and Kreuger of New York. The arena was erected by the William Muirhead Construction Company of Durham. Nowicki remained, however, a powerful symbol of the modernist period in the state for both the public and the architectural profession. Among the young architects in school at the time and those who would follow shortly—the generation that would establish modernism in the state—the gifted young architect who was killed in his prime became nearly a cult figure.

The construction of the arena, in reality, resulted from an extraordinary mating of architectural talent with ambition from both the architectural and agricultural communities. J.S. Dorton, the fair manager whose ambition was “to make the N.C. State Fair the most modern plant in the world,” first approached Henry Kamphoefner, dean of the new School of Design, within a year of the school’s founding, saying that he wanted some special buildings constructed on the fairgrounds. Kamphoefner, who wanted to build the reputation of the school and secure work for its faculty, suggested Nowicki. “I had no trouble persuading him of the abilities of Matthew Nowicki,” Kamphoefner recalled in an interview in 1980. He described Nowicki as “a very charming person.” Throughout the project, in fact, Nowicki’s charm played a major role. Dorton “didn’t have any idea of what he was going to get,” recalled Kamphoefner, “but Nowicki and Deitrick were very good salesmen” and had no trouble getting the \$1.5 million building approved and funded, though it was considered very expensive for the day.

Again and again, those who knew the young Polish architect commented not only on his extraordinary talent but on his unassuming yet powerful personality, which meshed well with the state’s populist traditions. The result was immense popularity. As architecture critic Lewis Mumford, a visiting lecturer at the School of

Design who had suggested Nowicki for the university position, wrote after Nowicki’s death: “Nowicki’s dictum that the client makes an important contribution to the building and deserves part of the credit stemmed from his profound respect for ordinary men and their ways, and this was fully rewarded by the popular response his personality and his work evoked.” Thirty years later, Thomas T. Hayes of Southern Pines, who had been a young architect in Deitrick’s office during the arena project, remembered Nowicki’s approach vividly: “As he developed these projects, he had a way of making people think that they had done it.” Whether it was the governor, an official of the Department of Agriculture, or another architect, Nowicki would ask his opinion. “But there was no question that he had directed your opinion to what he wanted you to say,” Hayes recalled. The technique worked. Noted Hayes, “These were tobacco chewing, cigar smoking country boys, who were powerful, and they loved Nowicki and he loved them, and it was that kind of relationship. These were powerful men who knew their power and they didn’t worry about what people said.”

Like state architect William Nichols, who in the early nineteenth century had prodded his clients into redesigning the State House to accommodate the Canova statue of George Washington, Nowicki met criticism for the cost and ambition of the arena. Critics dubbed the building the “Cow Palace.” But like Nichols’s State House renovation, Nowicki’s arena did exactly what it set out to do—elevate the level of North Carolina’s public architecture and draw attention to the state. Reporting on the October 20, 1953 dedication of the arena, the *News and Observer* called the building “a great architectural wonder that seems to lasso the sky.” The politicians’ oratory also soared. Gov. William B. Umstead called the building a great tribute to the vision and foresight of the builders and the people of North Carolina. Kerr Scott, who had been governor when the building was approved and built and who at the dedication was a candidate for the U.S. Senate, called complaints about the arena’s cost and design “opposition where there should have been no opposition.” Said the former governor: “This [building] is the mirror of the Agriculture Department.”

The arena mirrored more than one government department, however. It was a symbol of what architecture and building could do and what postwar North Carolina wanted—even if it was not a symbol of general construction in the state. Like the Capitol a hundred years earlier, its direct effect on everyday building was negligible. Yet it was part of a widespread spirit of experimentation. Like the Capitol, it was to become a symbol of the city, and many people viewed it with both affection and pride. In the late 1970s, an auto dealer used it in his advertisements. The arena was a familiar spot for special events such as the circus and concerts. A local sporting-goods store sponsored a ten-kilometer run that coincidentally linked these two important buildings, the Capitol and the arena. Said the run’s organizer: “Every time I go by the building, I say to myself, ‘Gee, that’s really something.’”

*Excerpted from Architects and Builders in North Carolina: A History of the Practice of Building, copyright 1990, The University of North Carolina Press. Reprinted with the permission of the publisher.*

*Matthew Nowicki beside a drapery he designed for the Carolina Country Club.*





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## AWARDS AND RECOGNITION

A jury consisting of Cesar Pelli and Mark Simon selected four Honor Awards and three Awards of Merit in the second annual Isosceles Awards program sponsored by the Raleigh and Durham/Chapel Hill sections of the NCAIA. Of the entries, Pelli said: "We were impressed with the quality of the entries, particularly given the fact that this is such a small region... as good as I have seen sometimes of whole states."

Haskins, Rice, Savage and Pearce of Raleigh received an Honor Award for the Child Care Laboratory at Wake Technical Community College, which the jury found to be a "very handsome, simple, unpretentious" design. The design was praised for its solving the difficult problem of making a one-story, sloped-roof building interesting.



*Child Care Laboratory, Wake Technical Community College  
Haskins, Rice, Savage and Pearce*

The North Carolina State University research facility by O'Brien/Atkins Associates of Research Triangle Park took an Honor Award for a well-proportioned design that handles light in interesting ways and is unpretentious. "One telltale important sign is how good the blank facades are," Pelli said.



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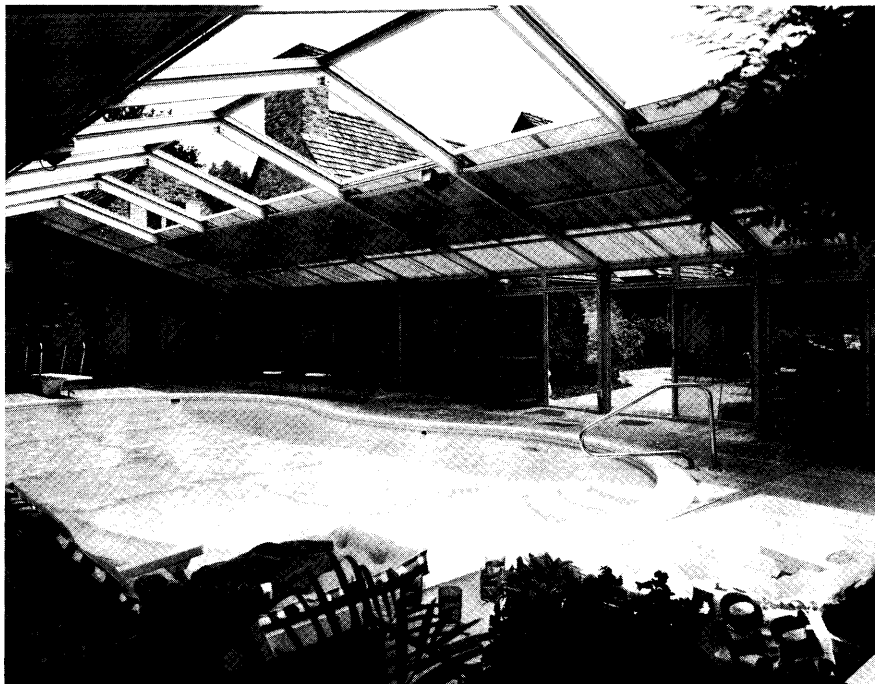
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Another O'Brien/Atkins design, the Durham Women's Clinic, received an Honor Award for its "nice, simple, clear, elegant plan," said Pelli. Simon said, "The building uses inexpensive materials but maintains its sense of dignity."

William R. Hopkins Architect, AIA, of Raleigh with Philip Szostak Associates of Chapel Hill, received an Honor Award for the Jenkins House, an unbuilt project. Pelli said, "The elevations are very nicely resolved."



N.C. State University research facility  
O'Brien/Atkins Associates

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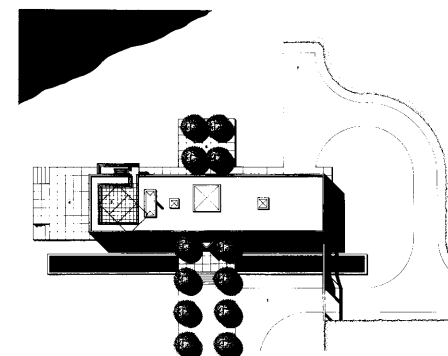
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Durham Women's Clinic  
O'Brien/Atkins Associates



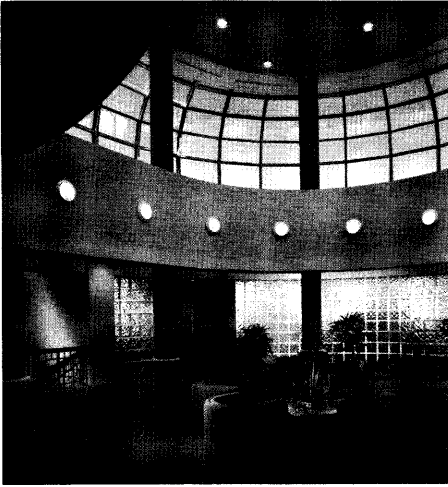
Jenkins House  
William R. Hopkins Architect, AIA,  
Raleigh, with Philip Szostak Associates,  
Chapel Hill

Merit Awards went to:

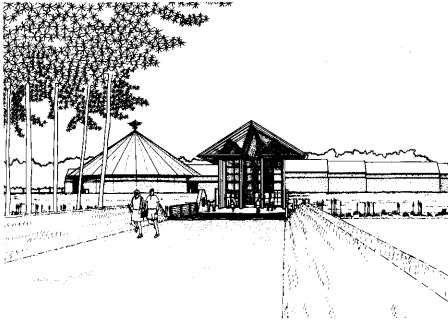
**O'Brien/Atkins Associates** for the Administration Building for Glaxo, noteworthy for the care given to details and the overall competence;

**Bohm-NBBJ of N.C. Inc.**, Research Triangle Park, for the Burroughs Wellcome Company Corporate Visitors Center, which Pelli praised for its proportions and the graphics of the plan.

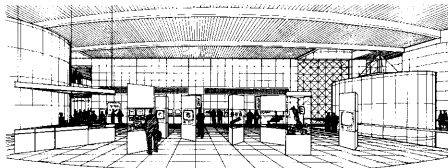
**Bohm-NBBJ** for the Visitor Center of the N.C. Indian Cultural Center, "an interesting place to explore," Simon said.



*Glaxo Administration Building  
O'Brien/Atkins Associates*

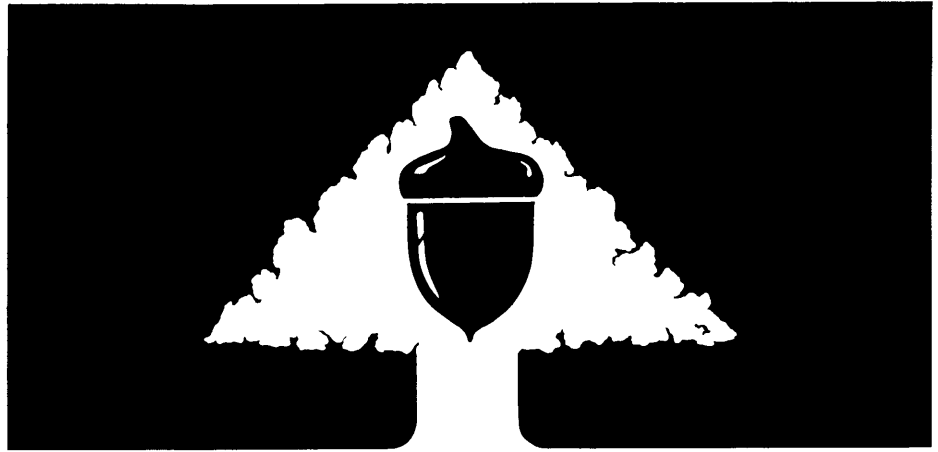


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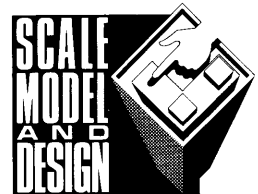
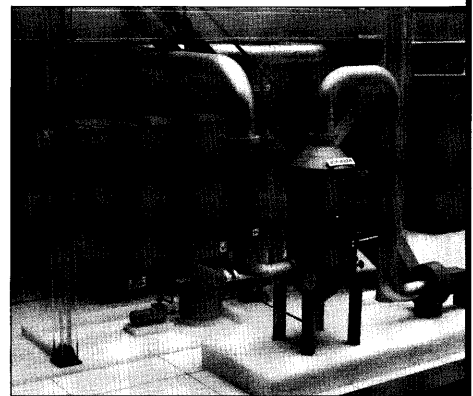
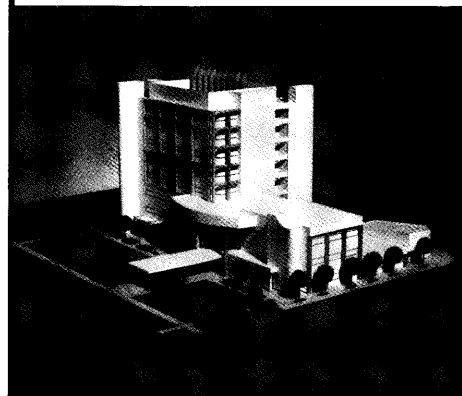
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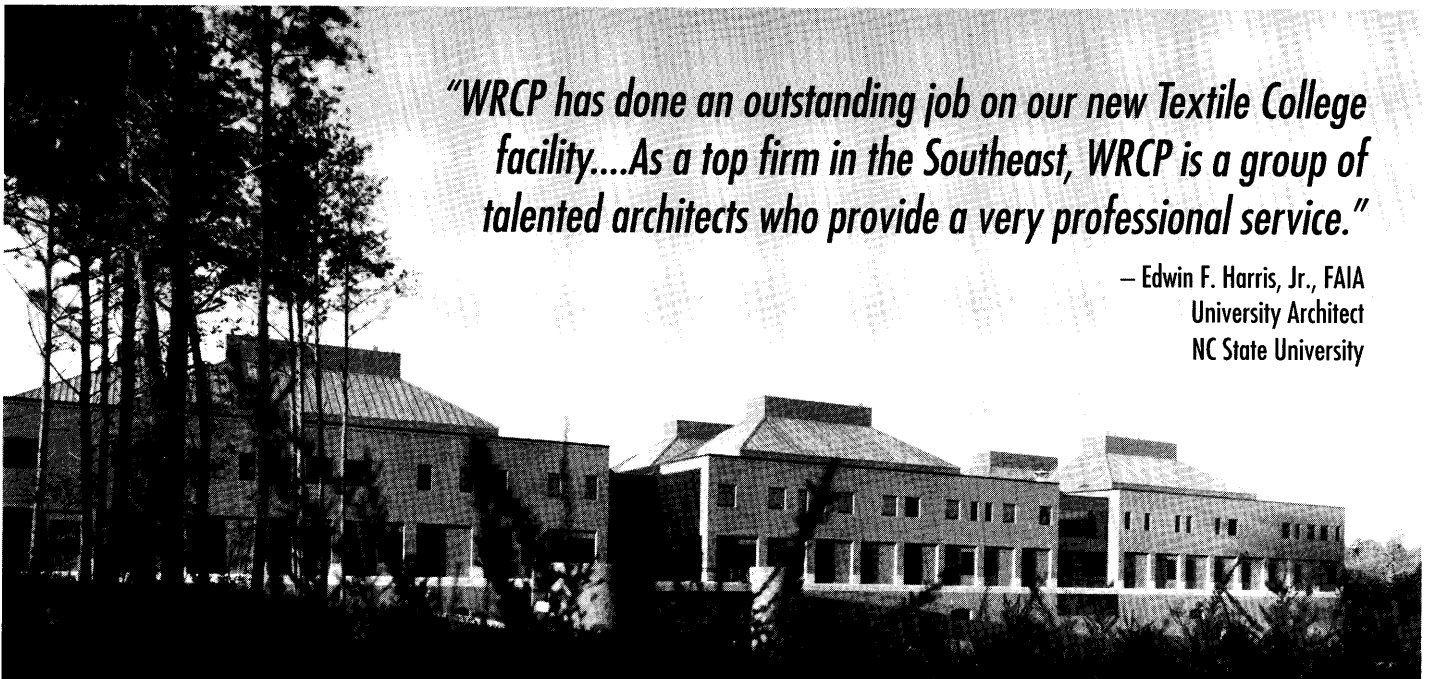


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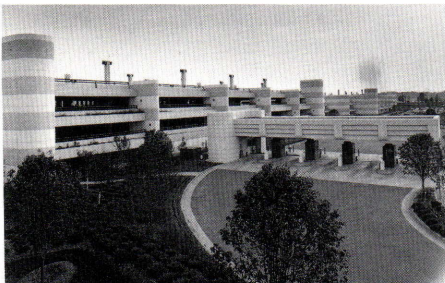




*Mecklenburg County Central Intake Center  
1990 Architecture for Justice award winner*

The Mecklenburg County Intake Center, by **J.N. Pease Associates** of Charlotte, was selected for inclusion in this year's national Architecture for Justice Exhibition. The exhibition will be displayed around the country for viewing by various law enforcement officials, public officials, architects and others involved in the criminal justice system. The overall design concept of the Intake Center is a new approach to the booking function of a traditional jail.

**Odell Associates Inc.** of Charlotte won the 1990 PCI Design Award of Excellence, given by the Precast/Prestressed Concrete Institute for the Charlotte-Douglas International Airport Parking Structures. The 2,700-car structure is one of the largest precast/prestressed concrete projects in the Carolinas with about 21,000 cubic yards of concrete.



*Charlotte-Douglas International Airport  
1990 PCI Award winning design*

**Norma DeCamp Burns, AIA**, President and CEO of **Burnstudio Architects, PA**, of Raleigh was recognized in a special feature of *Space Design* magazine entitled, "Women in American Architecture." Buildings featured in the article are the Burnstudio Building in Raleigh and the Chatham County Social Services Building in Pittsboro. *Space Design* is a Japanese architectural journal with international distribution.

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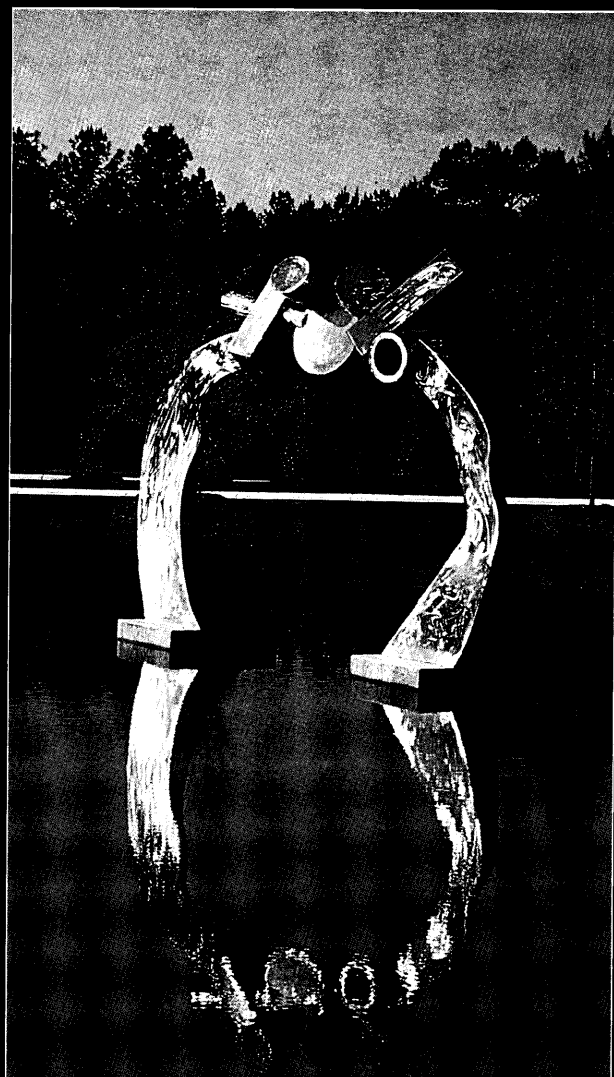
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## IN THE WORKS

The LSV Partnership, Architects, of Fayetteville have been selected to design two branch libraries for Cumberland County. One in northwest Fayetteville is under construction. The second, to be built in Hope Mills, is in the design phase. Also under construction is a day-care center designed for the Cape Fear Valley Medical Center.

Overcash-Demmitt Architects of Charlotte has been selected as the architect for the Carolinas AGC Headquarters Additions and Renovations. The project in the Dilworth community includes a new two-story, 13,000-square-foot addition, as well as the renovation of the existing 12,500-square-foot quarters. The Carolinas AGC is the largest chapter of Associated General Contractors in America.

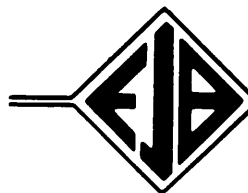
## NAMES AND CHANGES IN NORTH CAROLINA ARCHITECTURE

Robert L. Hume has joined Ellinwood Design Associates, with offices in Raleigh and Greenville. Hume will serve as director of the Raleigh office, with responsibilities for project management of the engineering and architectural departments as well as general office management. He has had 15 years engineering experience.

Amy Conner Murphy has joined Overcash-Demmitt Architects of Charlotte as project designer, with responsibilities for designing commercial projects. Murphy received her bachelor of architecture at Auburn University School of Architecture. She also is trained in using the CADD system.

Jerel Boone, AIA, has been named director of operations for J. Hyatt Hammond Associates, Inc., a Greensboro architecture and engineering firm. Boone has been with the firm for 18 years and recently became a principal. His responsibilities include personnel, project schedule, drawing and document management.

Lee Nichols Architecture of Charlotte recently announced the registration of M. Douglas Wasiela. Wasiela received his bachelor of architecture degree from Virginia Tech in 1986. He has been associated with Lee Nichols since 1984 and is head of the design studio for the firm.



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Dede A. Fister of Hamburg, Penn. recently joined STEC & Company, P.A., Architects of Greensboro as an intern architect and CADD technician. Fister is a recent graduate of UNC-Charlotte College of Architecture.

The LSV Partnership of Fayetteville has added two new staff members. **John MacKorell**, who has a master of architecture degree from Georgia Institute of Technology, comes to the firm from Lliollo Associates of Charleston, S.C. He has 10 years of experience. **Vida Tavakoli** joins the firm after one and a half years with Hayes, Howell Associates of Southern Pines. She has an interior design degree with first class honors (1974) and license and a bachelor of architecture degree from N.C. State University (1989).

Two N.C. State School of Design faculty members have been appointed to administrative posts. **Deborah W. Dalton** has been named associate dean of the School of Design, and **J. Patrick Rand** has been appointed assistant dean. Dalton succeeds Robert P. Burns, who will continue to serve as head of the Department of

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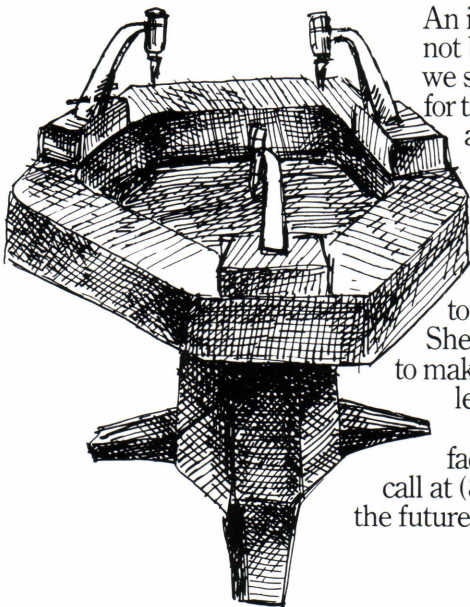
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Architecture. She previously was head of the Department of Landscape Architecture and she served as interim dean of the School of Design in 1988-1989.

### Correction

In the September/October issue *North Carolina Architecture* incorrectly identified Randolph D. Henning, AIA, who has joined Walter Robbs Callahan & Pierce Architects, PA, as project manager. We regret the error.

### Coming Up in 1991 in *North Carolina Architecture*

#### January/February The Annual NCAIA Directory

A reference guide to the NCAIA membership, its leadership and committees, bylaws, code of ethics and other source material, as well as a preview of the NCAIA legislative agenda for 1991.

#### March/April Back to Schools

A look at the latest in school design and the lessons architects have learned about working with educators, local officials and the state to build for our children's future.

#### May/June Contemporary Homes

This issue will examine the angles and lines that define a contemporary house in a state that reveres history and traditional forms.

#### July/August Coastal Development

Sand and spray, hurricanes and environmental concerns all have had an impact on development along the enticing, but fragile, North Carolina coast. This issue will review the ways architects are addressing these concerns in their designs.

#### September/October NCAIA Design Awards

This annual issue features the best new architecture in North Carolina, spotlighting the NCAIA Design Award winners and covering all the entries in 1991.

#### November/December Places to Shop and Dine

It's the time of year when cash registers ring and merchants sing—a fitting time to feature retail architecture. We'll look at small-town shopping centers, urban festive retail centers, the mom-and-pop store on the corner and restaurants.

## NEW PRODUCTS

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The Graphic Wizard, which has broad applications for use at home and the office, is available with firm logos for use as a promotional item. It costs \$19.95, with discounts for orders of two or more (\$9.95 per dozen). For more information, contact The Wizard, 883 Cape Haze Lane, Naples, Fla. 33942, phone (800) 426-3555.

### In Hot Water

The San Diego Center for the Blind has installed a Steamin' Hot hot water dispenser for its specially equipped kitchen designed to make food preparation easier and safer for the hundreds of visually impaired clients who complete the center's program each year.

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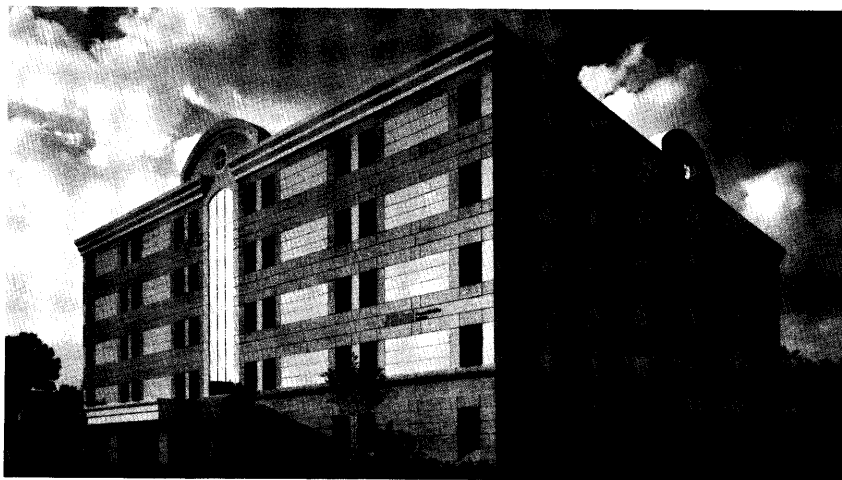
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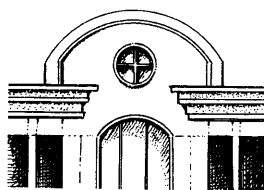
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The video also features a panel discussion of 2520 users hosted by W.I. Pittman, president of Xerox Engineering Systems. Copies can be requested by calling (800) THE-2520 or by writing to Engineering and Graphics Products, Xerox Corporation, Xerox Square-06, Rochester, NY 14644.





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