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National Park Service

National Register of Historic Places
Multiple Property Documentation Form

This form is used for documenting multiple property groups relating to one or several historic contexts. See instructions in How to Complete the Multiple Property Documentation Form (National Register Bulletin 16B). Complete each item by entering the requested information. For additional space, use continuation sheets (Form 10-900-a). Use a typewriter, word processor, or computer to complete all items.

New Submission Amended Submission

A. Name of Multiple Property Listing

Early Modern Architecture in Raleigh Associated with the Faculty of the North Carolina State University School of Design, Raleigh, North Carolina

B. Associated Historic Contexts

(Name each associated historic context, identifying theme, geographical area, and chronological period for each.)

- I. Modern Architecture in Raleigh, North Carolina, 1938-1972
- II. The Development of the Architecture Programs of the North Carolina State University School of Design, Raleigh, North Carolina, 1948-1972

C. Form Prepared by

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city or town Raleigh state North Carolina zip code 27605

D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. (See continuation sheet for additional comments.)

William S. Pinney SHPO Date 7-26-94
Signature and title of certifying official

State or Federal agency and bureau

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Carol D. Shull Date 9-21-94
Signature of the Keeper

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Provide the following information on continuation sheets. Cite the letter and the title before each section of the narrative. Assign page numbers according to the instructions for continuation sheets in How to Complete the Multiple Property Documentation Form (National Register Bulletin 16B). Fill in page numbers for each section in the space below.

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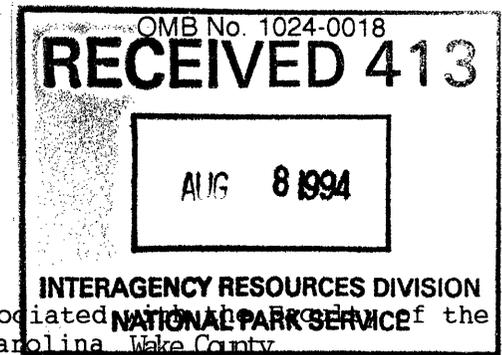
- State Historic Preservation Office
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E. Statement of Historic Contexts:

Introduction

During the 1920s, and for the most part in the 1930s and 40s, Raleigh's, and North Carolina's architecture was dominated by a variety of historically-based eclectic styles. Residential building was the realm of the Colonial Revival, the Tudor Revival, the Spanish Mission Revival, the French Provincial or the California Bungalow (essentially a revival or extension of the American arts and crafts movement). Commercial and institutional architecture was mostly the realm of the Georgian Revival, the Classical Revival, or in schools, the Gothic Revival.

Beginning in the 1930s, there was also room in institutional and commercial building for a more contemporary architecture in the form of the French-developed Art Deco, a streamlined version of the Art Deco known as the Art Moderne, and a stripped-down classical style that incorporated bits of both. Even these contemporary modes were largely stylistic clothing on existing building forms.

However, in the early 1930s, there began to be seen in North Carolina a new type of contemporary architecture that grew out of America's introduction to the rapidly-developing movement called Modernism. One of the hotbeds of Modernist thought in design in the early twentieth century was the Bauhaus at Dessau in Germany. Although closed in 1933 under pressure from the Nazis and thus only open for fifteen years, the school developed and popularized an integrated approach to design that, with the actual work of faculty members, had a profound affect on both the teaching of designers and on the substance of design around the world.

By the late 1920s, a substantial number of buildings had been constructed by Bauhaus architects and other designers, such as the French architect Le Corbusier, which reflected a similar set of concerns and which had superficial physical similarities. In 1932, Henry Russell Hitchcock and Philip Johnson curated an exhibit of modern architecture at the Museum of Modern Art in New York that they called "The International Style," and which attempted to define what this body of architecture had in common. In their book of the same title, Hitchcock and Johnson listed what they considered to be the key attributes of modern architecture, which consisted of:

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-an architecture of volume rather than mass, with space being defined by the planes of roof and walls, rather than being carved out of the body of the building

-regularity rather than axial symmetry as the chief means of ordering designs

-avoidance of applied decoration.

The aspect of the Modern Movement that was most imitated during this period, however, was the form that typified it; boxy, white, flat-roofed, asymmetrical, with crisply-cut windows and no ornament. And in examining North Carolina architecture for the influence of the new modern architecture during the period of 1930-1948, it can be seen that, for the most part, it was this formal aspect of the International Style and some of its underlying functionalism that manifested themselves.

The establishment of the School of Design at North Carolina State College (later North Carolina State University) in 1948 under the deanship of Henry Kamphoefner (1907-1990) brought North Carolina, and particularly Raleigh, into the mainstream of the Modern Movement almost overnight. Professor Robert P. Burns, Jr., former head of the architecture department of the school, and an early graduate of the program himself, has written that "the faculty not only trained many of the state's mid- and late-twentieth century architects, but they also produced a body of adventurous new designs which for a decade rivaled the best modern work in America's major cities" ("Modern Architecture in North Carolina's Capital City," unpublished manuscript by Robert Paschal Burns). In addition to bringing the latest European and South American ideas about modern architecture to North Carolina, they also introduced the state to the work of America's foremost modern architect of the early twentieth century, Frank Lloyd Wright, whose influence on North Carolina's architecture to that point had been negligible. So important was the School of Design under Kamphoefner to the introduction and proselytizing of modern architecture in North Carolina that the period during which the Modern Movement flourished in the state corresponds very closely with Kamphoefner's tenure at the school; from 1948 to 1972.

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Origins of Modern Architecture in North Carolina

The introduction of modern architecture to Raleigh in the late 1930s took place as part of a statewide context of architectural developments that dated from the early 1930s. The earliest known manifestation of modern architecture in North Carolina was the Weyman Biological Laboratory at Southern Highlands, constructed in 1931 to the design of Oskar Stonorov, with Tucker & Howell of Atlanta (Wodehouse, International Style, p. 149). Though now badly altered, as originally built it was a one-story, flat-roofed, T-plan building sheathed in vertical tongue-and-groove boards painted lemon yellow. The lab was one of the buildings illustrated by Hitchcock and Johnson in The International Style, and it was published in Architectural Record, but being located in a remote area of the state, it had no influence on the state's architecture. In a similar vein, Clauss and Daub's design of a doctrinaire International Style house for a client in Pinehurst was also published in 1931, but never built.

The earliest substantive modern movement influences on North Carolina came through Black Mountain College (NR), near Asheville. This college was formed in 1933 by a group of disgruntled professors from Rollins College in Winter Park, Florida, led by John Andrew Rice. Through the good instances of Philip Johnson, artist Josef Albers, one of the pioneers of the Vorkurs or preliminary course in handwork at the Bauhaus, came to Black Mountain to teach in the same year (Harris, The Arts at Black Mountain College, p. 8-9). Albers was the first of a stream of former Bauhaus professors and students that would come to Black Mountain, but he was also the most important, since he developed art and architecture programs similar to those at the Bauhaus (Harris, p. 8-9). In 1937, the college purchased 700 acres on Lake Eden for a new campus and hired Walter Gropius and Marcel Breuer to design a central complex of buildings (Harris, p. 56). They produced designs for a group of structures whose plan and detailing were in the mainstream of the Modern Movement. Unfortunately, the outbreak of the European war made fundraising difficult, and it was decided to abandon, at least temporarily, the Gropius and Breuer plans and to erect some simpler buildings which could be constructed by the faculty and students (Harris, p. 56).

A. Lawrence Kocher was then asked to make plans for the new building, in part because he was willing to join the faculty as resident architect. Kocher, who had been managing editor of the Architectural Record from 1928-1938, had a diverse range of

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interests which included the latest developments in construction and design in Europe and the United States. Kocher produced a plan for the Studies Building that featured a number of concepts from the Gropius and Breuer plan, in a simplified form. Like their plan, the Kocher design included a flat-roofed, multi-storied wing, cantilevered and elevated on *pilotis*, and with horizontal strip windows. Instead of the stuccoed masonry employed by European builders, the Studies Building had a wood platform frame that was sheathed with corrugated transite, a cement/asbestos panelling, with steel sash strip windows (Harris, p. 60).

The Studies Building was constructed by students and faculty members during 1940-44, and during this period Kocher was assisted in his teaching by several young architects, including Howard Dearstyne, the only American to graduate from the Bauhaus. Like the Bauhaus, the architectural curriculum included basic courses by Albers, experience in crafts workshops, classes in modern architectural design and materials, furniture design, and actual building construction (Harris, p. 86).

In the summer of 1948, Buckminster Fuller came to Black Mountain for the first time to teach in the Summer Art Institute. During that summer, Fuller and the students attempted unsuccessfully to erect his first geodesic dome. Fuller was so popular that he was invited to organize the 1949 Summer Institute at Black Mountain. With a group of students from the Institute of Design in Chicago, he erected for the second time a geodesic dome that had been designed over the winter. The relationship with North Carolina that Fuller developed at Black Mountain was shortly thereafter transferred to the new School of Design at North Carolina State in Raleigh, where Fuller was one of the early visiting professors (Harris, p. 160).

While it is easy to name the American architects and artists who were shaped by their experience at Black Mountain, it is more difficult to estimate the influence of Black Mountain on North Carolina. The school was isolated from much of the state, but there were some cultural exchanges between those who were teaching, studying or visiting Black Mountain and interested persons in Asheville. For example, both Gropius and Breuer came to Black Mountain a number of times and at least Breuer gave a talk to the local AIA chapter (Bishir, North Carolina Architecture, p. 492). The fact that Black Mountain College was located in North Carolina did contribute positively to North Carolina's national reputation in the arts. Writing to Albers in 1948 a few months after arriving to

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take over the deanship of the School of Design, Henry Kamphoefner remarked that "When my colleagues and I decided to come to North Carolina, being near Black Mountain College was considered by all of us to be one of the advantages" (Bishir, Architects and Builders in North Carolina, p. 359).

The most direct single example of Black Mountain's Bauhaus influence on North Carolina architecture is the Dr. Sprinza Weisenblatt House (1940-41) designed by Marcel Breuer with Anthony Lord of Asheville as supervising architect (Swaim, Doug, Cabins and Castles, p. 205). The flat-roofed, duplex house is a careful composition of planar, random-ashlar stone walls inset with panels of frame construction containing strip windows and cantilevered wooden decks. The result is quite a contrast to the surrounding period houses of Asheville's Lakeview Park subdivision.

From the mid-1930s, International Style-influenced buildings began to appear in North Carolina towns and cities. For the most part, these were houses constructed for relatively wealthy clients who were interested in modern art and architecture and who could ignore the social stigma that might come from having a house so different from its neighbors. With a few exceptions, the architects who produced the designs were more sophisticated than their fellow North Carolina practitioners and were more likely to have gotten their architectural education outside of the South, given the conservatism of the region's few architectural schools. However, they were also architects who ordinarily worked in both the eclectic modes and the Art Deco/Art Moderne.

Perhaps the earliest, and one of the best, of these homes was the Howard Gamble House (NR), built in Durham in 1935. It was designed by W. Stewart Rogers of the Asheville firm of Greene and Rogers. Rogers was an Asheville native, but had received his Master of Architecture degree from the School of Architecture at Harvard, where he studied under Walter Gropius, an Austrian architect whose work had been influenced by Gropius (Claudia Roberts Brown, National Register nomination for the Dillard and Gamble Houses). As originally constructed, the house was a composition of one and two-story stuccoed concrete rectangles with flat roofs. Overall, the exterior had the same feeling as Gropius's Masters' Houses at Dessau; a carefully-composed arrangement of boxes. The degree to which the plan was organized on functional lines was revolutionary for North Carolina in the period, particularly in the location of the kitchen at the front of the house.

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Another example of early International Style-influenced residential design was the W. Philip Robin House in Winston-Salem, built in 1939-40 and designed by Eccles Everhart of the Winston-Salem firm of Vorhees and Everhart. The one-story, originally flat-roofed, residence has an irregular plan centered around a living room/dining room space.

Both the Gamble House and the Robin House were published in national magazines, the Gamble House in American Home and Better Homes and Gardens in 1939, and the Robin House in Architectural Forum in 1945. Neither can be seen to have had a major impact on North Carolina residential architecture and both have subsequently been altered.

The grandest of all North Carolina houses built with the influence of the International Style was the R. J. Reynolds, Jr., House, "Merry Acres," constructed in Winston-Salem in 1940 from plans by Luther Lashmit of the firm of Northrup and O'Brien. Merry Acres was the antithesis of Bauhaus social ideas, incorporating as it did 35 rooms, 15 baths, a ballroom and a bowling alley ("From Bauhaus to Winston-Salem," The (Winston-Salem) Sentinel, 20 November 1981, p. 20). Architecturally, however, it made use of ideas derived from the work of Gropius and the other International Style architects. The flat-roofed, two-story house had stuccoed walls and horizontal bands of strip casement windows. It had wings projecting at right angles and a dramatic curved pavilion rounding the corner (Bishir, North Carolina Architecture, p. 454). Locally, the house was compared to an ocean liner and nicknamed "The Ship." Lashmit, however, felt that his design involved "a whole approach to make the house very useful and functional." He noted that he had built a heavy overhang on the south side, for instance, to keep the summer sun out and let winter sun in ("From Bauhaus to Winston-Salem," p. 20). Unfortunately, Merry Acres was torn down in 1977.

In spite of scattered examples, the International Style never became widely-accepted as a residential style in North Carolina. In part, perhaps, it was too alien from the state's conservative traditions of residential building. Its aesthetic principles required a more sophisticated contemporary outlook than most consumers (and their architects and builders) could muster. The functional concepts underlying International Style design were not a very good match for the living styles of middle class North Carolinians in the 1930s, when functional arrangement of rooms was still not seen as primary in importance. The architects who produced the International Style houses

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understood in general terms the underlying philosophy that accompanied the stylistic elements, but were not committed to it in exclusion of their ordinary eclectic work.

In the realm of commercial and institutional buildings the ideas of the Modern Movement were slightly more successful, in part, perhaps, because of the desire to project a progressive image on the part of the client. In Asheville, Anthony Lord's Asheville Citizen and Times Building of 1938-39 is a crisp counterplay of a vertical entrance tower with horizontal bands of glass block windows, another iteration of a motif that Walter Gropius borrowed from the the Die Stijl movement. One of Lord's later partners, Henry I. Gaines, also designed a striking Coca-Cola bottling plant for Asheville in 1940 that combined International Style strip windows and massing with Art Moderne curves.

I. Modern Architecture in Raleigh, 1938-1972

The most prolific proponent of modern architecture in North Carolina in the late 1930s and 1940s came in the unlikely form of a classically-trained Raleigh architect named William Henley Deitrick (1895-1974). Born in Danville, Virginia, Deitrick graduated from Wake Forest College in 1916, and after serving in the army in World War I, enrolled at Columbia University in 1922. During two years at Columbia he worked as a draftsman with Raymond Hood in New York, coming to Raleigh in 1924 ("Deitrick Paralleled," Raleigh News and Observer, 21 July 1974, p. 6-V and "William H. Dietrick Elected to Fellowship," Southern Architect, July 1955, p. 17).

Deitrick's first major commission as an independent architect was Broughton High School in Raleigh, built in 1928-29. Its Lombard Gothic Revival design set the tone for subsequent projects, which were carried out mostly in the Classical Revival or Georgian Revival styles. His first flirtation with modern architecture came in 1938 when he designed a new home for the Raleigh Little Theatre as part of a WPA project. Although its very simplified classicism and its detailing probably owe equally to a tight budget and the influence of the Art Deco, it represented a break from the eclectic tradition. The original portion of the building is composed of two crisp, painted brick rectangles, the lower one containing the lobby and auditorium, the taller rectangle housing the stage and fly gallery. Both portions of the theatre are set on high, random-ashlar stone foundations. At the south end of the building, its symmetrically-arranged facade contains

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a recessed, two-story entrance porch with two square brick piers. The only applied ornament is an inset concrete plaque which depicts the masks of comedy and tragedy.

In 1939-40 Deitrick carried out several commissions around Raleigh which more closely reflected the influence of the Modern Movement. The Rex Hospital Nurses' Home on St. Mary's Street, with its flat roofs, rectangular painted brick massing counterplayed against a vertical entrance bay, strip casement windows, and random ashlar stone base and terraces is a relatively clear statement of the basic formal elements of the International Style. The transmitter for radio station WPTF on Chapel Hill Road, while it has the curved corners of the Art Moderne, also has the clean lines, porthole windows and horizontal massing of the International Style.

Several other Deitrick designs of 1939-40, the Chavis Heights and Halifax Court Housing Projects and the Crosby Garfield School (Lenoir Street), show a Bauhaus influence, principally the spartan functionalism that typified the work of Hannes Meyer during his 1927-1930 Bauhaus period. Meyer had rejected the mantle of art for modern architecture, preferring to refer to building as a biological process which included social, technical, economic and psychic organization (Claude Schnaidt, Hannes Meyer, p. 47). In his design for the Federal School of the German Trade Unions Federation in 1928-30, the scientific and functional concerns were allied with a clarity of plan and massing that approached elegance. Meyer had an affect on the work of other Bauhaus architects, notably Walter Gropius, whose plans for Impington Village College in England, designed with Maxwell Fry and completed in 1939, owe much to Meyer's facility for the German Trade Unions Confederation.

Deitrick's Crosby-Garfield School was a radical departure from the typical North Carolina public school of the 1930s. Of an age when public schools almost always retained some vestige of the Classical Revival, Tudor Revival or Georgian Revival, it was completely devoid of ornament. Its auditorium was pushed to the front like the one at Impington Village College, and its massing was similarly spare, rectangular, two-story and flat-roofed. Even the materials, brick and concrete, and the fenestration were similar.

Deitrick also broke from common practice in his designs for the Halifax Court and Chavis Heights Housing Projects. While virtually all of the public housing illustrated in magazines of the period exhibited at least a token amount of historicism, the Raleigh

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projects were unornamented, flat-roofed brick boxes with crisp-cut window openings and small entrance porches with flat roofs supported by pipe columns.

By the late 1940s, Deitrick's firm was the largest in Raleigh and the most committed to modern design, although it continued to design in the eclectic mode, as well. Deitrick was able to attract young architects who had been trained in the new ways and he was supportive of their efforts toward modernism.

Downtown Raleigh received its first truly modern building with the completion of the Durham Life Insurance Building on Salisbury Street in 1942. Designed by the Winston-Salem firm of Northup & O'Brien, the skyscraper with its stepped profile and richly-ornamented lobby recalled the Art Deco of the early 1930s, but it was much cleaner in its detailing than the firm's Education Building (1938) and Justice Building (1940) on Union Square (Burns, Robert P., "Modern Architecture in North Carolina's Capital City," unpublished manuscript).

With the end of World War II, North Carolina and Raleigh experienced a building boom as returning veterans added to the demand for housing that had been put on hold by materials rationing during the war. Raleigh took part in the increasing urbanization of North Carolina, its population growing from 47,000 in 1940 to 68,000 in 1950 (Hills Raleigh City Directories, 1940 and 1950). This pent-up demand for housing was satisfied in a variety of ways, from the subdivision of large tracts of land into small lots on which were built Minimal Traditional Style houses ("G. I. Houses") to the development of a series of even larger tracts of land outside the city. The latter subdivisions, provided particularly Budleigh Forest and Country Club Hills, provided more ample lots and a modern suburban atmosphere. It was in this rolling, wooded landscape that a series of innovative modern houses would be constructed in the late 1940s and early 1950s by faculty and former students of the North Carolina State University School of Design.

The post-war boom in Raleigh created many opportunities for architects, both native sons and practitioners attracted from other parts of the country. Among the significant imports of architectural talent to North Carolina during the period was Leif Valand. A New Jersey native educated at Pratt Institute in New York, Valand was the principal architect for Cameron Village in Raleigh, begun in 1948 by J. W. York, and which would become the Southeast's first regional-scale shopping center. This complex has been expanded and remodeled so many times that it is difficult to find the original, modest

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flat-roofed brick stores with pipe-columned canopies. In the 1950s and 60s, Valand also designed a number of office buildings around Cameron Village and a new YMCA (1960, Hillsborough Street) for Raleigh, all in the International Style. He was also the local architect for the 1955 Occidental Life Insurance Building at 1001 Wade Avenue, designed by the Jacksonville, Florida firm of Kemp, Bunch and Jackson. Beautifully sited on a wooded knoll, this building has a brick base surmounted by clean limestone rectangles with strip windows. A streamlined stainless steel canopy extends over the front entrance.

The establishment of the School of Design at North Carolina State College (now North Carolina State University) in 1948 brought to the state a small, but distinguished group of architects and designers who would have an important influence on the consolidation of modernism as the dominant force in architecture, and who would leaven the practice of architecture with constant experimentation. A diverse and ecumenical group, they represented a variety of strains of architectural thought, but at base they were all committed to the tenets of modernism.

Among the earliest works of the new faculty at the School of Design were a series of residences designed for themselves, for other faculty members and for a small group of clients interested in new ideas in architecture. The first of these houses were strongly influenced by the ideas and works of Frank Lloyd Wright, but in the early 1950s the design concepts of Mies van der Rohe became increasingly important. Most of the residential designs involved experiments in structure; in the use of modern materials; in the organization of space; in the relation of building to site; in passive climatic control; and in the definition of roof, wall and floor planes. Beginning with the Fadum House (NR, 3056 Granville Road) in 1950, many of the residences were constructed by a young contractor named Frank Walser, educated in engineering at North Carolina State College, who was willing and able to employ techniques and materials that were alien to building traditions in the Raleigh area.

The new dean of the school, Henry Kamphoefner, was the first faculty member to build in Raleigh; a house for himself in Country Club Hills (3030 Granville Drive) designed and built in 1949 in co-operation with George Matsumoto. It was followed by the Fadum House (NR, 3056 Granville Road) and the Paschal House (3334 Alamance Road), both designed by James Fitzgibbon and built in 1950, and the Ritcher House (3039 Churchill Road) designed by George Matsumoto and constructed in 1951. All of these houses exhibited the strong

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influence of Frank Lloyd Wright on their architects, both in his romantic, organic approach to architecture, and especially in his Usonian houses of the 1930s and early 1940s.

During the mid-1930s, Frank Lloyd Wright had developed a pattern of building which he labeled the "Usonian House." The Usonian House was Wright's effort to provide high-quality design at affordable prices. It incorporated efficiencies in structure, construction and the use of materials to reduce the cost of building (Sergeant, John, Frank Lloyd Wright's Usonian Houses).

Wright's Usonian houses usually had flat roofs and were one story. They were generally built in suburban areas and included a private street side with few openings and a garden side that opened up onto terraces. Instead of a garage they had a carport. Each house had a modular dimension that acted as the basis for its construction. The houses were built on concrete slabs, often with pipes buried in the floor for radiant heating, and generally with the module scribed in the surface of the slab. However, there was also a concern for natural heating through solar radiation and many of the houses had deep eaves on the south side which allowed direct sunlight to penetrate into the living spaces only in the winter. They also included large areas of local natural stone or brick to serve as a thermal mass for winter warming and summer cooling (Sergeant, Frank Lloyd Wright's Usonian Houses).

As with Wright's previous work, the Usonian houses had kitchens open to the dining area. Spacious living rooms with fireplaces formed the heart of the house and the large stack of the fireplace formed a counterbalancing vertical element. The bedrooms were arranged along a linear hallway at the end of the house opposite the living room. The concern for efficient use of space mandated the use of large amounts of built-in furniture and storage, particularly in the bedroom areas. Wood, either as boards or panels of plywood finished with stain or varnish rather than paint, was combined with exposed brick or stone as an interior finish (Lind, Carla, The Wright Style, p. 104).

Wright's Usonian concepts dovetailed well with the School of Design architects' interest in modular design, in the use of low-cost, mass-produced industrial materials and techniques for constructing housing, in passive solar climate control and the integration of buildings into the site, as well as in a wealth of aesthetic issues having to do with

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creating an architecture that was expressive both of structure and of the conditions of the modern age.

The two more Usonian of the Raleigh residences, the Fadum House and the Ritcher House, were widely-published at the time. Architectural Record recognized the Fadum House as one of its Houses of the Year in 1951.

Contemporary with the Wrightian houses designed by the School of Design architects was the Miesian residence of G. Milton Small (310 Lake Boone Trail), built in 1951. Small was only a member of the School of Design Faculty for a brief period in 1951-52, but he had been recruited by Henry Kamphoefner in 1948 to come to Raleigh to head William Henley Deitrick's architectural office (See biographical sketch for G. Milton Small in Appendix). A former student of Mies van der Rohe at Illinois Institute of Technology, Small designed a series of houses in Raleigh during the 1950s and early 1960s that exhibited a Miesian concern for articulating space by horizontal and vertical planes; for exposed structure in the form of steel or wood posts and paneled walls; for a classical definition of base, body and roof; for the integration of outdoors and indoors through large expanses of glazing; and for the selective use of rich interior finish materials. The designs of Small's houses were obviously informed by Mies's Barcelona Pavilion of 1929 and Tugendhat House of 1930 as well as the more contemporary Farnsworth House of the late 1940s (See Small Biography in Appendix). Small's house on Lake Boone Trail, like the Wrightian Houses, attracted national attention, being published in Architectural Record in 1954 and again, after he had enlarged it, in 1966. The North Carolina Chapter of the AIA gave the house an Honor Award in 1957.

Beginning with his own house, completed in 1954, (821 Runnymede Road) George Matsumoto began to employ a more Miesian sense of composition. He added to the Wrightian concerns for orientation to site, modularity, and economy of construction a Miesian interest in expression of structure, panelized wall construction and selective use of rich interior finishes. Matsumoto followed his own house with a similar design next door for his associate Wayne Koontz, and another reworking of the concept for George Poland (3929 Arrow Drive). The Matsumoto houses, with their flat-roofed, boxy forms cantilevered over masonry bases, could not have been more different from the typical Williamsburg-generated Colonial Revival Raleigh residence of the period if they had been imported from outer space. In all, Matsumoto designed twelve houses in the Raleigh area from 1950 to 1961,

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either individually or with associates (See Matsumoto Biography in Appendix). All are characterized by an extremely careful working-out of plan and detailing and a great clarity of structure. These designs were much admired at the time. The Matsumoto House received a North Carolina AIA Honor Award in 1957 and was published on the cover of Architectural Record Houses for 1957. The Poland House was given a North Carolina AIA Award with Special Commendation in 1957 and was also depicted in a large spread in Architectural Record in 1957 ("Lessons in Residential Order," Architectural Record, July 1957, p.190). A small vacation house produced by Matsumoto in 1960 for Woman's Day Magazine (later dismantled and now used as a storage building off Falls of the Neuse Road) as a demonstration project for the Douglas Fir Plywood Association also won a North Carolina AIA Award of Merit in 1961.

In one of his collaborations, Matsumoto produced a 1959 residence for businessman Gregory Poole (2745 Lakeview Drive) in association with G. Milton Small. The house is more generously-proportioned and less modular than Matsumoto's other residences and is also less concerned with structural experiments, although it makes use of steel in its framing. The most interesting aspect of the house, which won a North Carolina AIA Honor Award in 1960, is the way that the carefully-detailed interior spaces flow into each other and intermingle with screened porch spaces.

The most daring of all of the houses by School of Design architects was the residence built in 1954 by Eduardo Catalano, the head of the architecture department, for his own home (216 Furches Road, now Catalano Street). Called the "House of the Decade" by House and Home magazine, and publicly praised by Frank Lloyd Wright, the Catalano house employed the hyperbolic paraboloid roof form which had been used at the nearby Dorton Arena. Catalano extended a thin, double-curved shell of wood across a span of 87 feet between two buttresses, sheltering a glass-enclosed, column-free living space beneath it (Burns, Robert P., "Modern Architecture in North Carolina's Capital City," unpublished manuscript). Unfortunately, as is sometimes the case with great experiments, a faulty choice of materials and inadequate maintenance led to the sagging and eventual near-collapse of this great roof.

Although relatively late, the house and studio designed for himself by Harwell Hamilton Harris in 1967, expanded in 1976 (122 Coxe Avenue), exhibited the same sense of experimentation in form and structure, and the same concerns for site and economical

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construction, that were exhibited by the earlier faculty-designed houses. Like the previous School of Design faculty members, Harris was initially inspired by the architecture of Frank Lloyd Wright, but combined Wrightian elements with European modernism and his own inventiveness to create an architecture that won him international acclaim in an earlier career in California.

Other School of Design faculty members built houses in Raleigh during this period, but usually without the same degree of experimentation. For example, Edward Waugh built a house for himself on Churchill Road which had a flat-roofed, Usonian section and a more conventional, gable-roofed wing. F. Carter Williams, briefly associated with the School of Design at its beginnings, also built a number of houses during this period, some of which were traditional or romantically Wrightian, while others made use of modernist ideas.

The modernist houses designed by faculty or former faculty of the School of Design in the 1950s and 1960s had an important impact on residences designed by their students and by other architects both in Raleigh and in North Carolina. Scores of modernist houses were constructed in the suburban neighborhoods of the city during those two decades, in many of which can be seen the direct influence of the early masters. For example, the 1966 Huisingh House (2322 Lyon Street) designed by early School of Design graduate and faculty member Robert P. Burns, Jr., employs a number of their techniques, such as cantilevering the frame living quarters over a masonry base, providing clearstory ventilation and lighting, and orienting the living quarters toward the view. The House received a North Carolina AIA Award of Merit in 1969. And indirectly, through widespread publication in national and international architectural publications, these groundbreaking designs contributed to the development of modern architecture on the national and international levels.

As important as their contributions to residential architecture were, the institutional and commercial buildings designed by faculty or former faculty in the 1950s and 1960s attracted even more attention. Easily the most distinctive and celebrated of all the buildings designed by School of Design faculty is Dorton Arena (NR) on the North Carolina State Fair Grounds in Raleigh. Originally intended as a facility for livestock judging, the revolutionary conceptual design by émigré Polish architect Matthew Nowicki was for a vast, column-free room covered by a network of cables suspended between great

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intersecting concrete parabolic arches, forming a unique saddle-shaped roof. One of the most promising of the faculty of the school, and with a growing international reputation, Nowicki was in the conceptual design stages for the building when he was killed in a plane crash in 1950 while working on the new Asian city of Chandigarh. The arena was completed in 1953 by William Henley Deitrick, with whom Nowicki had been associated on the project. Although the constructed building is less airy and dynamic than Nowicki's concept, it is still an extraordinary demonstration of the potentials of cable-supported buildings, one that has been emulated around the world. The daring and graceful use of the hyperbolic paraboloid for the arena's roof led to its being awarded the First Honor Award by the national AIA and the Gold Medal in Engineering by the Architectural League of New York.

Another ground-breaking and now-familiar architectural form developed by faculty members is the geodesic dome. Buckminster Fuller came up with the basic dome concept while at the University of Chicago and Black Mountain College in the late 1940s. In 1949 Professor James Fitzgibbon of the School of Design met Fuller at Black Mountain and agreed to become Director of the International Fuller Foundation. Fuller began coming to the School of Design to teach as a visiting lecturer, and in 1954 Fuller and Fitzgibbon formed Geodesics, Incorporated, in Raleigh to develop and promote geodesic systems. Duncan Stuart, another faculty member, was also involved in the enterprise. Geodesics, Incorporated, engineered and manufactured a wide variety of geodesic applications, from radar domes on the DEW Line in Alaska to a series of demountable exhibit buildings used for international exhibitions. In 1957 the business was expanded to form Synergetics, a design firm still in operation ("Fitzgibbon's Daniel House," Fine Homebuilding, June/July 1986).

One of the most important contributions of the School of Design to North Carolina architecture in the 1950s was in the area of school design. During the 1920s the North Carolina state government had brought about a massive consolidation and expansion of the state's public school system through substantial funding for construction tied with technical assistance from the state's Office of Schoolhouse Planning. However, by the late 1940s, with school populations increasing rapidly and urbanization shifting populations, there was a need for more school buildings. The 1949 General Assembly appropriated \$25,000,000 and authorized bonds for another \$25,000,000 for school

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construction as part of a \$100,000,000 plan to create more than 10,000 new classrooms in the state ("School House Plans," Raleigh News and Observer, 20 November 1949, IV-1).

In November of 1949, the School of Design, in cooperation with the Office of School Construction, put on a three day workshop for architects and local officials touting the benefits of modern design in schoolhouse planning. The conference organizers encouraged architects to study the academic program of the school they were designing for, and to carry out their designs in materials appropriate for the particular area. They urged a use of greater areas of glass for natural lighting and of less massive, more carefully-detailed construction devoid of added ornament, as well as a more careful integration of landscaping, site and building. In place of stock school plans they advocated flexible planning tailored to the specific location ("School House Plans, p. IV-1). Another school planning institute was organized by the School of Design in 1950.

Edward Waugh took a leave of absence from the School of Design in 1949 to reorganize the Office of School House Planning in North Carolina, submitting his resignation in 1951 to take on that position permanently (UNC Board of Trustees Minutes, 12 May 1951, p. 4). Design standards, rather than rigid requirements, were set up as a guide for architects and superintendents to help them develop contemporary design in schools ("Waugh Heard by School Group," Southern Architect, August 1956, p. 20). In addition to his work with the Office of School House Planning, Waugh also developed a campus plan for Women's College in Greensboro in 1949, designed Ridge Road School (now Lacy Elementary) in Raleigh, and in 1960, in association with Holloway-Reeves, designed an innovative circular classroom building, Harrelson Hall, for North Carolina State ("Harrelson Hall," Southern Architect, April 1961, p. 6). Waugh also designed the renovation of the old Highway Building in 1955 to serve as the first North Carolina Museum of Art.

Perhaps the first school in North Carolina to completely reflect the new approach being advocated by the School of Design was Sherwood Bates Elementary School in Raleigh, designed in 1950 by William Henley Deitrick. Former School of Design professor F. Carter Williams also produced a number of modern schools in the 1950s, including the Longview Gardens (King Charles Road) and J. Y. Joyner (Noble Road) Schools in Raleigh.

A key element in the history of modern architecture in Raleigh was the arrival of Miesian design in the person of G. Milton Small. As mentioned earlier, Small was a former student of Mies and brought to the city a first-hand knowledge of that architect's

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developing work. He also followed the contributions that Mies made to American architecture in the 1950s and 1960s and incorporated them selectively in his own work. Mies had emigrated to the United States in 1938, becoming Director of Architecture at the Armour Institute (later Illinois Institute of Technology) in Chicago. In his designs for new campus buildings in the early 1940s, he developed a modular system of great aesthetic power and subtlety involving rectangular, flat-roofed masses, exposed steel structure, inset panels of plain brickwork, and large areas of glass with small muntins. Beginning with two apartment houses on Lake Shore Drive in Chicago in 1951, Mies also developed an aesthetic system for high-rise buildings that became the prototype for high-rise construction all over the world. These buildings were rectangular masses raised on exposed steel columns above a podium. Their exterior walls were a repetitive pattern of glass windows held in an exposed, vertical structural grid of steel I beams.

Two projects that Small designed while heading William Henley Deitrick's office brought Miesian design to Raleigh for the first time. One was the new Carolina Country Club Clubhouse (Glenwood Avenue), begun in 1948. This was one of the first modern clubhouses in the country and its flat-roofed, steel, glass and stone form was much-admired nationally, being published in Life magazine and Progressive Architecture (Progressive Architecture, October 1951, p. 83 and "New Country Club," Life, 31 July 1950, p. 70). The interiors of the building were designed by Matthew and Stanislaw Nowicki. Unfortunately, the clubhouse was demolished in 1992 to make way for a larger, Neo-Georgian style facility. A more hard-edged design was the Wake Social Services Building (Davie Street), built in 1950. The stark, flat-roofed box has an exposed steel structure with brick infill panels and a frankly-projecting set of steel window-washing tracks.

One of Small's earliest independent projects was a modest, one-story brick building with a tall trussed tower constructed for the research reactor at North Carolina State. Dubbed the "First Temple of the Atom" by the Associated Press, it housed the nation's first privately-owned nuclear reactor, built with state and private funds and opened in 1953. The American Nuclear Society declared the building a "Nuclear Historic Landmark" in 1986 ("Reactor Designated Landmark at NCSU," Raleigh News and Observer, 26 May 1987). Also on the North Carolina State campus, Small designed a Student Service Center in the early 1960s, a new Student Center for the campus in the early 1970s, and in 1967 was the architect for the university's Carter-Finley Stadium.

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Small's Northwestern Mutual Life Insurance Building on Glenwood Avenue, completed in 1962, shows the deftness with which he could handle the Miesian vocabulary. The building, which won a North Carolina AIA Award of Merit in 1964 and was cited by Architectural Record in 1965 as an example of imaginative design in office buildings, was raised on a brown masonry podium and featured cantilevered roof and floor planes separated by black steel columns, and with a recessed enclosure of glass and aluminum ("Taste and Good Design Found in Small Office Buildings," The New York Times, 25 April 1965, p. 8-1). Small won another North Carolina AIA Award of Merit in 1965 for his National Headquarters Building of the American Association of Textile Chemists and Colorists, located in the Research Triangle Park west of Raleigh, which shows a similar cantilevering of floor and roof over a masonry base. The 1968 Richard B. Harrison Library (New Bern Avenue) in Raleigh exhibits still another exploration of the theme, using a raised concrete podium and black slab roof supported by steel columns, with a brick and glass enclosure underneath.

The building that he constructed in 1966 to house his architectural practice (105 Brooks Avenue) is a summation of Small's mastery of the language of expression originated by Mies. With an unusual sensitivity to its diminutive site, the small structure is set high on steel columns and appears to float among the trees. Published in Architectural Record in 1969, the building is beautifully-detailed and has an interior plan with a clear hierarchy of spaces that still functions well for its architect tenants ("Economy and Flair Highlight Six Architects Offices," Architectural Record, December 1969, p. 111).

Some measure of the influence of Small's architecture on the work of George Matusumoto can be seen in the Miesian classroom wing designed by Matsumoto in 1955 as part of the adaptation of the old D. H. Hill Library into a new complex for the School of Design. This project, undertaken with F. Carter Williams, won a North Carolina AIA Honor Award with Special Commendation in 1957. Small and Matsumoto also teamed-up to produce the Gregory Poole Equipment Company Building (4807 Beryl Road) in 1955. Although since altered beyond recognition, it originally featured a showroom for tractors that was a pristine glass box. Matsumoto and Small received a North Carolina AIA Award of Merit for the building in 1956.

The School of Design architects were not the only ones erecting Miesian buildings during this period. Several high-rise Miesian designs were constructed in downtown Raleigh by architects from outside the city. One was the Wachovia Bank and Trust Company

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Building (234-240 Fayetteville Street) of 1962 by A. G. Odell and Associates of Charlotte, a competent but not exciting use of the mode. Another was the 1963 Branch Banking and Trust Building at 333 Fayetteville Street, the first (and only) completely Miesian true skyscraper built in the city. Rising above a handsome base of black granite and glass is an uninterrupted vertical sweep of black glass and black spandrel panels, accentuated by aluminum mullions.

Just off Fayetteville Street is the 1960 First Federal Bank Building on Salisbury Street, designed by Howard T. Musick of St. Louis. It employs a version of the Miesian vocabulary, but in the form of white marble cladding on the end walls and with a playful pattern of multi-shaded blue spandrel glass in the glazed window walls.

Among Harwell Hamilton Harris's few Raleigh designs is St. Giles Presbyterian Church (5015 Oak Park Road) which was begun in 1968 and completed in pre-determined stages in 1974 and 1983. The fellowship hall, classrooms, offices and sanctuary are loosely organized around an informal central space over which tall pines tower. The complex's buildings employ a common vocabulary of low-sloped gable roofs and shingled exteriors that create an effect of serenity, repose and harmony (Burns, Robert P., "Modern Architecture in North Carolina's Capital City).

Another modernist church worth of note is Milton Small's Our Savior Lutheran Church (Aycock Street at Glenwood Avenue), completed in 1964. Its crisp, gabled roof planes define the form of the church, reaching down over low, brick side walls and with a transparent, glazed end wall. The church won an North Carolina AIA Honor Award in 1967.

Although the basic ideas of modernism continued to dominate Raleigh's commercial and institutional architecture until well into the 1970s, the consensus for orthodox modernism in North Carolina began to be broken with the building of the new Legislative Building in Raleigh in 1963. Designed by New York architect Edward Durrell Stone, with Holloway-Reeves as the associated local firm, it reintroduced a degree of symmetry, neoclassicism and surface decoration to public architecture. The Legislative Building was followed on Jones Street by a couple of classicising state buildings clad in marble to harmonize with it; the Archives and History/State Library Building of 1968 and the Administrative Building of 1967, both collaborations of F. Carter Williams Architects with Leif Valand & Associates.

On the national and international architectural scene, the non-International Style work of the French architect Le Corbusier, and of the American architect Louis Kahn, also

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began to assume greater importance. In the place of lightweight planes enclosing space in a clear and regular way came massive masonry, and sometimes irregularity. Concrete, principally precast in new building systems, replaced the Miesian glass and steel/aluminum exterior building membrane. These changes were reflected in the architecture of North Carolina and Raleigh. Even Milton Small employed repetitive, heavy concrete masses in his design for the North Carolina Medical Society Building (Person Street) in 1972.

During the 1950s and 1960s, modernist designs enjoyed a brief popularity in the housing market. Raleigh's suburban neighborhoods are dotted with "contemporary" houses from that period which incorporate some of the features of the scarcer, more innovative designs, principally in the absence of applied ornament, in the use of flat or low-sloped gable roofs, in the choice of manufactured materials for construction, in the arrangement of interior plans, and in the relationship of interior to exterior space. These houses were never in the majority, however, and by the early 1970s the tide in the housing market had turned strongly back to traditional, eclectic designs, or to hybrid forms like the colonial brick ranch house. Even these houses, however, had been influenced by modernist ideas, especially in their plans, which had become more open and functional in their arrangement.

**II. The Development of the Architecture Programs of the North Carolina State
University School of Design, 1948-1972**

In the late 1940s, North Carolina was experiencing a Post-World War II building boom that was contributed to by the state's relatively rapid urbanization. The builders of the state, and their buildings, were caught between the urge to change by taking advantage of new technologies and the desire to search for traditional roots. Before 1945, the cause of modernism in architecture was represented by only a few North Carolina architects and their buildings, but with the establishment of the School of Design at North Carolina State College (later North Carolina State University) in 1948, modernism for the first time developed an organized voice (Bishir, Catherine, Architects and Builders in North Carolina, p. 358). During the tenure of Henry L. Kamphoefner (1907-1990) as Dean of the School of Design from 1948 to 1972, the school acted as an aggressive standard bearer for the Modern Movement in the state's architecture and design in general. The faculty of the

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school generated a constant stream of innovative solutions to architectural problems and the school attracted as visitors and part-time faculty a steady stream of the best-known modernist designers in the world, increasing the state's architectural ferment. Graduates of the school's architectural program in this period also contributed importantly to giving modernism a prominent, and in some cases dominant, voice in the state's building in the 1950s and 1960s.

In the immediate Post-World War II period, the political climate in North Carolina favored a progressive attitude toward the development of the state's resources and its people. A succession of governors and legislatures proposed and funded initiatives in education, health care, and highway construction. One of the champions of this activist mood was the President of the University of North Carolina, Frank Porter Graham. Graham enunciated the prevailing spirit of activism in a paper presented at a May, 1945, Conference on Research, proclaiming that North Carolina

is becoming an example of co-operation and sharing on a state-wide basis of more equal opportunity in schools, roads, libraries, suffrage, health, medical care, and the welfare of all our great family of people called North Carolina. Let us challenge our region and generation with plans for research in all fields, which the people, free and unafraid, will rejoice to fulfill in the service of the needs of all the people more wisely and nobly from generation to generation (Coker, Robert E., Research and Regional Welfare, p. 15).

This attitude toward public service on the part of the state's universities, which Graham headed, and the feeling by many of the state's architects and some of the faculty of the existing architectural engineering program at North Carolina State College that the teaching of architecture at State overemphasized the engineering aspects of the discipline at the expense of the aesthetics of design, favored the establishment of an activist architecture school. The lack of accreditation of the existing architecture and landscape architecture programs, coupled with the return of large numbers of veterans interested in pursuing an architectural education, also helped to create a consensus among a number of groups that changes were needed.

Some form of education in architecture had been available at North Carolina State College (now North Carolina State University), founded as a land grant college in 1887, since almost the beginning. By the 1890s the Civil Engineering Department offered instruction in Architecture and Building, and in 1922 a four-year curriculum in

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Architectural Engineering was established within that department. In 1929 an independent Department of Architectural Engineering was established. Also during the 1920s, the Department of Horticulture offered a four-year curriculum in landscape gardening, which was changed to Landscape Architecture in 1930. Two curriculums were offered by the Department of Architectural Engineering in 1940, Architectural Engineering and Architecture, the latter being a five-year course (NCSU Archives, School of Design Dean's Office Papers).

In May of 1946, Dean J. H. Lampe of the School of Engineering wrote to Chancellor Harrelson recommending the establishment of a School of Architecture and Landscape Architecture that would be coordinated with the Schools of Agriculture and Engineering. Lampe asked Harrelson to approach the Board of Trustees of the University of North Carolina (the governing body for all state universities) with a resolution authorizing the formation of such a school, to be activated as soon as budgets, staff and space were available (NCSU Archives, Chancellor's Office Papers). At its June 4 meeting, the trustees approved the recommendation of the visiting committee for State College that, "the Department of Architecture and Department of Landscape Gardening (sic) be consolidated into a separate school in order that all the facilities in this important field may be provided in one unit, which can better serve the educational and instructional needs of North Carolina" (Minutes, Board of Trustees of University of North Carolina, 1946).

Before the new school could be realized, funds had to be secured from the State Legislature to support a wider base of operations, and a new dean had to be recruited. The latter proved not to be an easy task. As Chancellor Harrelson wrote an impatient North Carolina AIA in September of 1947, "There has never been a time in the history of education when it has been as hard to obtain qualified men for important positions in scientific institutions" (NCSU Archives, Chancellor's Office Papers). The committee formed to recommend a dean for the new school set the following list of desirable qualifications: 1. he should have an education including architecture, landscape design and a broad training in the arts; 2. the emphasis in training and experience should be on architecture; 3. administrative ability is a highly desirable qualification; 4. A graduate degree of some sort was desirable; and 5. an age range from 35 to 45 was preferred (NCSU Archives, Chancellor's Office Papers).

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On a short list of candidates for the Deanship was Professor Henry L. Kamphoefner of the School of Architecture at the University of Oklahoma. Kamphoefner had been recommended by academics at other schools, and was invited to come to Raleigh for an interview in early October, 1947. He was then forty years old, a native of Iowa, who had received a B. S. in Architecture from the University of Illinois in 1930 and a Master of Science degree from Columbia University in 1931. In addition to draftsman's jobs during school, Kamphoefner had worked for firms in Iowa City and Birmingham, Alabama, and as Associate Architect and Designer with the Resettlement Administration in Washington, D. C., working on experimental housing. He had also practiced architecture privately for several years after passing the licensing examination in Iowa in 1933. Kamphoefner had taken a position as an assistant professor of Architecture at the University of Oklahoma in 1937, and was subsequently promoted to associate professor and then full professor in 1940. From 1942-1944 he had served as the Acting Director of the School of Architecture while the director was in military service. Despite his experience, Kamphoefner had a limited resume of designs which had actually been constructed (not entirely uncommon for an architect in the 1930s), the best documented being the Grandview Music Pavilion in Sioux City, Iowa, selected by the Royal Institute of British Architects as one of "America's Outstanding Buildings of the Post-War Period," and by the American Institute of Architects for a traveling exhibit of "Representative American Architecture of the Post-War Period" (NCSU Archives, Chancellor's Office Papers).

Kamphoefner was not without his detractors, particularly within the architectural profession in Oklahoma. As an outspoken modernist and a disciple of Frank Lloyd Wright, he had ruffled the feathers of the mostly eclectic-leaning architectural fraternity there. As the College Architect at Oklahoma A & M put it, "While I am sure that most of the members of the profession in this area who know him would be pleased to see him removed from this area, we cannot hope to see it done at the expense of North Carolina" (NCSU Archives, Chancellor Harrelson's Papers).

While Acting Director of the Oklahoma program, Kamphoefner had recruited a small group of young professors committed to both Wrightian and modernist principles. With the assistance of University of Oklahoma President George Cross, and aided by architecture professors James Fitzgibbon and Martin Kermacy, Kamphoefner was able to get approval by the University Regents for a new campus plan and four buildings whose design was strongly

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influenced by the International Style, but with an awareness of environmental issues. In stating the philosophy of his campus planning group, Kamphoefner wrote that, "If we satisfy the requirements of our buildings, create simple, workable structures, orient these structures to the sunlight, the prevailing winds, and the physical characteristics of the property, we will find very little need for serious discussion . . . of 'style' ("Oklahoma University Goes Modern," Architectural Forum September 1945, p. 105).

In his initial visit to Raleigh, Kamphoefner appears to have made a good impression on a majority of the selection committee. He also had a positive meeting with William Henley Deitrick, then head of the North Carolina AIA and an architect sympathetic to modernist ideas. Kamphoefner used potential job offerings at other universities as levers to get what he wanted at NC State, but in reality Chancellor Harrelson was equally eager to settle on a qualified man for the position. Following a recommendation by the selection committee, Harrelson cabled Kamphoefner on November 9, offering him the deanship. Kamphoefner in return asked to meet with Chancellor Harrelson to discuss a number of issues. Following that meeting, Kamphoefner accepted the deanship, subject to four conditions. These included replacing Ross Shumaker as head of the architecture department; firing tenured professor Jehu Paulson and five non-tenured professors; hiring six new professors with increased salaries; and securing additional space for the new school. Harrelson readily agreed to Kamphoefner's conditions and the two began to work on getting approval from the Board of Trustees for the new faculty members (NCSU Archives, Chancellor's and SOD Dean's Papers).

Kamphoefner's plans included bringing with him at least four faculty members from the architecture department at Oklahoma: James W. Fitzgibbon, Edward Waugh, Duncan Stuart and George Matsumoto. He also hoped to bring Bruce Goff, who later decided to remain in Norman. In addition, he wished to offer a full professorship and the head of the architecture department to Hugo Leipziger-Pearce, then at the University of Texas. Although some members of the Board of Trustees expressed concerns about Matsumoto's Japanese heritage, all of the appointments other than Leipziger-Pearce's were made without difficulty. Leipziger-Pearce's German background and rumors that he was a communist fellow-traveler caused the offer of a professorship to come with a one year probation. As a result, he also decided not to come to Raleigh at that time (NCSU Archives, SOD Dean's Papers). Another personnel decision made by Kamphoefner was to offer architectural

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critic, writer and urban planner Lewis Mumford a visiting professorship. Mumford was instrumental in turn in introducing émigré Polish architect Matthew Nowicki to Kamphoefner as a replacement for Leipziger-Pearce.

During its first year, the architectural faculty of the School of Architecture and Landscape Architecture consisted of Visiting Professor and Acting Head of Department Matthew Nowicki; Visiting Professor Lewis Mumford; Professor Ross Shumaker; Associate Professors James W. Fitzgibbon, Edward W. Waugh, William L. Baumgarten, Duncan Stuart, F. Carter Williams; Assistant Professors George Matsumoto, Alexander Crane, Stanislava Nowicki; instructors John C. Knight, John H. Moehlman, Margaret Fitzgibbon; and assistant David W. George (State College Catalog, 1948). Much of the faculty was relatively young; Matsumoto was in his twenties and Fitzgibbon in his early thirties, but they had already built solid records of accomplishment. Nowicki and Mumford had international reputations.

Another important aspect of the early faculty is that most were practicing architects rather than academics. Although at first they had to keep a low profile to avoid upsetting the local architectural fraternity, Kamphoefner encouraged them to remain active (Hoyt Bangs interview with George Matsumoto, March 1993). Faculty members were even encouraged to operate their professional practices out of their campus offices (David Black interview with Robert P. Burns, December 1993).

Following Nowicki's death in a plane crash in 1950, Eduardo Catalano became head of the architecture department. Buckminster Fuller began a series of annual stays at the School of Design as a visiting professor in 1949. Over the next twenty-five years, Mumford and Fuller were followed as visiting professors by a succession of the world's leaders in design, including Frank Lloyd Wright, Walter Gropius, Mies van der Rohe, Eric Mendelsohn, Willem Dudok, Pietro Belluschi, Charles Eames, Pier Luigi Nervi, Eero Saarinen, Louis Kahn, Felix Candela, Eduardo Torroja and many others, most of whom spent from a week to a month or more at the school (Kamphoefner, Henry, "The School's Beginnings," North Carolina Architect, September/October 1978, p. 11).

Additional architectural faculty during the 1950s and 1960s included Hugo Leipziger-Pearce, James E. Adams, Julian Beinart, G. Milton Small, Stefan Buzas, Horacio Caminos, Cecil D. Elliott, Charles M. Sappenfield, Kenneth McCoy Scott, Paul Buisson, Robert P. Burns, Jr., Charles Howard Kahn, John P. Shaw, Fred M. Taylor, Vernon Shogren, Walter Weissman, Joseph Boaz, John C. Knight, H. Th. Wijdeveld, Harwell Hamilton Harris and

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others. So many professors began their careers at the School of Design and moved on to become better known elsewhere that the Association of Collegiate Schools of Architecture gave Kamphoefner a special award in 1972 for "having furnished more faculty members to other schools of design in the nation than any other design dean" ("The School's Beginnings," North Carolina Architect, September/October 1978). Beginning with Duncan Stuart, the design faculty always included artists as well as architects such as Alexander Crane, Manuel Bromberg, Roy Gussow, Leslie J. Laskey, Joseph H. Cox, Louis Tavelli, George L. Bireline, Jr., and Raymond Casper Howard.

Early in the first school year, the faculty of the new school requested that the name of the school be changed to the School of Design. The existing name was awkwardly long, and there were preliminary plans for a expansion of the school's programs to include ceramic, textile, furniture and industrial design. Kamphoefner approved of the change, but did not originate the new name, since the school was being referred to by that title well before it was established (NCSU Archives, Chancellor's Papers and State College Catalog, 1948).

Kamphoefner's School of Design entry in the State College Catalog for 1948-49 laid out his concept of the role of the new school:

The School of Design . . . is devoted to the development of an organic and indigenous architecture; its accompanying landscape architecture and the related arts, to meet the needs and conditions of the southern region.

In its approach to the problems of design, the School of Design considers regionalism as a factor of primary importance in the development of contemporary civilization. Diversified regional features of the south are used as an illustration of similar problems elsewhere, with the logical diversity of resulting form as an ultimate goal. The standards of professional ethics represented by the school include the profound treatment of the human factors involved in the creation of an architectural form along with its allegiance to structure, material, landscape, of which it becomes an integral part, climate, in which it provides a shelter. Within the broad current of the contemporary movement in architecture, the school attempts to point to the diversity of solutions, creating a method of approach which would sponsor further individual study and search for personal expression of each graduating student.

An admirer of both Frank Lloyd Wright and Walter Gropius, Kamphoefner attempted to combine Wright's ideas of "organic" architecture and his concern with site, natural materials, climatic controls and adaptations to local conditions with the scientific,

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social and technical concerns of the Bauhaus and European architects. The result, in the early years, was an ecumenical environment underlaid by a broad commitment to modernism.

During the early 1950s, the School of Design was ranked among the top schools of architecture in the United States, primarily because of the high quality of its faculty. As Professor Robert P. Burns, an early graduate of the school and former head of the Department of Architecture has written,

Founding Dean Henry L. Kamphoefner, an uncompromising modernist, attracted to the faculty a constellation of innovative architects from around the globe to create what some observers regard as the first true American school of modern design. The faculty not only trained many of the state's mid- and late-20th century architects, but they also produced a body of adventurous designs which for a decade rivaled the best modern work in America's major cities (Burns, Robert P., "Modern Architecture in North Carolina's Capital City," unpublished manuscript)

The attrition rate for students was high in the beginning--63 percent for the initial class, but those who did survive had outstanding success (Bishir, Architects and Builders in North Carolina, p. 412). Students in the early classes won a number of important competitions, including the Paris Prize and fellowships to the American Academy in Rome, the most prestigious awards for architectural students. In all, during Kamphoefner's tenure as dean from 1948 to 1972, five of the school's students won Paris Prizes and three won fellowships to the American Academy in Rome. Faculty and graduating students won three Guggenheim Fellowships and nineteen Fulbright Scholarships (among only twenty-one Fulbrights awarded in the entire university for the period) ("The School's Beginnings," North Carolina Architect, September/October 1978, p. 10.). By the mid-1950s, early students of the school began to become licensed in architecture, and by the early 1960s they were affecting architectural practice in the state. These early graduates were a tight-knit group that formed a network in the state's architectural community. J. Bertram King of Asheville and Thomas T. Hayes of Southern Pines, for example, both formed their own firms soon after licensing. Both became presidents of the North Carolina AIA. (Bishir, North Carolina Architects and Builders, p. 413). An article in the Greensboro Daily News in 1965 quoted Hayes as saying, "The School of Design, under Dean Henry Kamphoefner since 1948, has meant more to the total environment of North Carolina, to architecture and the arts of North Carolina and to the architects practicing, not only in

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this state, but in many other states today, than any one single factor" (Lewis, Owen, "Graduates of School are Reshaping State," Greensboro Daily News, 6 June 1965, p. D-14).

By the late 1960s, however, the School of Design was experiencing increasing difficulty in attracting faculty with international reputations, in part because of the proliferation of other schools of architecture and design, many patterned in their operations after the School of Design. The school had also become larger and more diverse, having added a program in product design in 1958 to its existing architecture and landscape architecture departments. Whereas the architecture program had originally granted the Bachelor of Architecture degree, during the late 1960s a graduate degree program was developed in a process that did not directly involve Kamphoefner (Black Interview with Robert P. Burns). As the school expanded, the faculty also became more expressive of a variety of points of view, diffusing its focus. Kamphoefner's orthodox modernist approach, once a great asset, began to limit the influence of the school in a period when modernism was undergoing a re-examination.

By 1972, when Kamphoefner took mandatory retirement from his position as Dean, the School of Design had lost its early missionary zeal for modernism in architecture, though it retained a modernist orientation. Kamphoefner was replaced by Claude McKinney, who was neither an architect, landscape architect or product designer, but a planner who had been trained as a painter (Bishir, Architects and Builders, p. 422).

Appendix: Selected Biographical Sketches

Fitzgibbon, James

James Fitzgibbon (1915-1985) was born in Nebraska but attended high school in Syracuse, New York. He went on to Syracuse University, earning a Bachelor of Architecture degree in 1938, then spent a year at the University of Pennsylvania, receiving a Master of Architecture degree in 1939. At Penn he was a part-time assistant instructor in architectural design during 1939-40 and also worked for United Engineers and Constructors in Philadelphia from 1939-43. Fitzgibbon was registered to practice architecture in Pennsylvania in 1943 (NC Board of Architecture, Registration Records).

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In 1944, Fitzgibbon was hired as a campus planner by the University of Oklahoma, and in 1945 he became an assistant professor there (Peter Calandruccio, "Fitzgibbon's Daniel House", Fine Homebuilding, June/July 1986). With Henry Kamphoefner and Martin Kermacy he developed a new campus plan for the University that included modern buildings influenced by the work of Frank Lloyd Wright and the European modernists ("Oklahoma University Goes Modern," Architectural Forum, September 1945, p. 105).

During the late 1940s and early 1950s, Fitzgibbon designed three houses for friends in Tennessee, at least one of which, the Daniel House, involved the experimental use of World War II surplus Quonset hut ribs as the primary framing element (Calandruccio). In Raleigh, Fitzgibbon first designed a wedge-shaped Usonian House for attorney Nancy Fadum that was published in Architectural Record as one of the Houses of the Year for 1952, then produced a more romantically-Wrightian residence for Dr. and Mrs. George Paschal. He also designed an overbuilding of an older house for his own residence in Raleigh on a hill overlooking the North Carolina State Campus.

On one of his trips to Tennessee in 1949, Fitzgibbon met Buckminster Fuller at Black Mountain College. Fitzgibbon became director of the Fuller Research Foundation, and later executive vice president of Geodesics, Incorporated, a company founded in 1954 to develop and market geodesic structures (Calandruccio). He resigned his faculty position in 1953, but came back to the School of Design for a year in 1967 before taking a position at Washington University.

Matsumoto, George

George Matsumoto was born in San Francisco in 1922 into a second-generation Japanese-American family. He spent three and a half years in the School of Architecture at the University of California at Berkeley before receiving the Comstock Architectural Scholarship to attend Washington University in St. Louis, Missouri, from which he received a Bachelor of Architecture degree in 1944.

During the summer of 1941, Matsumoto had traveled to the Orient to study the architecture of Japan and China, particularly with reference to modular construction and its adaptability to pre-fabrication. He returned quickly when relations between the

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United States and Japan began to deteriorate and spent a month at a Japanese-American relocation center in Arizona ("Tarheel of the Week-George Matsumoto," News and Observer, 22 September 1957 and "George Matsumoto and the Ritcher House," unpublished manuscript by Hoyt Bangs).

Having been offered a graduate fellowship, Matsumoto spent two years at Cranbrook Academy of Art in Bloomfield Hills, Michigan, studying under Eliel Saarinen. He received an M. A. from Cranbrook in 1945. During 1945-46, Matsumoto was with Saarinen and Swanson in Detroit. In 1946 he moved to Kansas City, Missouri, to become a partner in the firm of Runnells, Clark, Waugh, and Matsumoto and to act as an instructor at the University of Oklahoma in 1947-48 (Matsumoto, George; Supplement to Who's Who in America, p. 773).

In 1948, Matsumoto was recruited to come to the School of Design by the newly-appointed dean; his colleague at the University of Oklahoma, Henry Kamphoefner. Although only 26 at the time, Matsumoto had already built a record of achievement. He had received one-hundred-dollar prizes in 1944 and 1945 for designs of small houses published in Pencil Points and Progressive Architecture. He had also shared a one-thousand-dollar first prize and a ten-thousand-dollar grand prize in 1946 for his regional plan for Chicago in the Chicago Herald American Better Chicago National City Plan Competition (School of Design Bulletin, 1956-57). During the summer of 1948, before coming to Raleigh as an assistant professor, Matsumoto worked as a senior designer in the Chicago offices of Skidmore, Owings and Merrill.

Between 1948 and 1961 Matsumoto designed, alone or with an associate, twelve houses that were built in the Raleigh area. They are:

Paul O. Ritcher House-3036 Churchill Road

Henry L. Kamphoefner House-3030 Granville Drive (with Kamphoefner)

George Matsumoto House-821 Runnymede Drive

William Weber House-Transylvania Drive (with William Weber)

Gus Aretakis House-307 Transylvania Drive

George Poland and Richard Walser House-3929 Arrow Drive

Vacation Cabin, Womans Day/Douglas Fir Plywood Assn.-original location unclear

Total Electric Demonstration House for Westinghouse Electric-off Dixie Trail near
Churchill Road

Wayne F. Koontz House-823 Runnymede Road

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Gregory Poole House-2745 Lakeview Road (with G. Milton Small)

William Watkins House-Lakeview Road next to Poole House

Gregory Poole Lake House-original location unclear, now destroyed

During the same period, Matsumoto designed homes in Tampa, Florida; Little Rock, Arkansas; Richmond, Virginia; and in Chapel Hill, Greensboro, Rocky Mount and Roanoke Rapids in North Carolina. He also carried out a number of commercial and institutional projects, including the Community Church on Purefoy Road in Chapel Hill; a new wing for the School of Design; and with Milton Small, a new facility for Gregory Poole Equipment Company on Beryl Drive. From 1955 to 1961 he received three honor awards with special commendation and four merit awards from the North Carolina A.I.A. for building designs. Nearly all of his house plans were published in architectural magazines ("George Matsumoto," Hoyt Bangs). The Matsumoto House, completed in 1954, was featured on the cover of Architectural Record Houses in 1957.

George Matsumoto returned to San Francisco in 1961 to teach architecture at the University of California at Berkeley. He has continued his architectural practice, designing a number of residences and buildings throughout the country and has earned more than 50 architectural awards and prizes. He has also been named a Fellow of the American Institute of Architects (Matsumoto, George, Who's Who, p. 773).

Small, George Milton, Jr.

George Milton Small, Jr. (1916-1992) was born in Collinsville, Oklahoma and attended the University of Oklahoma, where he received a B. Arch. and B. S. in Architectural Engineering in 1939. In 1942 he married the former June Marie Volck. After several years of work for an Oklahoma City architect, Small served in the U. S. Navy from 1943 to 1946, including service at Okinawa. In 1946 he was admitted to the practice of architecture in Oklahoma and formed a partnership with Joseph N. Boaz in Oklahoma City. He also taught as a Special Instructor in architecture at the University of Oklahoma. Small did graduate work in architecture in 1946-47 at the Illinois Institute of Technology under Mies van der Rohe. During 1947 and into early 1948 he worked in the Chicago office of Perkins and

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Will, Architects and Engineers (Who's Who, p. 2880 and Registration Records, North Carolina Board of Architects).

While in Raleigh to be interviewed for the Deanship of the new School of Design in late 1947, Henry Kamphoefner met with the head of the North Carolina AIA, William Henley Deitrick. Deitrick mentioned the large amount of work that his office had in hand and its need for additional staff. Kamphoefner subsequently wrote to Deitrick recommending that he offer a position to Small. Following an interview in January of 1948, Small was hired to head Deitrick's office, though in a letter to Kamphoefner he expressed some misgivings about the nature of Deitrick's practice:

I have my fingers crossed on the architecture, but he seemed sincere in his stated desire to improve the quality and that he would really try to sell the clients. He was also quite frank that he would not turn down a commission just because the client insisted on a Georgian edifice. Time will only tell, and at least I will be a little prepared...(Small to Kamphoefner, 2 February 1948, NCSU Archives, Dean's Office Correspondence).

While heading Deitrick's office, Small was responsible for several important modernist designs, most notably the clubhouse for the Carolina Country Club on Glenwood Avenue. The anticipated opportunities in Deitrick's office did not materialize, however, and in 1949 Small left Deitrick to practice on his own, having become licensed as an architect in North Carolina. During the winter term of 1951, Small was also a member of the faculty of the School of Design (NCSU Archives, Dean's Office Papers). The 1952-53 Bulletin lists him as a "Part Time Lecturer."

During the 1950s and 1960s Small's architectural firm developed into the foremost advocate in the Raleigh area of the Miesian school of architectural design. He executed a number of important commissions including several buildings on the NC State campus, Carter-Finley Stadium, the Raleigh Municipal Building, buildings on the Atlantic Christian College campus in Wilson (with Joseph Boaz and Horacio Caminos), studios for TV station WRAL, several churches, and a substantial number of commercial buildings.

While Small was best known for his commercial and institutional projects, he also designed, in addition to his own house, a number of other residences. These include the Robert I. Rothstein House (1950, 2337 Churchill Road), the Philip L. Rothstein House (1960, 912 Williamson Avenue) and the Al A. Rothstein House (1962, 2100 Barfield Court);

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the Gregory Poole House on Lakeview Road done with George Matsumoto; and a small residence for the Wade C. Lewis family (ca. 1956), that was published on the cover of Better Homes and Gardens in 1957 ("A House for a Family with Young Ideas," Better Homes and Gardens, March 1957, p. 22).

Small also was Vice-chairman of the City Planning Commission 1950-60, a member of the Raleigh Board of Adjustment and President of the Design Foundation at the School of Design. For his "excellence in design" he was made a fellow of the American Institute of Architects in 1963 (G. Milton Small entry in Who's Who, p. 2880 and Fellowship Conferred on G. Milton Small, Southern Architect, April 1963).

Walser, Raymond Frank

Frank Walser (1924-) was born and lived in Greensboro, North Carolina, until he left to attend North Carolina State College in the early 1940s. After a period in the U. S. Army, he graduated with a Bachelor of Science degree in Civil Engineering in 1949. During one college summer he worked doing surveying for the development of Cameron Village, then under construction (David Black interview with Frank Walser, April 1994).

Walser built his first house in 1947, a residence for himself and his wife Ellen about a half mile from the college campus, using materials that his father-in-law, a building materials supplier, helped him obtain (David Black Interview with Frank Walser, April 1994). In February of 1950, he began work on the Fadum House in Raleigh, the first of a substantial number of important modern houses that he was to construct. Although he had no formal training or apprenticeship in carpentry or contracting, Walser quickly became known for the quality of his building and for his ability to execute innovative designs. Walser built all but one of the houses George Matsumoto constructed in Raleigh, as well as the Milton Julian House in Chapel Hill. He also built the Catalano House and several houses for Milton Small, including Small's own house on Lake Boone Trail, and a house for himself (sold before occupancy) on Alamance Drive that Small designed. Although Walser is best known for residential construction, he built the Community Church in Chapel Hill for Matsumoto; the G. Milton Small and Associates Office Building on Brooks Avenue and Our Savior Luthern Church on Aycock Street for Milton Small; and the sanctuary of St.

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Timothy's Church on Six Forks Road, designed by Bill Hall in Leif Valand's architectural
office (Black Interview with Frank Walser).

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F. Associated Property Type:

**Early Modern Residences in Raleigh Associated with the Faculty of the
School of Design, 1948-1972**

Description:

The earliest works of the new faculty at the School of Design, dating from the first one in 1948, were a series of residences designed for themselves, for other faculty members, and for a small group of clients interested in new ideas in architecture. This process of innovation continued during the 1960s. A substantial number of these houses, to one degree or another, involved experimental essays in structure and in the definition of roof, wall and floor planes; in the use of modern materials; in the organization of interior space; in the relationship of the interior to the exterior; and in passive climatic control. Built for the most part on relatively ample, wooded suburban lots, a key element in most of the designs lies in a careful integration of the house with the site.

The earliest of the houses designed in Raleigh by School of Design faculty, and also the first modern house in Raleigh, is more diffusely Wrightian, though influenced by the Usonian mode. Henry Kamphoefner's house, designed with George Matsumoto in 1948, is oriented around a large, central brick chimney. The bedroom wing extends from the core of the house toward the street, presenting a brick end wall to the street, while the glazed walls of the principal living areas open onto terraces on the private side, providing views over the adjacent Carolina Country Club golf course. The house makes use of clearstory ventilation and incorporates the first use of insulating glass in the Raleigh area.

The adjacent, more daring Fadum House (NR) of 1949-50, designed by James Fitzgibbon, has a single-slope flat roof supported by large built-up wood columns, giving it a wedge-shaped section. Built on a 2x4-foot module, the house displays finishes throughout of exposed brick and stained and sealed plywood or tongue and groove pine, cypress, or

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redwood. Its deeply-cantilevered overhangs, orientation to the southeast, and large expanses of glass allow for supplemental solar heating in the winter, although it also has a forced air heating system. The living and dining areas of the house are fitted around a large, central chimney and open onto a terrace area. Above the one-story living area, a mezzanine study/bedroom has windows that allow ventilation through to the adjacent dining area that rises to the roofline. Bedrooms in the Fadum House all incorporate built-in furniture. Like Wright's Usonian houses, the Fadum House presents a closed elevation with carport toward the street, while it opens up toward a sloping natural site on the sides and rear.

Another residence designed by Fitzgibbon and built during 1949-50, is the Paschal House. In some ways, this house is more romantically Wrightian and slightly less Usonian than the Fadum House. Considerably larger, but all on one level, it has a more complex form composed of multiple low-sloped gables that unite on the garden side into one all-encompassing gable. Inside and out, Fitzgibbon used random ashlar local granite, together with pine and natural-finished plywood of a variety of veneers. In plan, the house has three parts; a kitchen and dining room wing; a central living space oriented around a massive Wrightian stone chimney with a sunken hearth; and a study/bedroom wing. The bedrooms, bathrooms and office spaces are arranged along one end of the long, axial corridor that joins the three parts of the house. The house has radiant heat beneath flagstone and cork floors, but the large expanses of glass in the living room, and the deep overhangs of the roof, allow for some solar heating in the main space. Like the Fadum House, the Paschal House opens up to a terrace and sloping landscaped area, providing a sweeping view. The large expanses of glass in the main gable ends give the house a degree of transparency, allowing one to look through the building from the south side to the treetops north of the house.

The (north) street elevation of the house is much more closed, being set back from the street behind a circular driveway, with a stone end wall screening the entrance and carport from view. Entrance to the house is through an atrium guarded by a small wooden gate in a screening wall.

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The most explicitly Usonian of all the houses is the Ritcher House, built in 1951 to a design by George Matsumoto. An experiment by Matsumoto in low cost, modular design, the one-story building with intersecting flat and shed roofs is designed and crafted with all the care of a piece of fine cabinetry. Built with heavy-timber, post and beam construction on a three-foot module that is scribed into its Wrightian Cherokee red concrete floor, its frame includes perhaps the earliest flitch beams (steel sandwiched with wood) used in Raleigh. Integrated carefully into a sloping, wooded site, the Ritcher House presents a mostly closed face to the street and opens up onto a terrace and landscaped rear yard. This south-facing glazing is balanced with a deep overhang, so that the living spaces are shaded in the summer and warmed by the sun in the winter, while the north side of the house contains mostly windowless bathrooms, kitchen and utility spaces. With operable clearstory windows, the house can be naturally ventilated from side to side. The principal heating system is radiant piping buried in the concrete floors. The Ritcher House was the last of Matsumoto's houses that was not air-conditioned, and thus is the last in which the orientation of the building is critical to its performance.

Unlike the typical Usonian house, the chimney is not a central feature of the main living space in the Ritcher House, but is peripheral. Rather than providing a vertical pivot for the house, the stone chimney face ends before reaching the eaves, continuing outside the house as a bright orange-painted cylindrical stack visible through a transom window over the fireplace. By this device Matsumoto eliminated the difficult framing around the chimney stack. The exterior of the house is sheathed in vertical shiplapped boards, while the interior is finished in a variety of veneered and striated plywoods and tongue-and-groove stained and varnished pine, providing both economy and a warm overall feeling. Built-in furniture is located in the kitchen, bath, hallways and bedrooms.

In 1952, Matsumoto began the construction of his own home on a steeply-sloping lot on Runnymede Road. The house, which was finished in 1954, shows the same attention to economical, modular construction and careful detailing as the Ritcher House. It also demonstrates a Miesian concern with exposed structure and a sense of suspension generated by the use of lightweight wall, floor and ceiling planes to articulate its internal space.

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Unlike the Ritcher House, the Matsumoto House makes use of the sloping lot to provide two levels. The lower level is of concrete block and provides a base for the cantilevered post and beam-framed upper level. Essentially rectangular, this flat-roofed box has side-to-side floor and ceiling beams spaced on an eight-foot interval, neatly dividing the symmetrical front (north) elevation into eight-foot-square panels. Narrow strip windows above and below this facade make the house front appear to float when illuminated at night. At the street, a paved, Japanese-influenced court provides entry to a wooden ramp that bridges the gap to the cantilevered facade, the first of a series of volumes of space that one experiences moving to and through the house. The interior of the house is carefully arranged to achieve the maximum affect for the greatest economy. Matsumoto divided the plan bilaterally into public and private areas; the living, dining and kitchen spaces at one end flowing around a central stair/storage core, and the bedrooms and baths at the other end laid out around a small hall. All of the rooms along the back (south) of the house open with glazed doors onto a cantilevered, screened rear porch, extending the living space visually into the wooded hillside beyond. In place of the heavy stone or brick chimney of the Usonian House is a freestanding, steel fireplace with exposed steel flue. Built-in furniture is included in all of the living spaces.

Matsumoto designed a house with Wayne Koontz next to his own on Runnymede that was built about the same time. This house shares many of the same features, but is more open to the street. In the mid-1950s, Matsumoto designed a house very similar to his own for Dr. George Poland. The Poland House also makes use of a sloping site to provide two levels, the masonry lower level providing a base for the frame box above. Like the Matsumoto House, the Poland House is largely closed toward the street and opens onto a full-width screened porch across the rear.

Matsumoto carried out several projects in conjunction with G. Milton Small, including a late 1950s house for Gregory Poole. This house is more generously-proportioned and less modular than Matsumoto's other residences. It is also somewhat less concerned with structural experiments, though its framing is a mixture of steel and wood. Basically on one level, the house is sheltered under a low-slope gable roof. As with his

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other houses, the street elevation is mostly closed, while the house opens up on the sides and toward the rear with a series of porches. The carefully-detailed interior public spaces, designed for entertaining, flow into each other and intermingle with screened porch spaces, while the bedrooms are set off for privacy.

In some ways, the house that Small designed for himself in 1951 may be seen as a precursor to Matsumoto's more Miesian residential designs. In its original 1951 form, the Small House was a compact, T-shaped, flat-roofed frame box. Except for a small entrance hall, the public living spaces of the house were incorporated in one long, carefully-proportioned rectangular room that opened with sliding doors onto a full-width, screened porch. This porch was located on the down-slope (east) side of the house, and was cantilevered over a small brick cellar that extended as retaining walls to either side. The house was carefully sited near the top of the hill to provide the best views to the east, and to create a sense of "living high." Two-by-ten inch beams and four-by-four inch exposed posts provided the structure for both floor and roof and the outside was covered with plywood panelling. At the rear of the house the bedrooms and baths were laid out for the most efficient use of space and maximum privacy. Although the house was built at a very low cost (\$8.00 square foot), the interior incorporated veneer plywoods of a variety of exotic woods. This use of exotic materials, the definition of space as roof and floor separated by exposed posts, and the large public area that opens up onto the a semi-outdoor area are very Miesian touches. Although the casement windows of the bedrooms were sheltered by deep overhangs, the house was in general oriented toward the view, rather than for solar/climatic reasons. In 1961, additions designed by Small were made to the sides of the house to provide additional space for the bedrooms and for separate living and dining rooms on either side of an enlarged entrance hall. A raised, paved terrace with trees was added alongside the house to serve as an entrance court. The result is a smoother transition from outside to inside and a subtle change in proportions for the house, making it even more Miesian.

A late example of the experimental spirit in residential design is Harwell Hamilton Harris's House and Studio, built in 1968 and expanded in 1971. The house is built on a

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long and narrow lot on Ashe Avenue. In Wrightian fashion, and like his earlier houses, the street elevation is blank, the house opening up on the garden side to nearby Pullen Park. As with the houses built in the 1950s by School of Design faculty, the plan is very carefully laid out, resulting in elegant spaces filled with light. Constructed on a 4x8-foot module, the house is balloon-framed in an unusual fashion with 4x4-inch studs, and is sheathed in stucco. Its lightweight ceiling truss joists of wood and metal support a Tectum brand roof of wood cellulose/Portland cement panels.

Significance:

The unique group of innovative Raleigh residences designed by faculty or former faculty of the School of Design from 1948 to 1972 are eligible for nomination under Criterion C, as the work of a master and for their high artistic value. Produced by a small group of highly-talented architects at one of the best-known American schools of design of the period, they demonstrate that institution's pioneering adherence to the ideals of the Modern Movement. The earliest of these houses exhibit, for the first time in North Carolina, the strong influence of Frank Lloyd Wright's romantic organic and Usonian residential designs. Beginning with the G. Milton Small House in 1951, and especially in a strong body of work by George Matsumoto, they also incorporate for the first time the aesthetic concepts developed by German emigre architect Mies van der Rohe in the 1920s to 1950s. In the mid-1950s, Eduardo Catalano completed a house for himself which involved the bold use of the saddle-shaped hyperbolic paraboloid figure for a roof. The high quality of these designs was recognized during the period of significance by a wide publication in magazines, and by a series of awards from the North Carolina Chapter of the American Institute of Architects, increasing their influence on the design of residences in Raleigh and the state. All of the houses, to one degree or another, involve experiments in structure and in the use of modern materials and construction techniques. They also explore the definition of space by wall, roof and floor planes, the functional organization of floor plans, techniques of passive climatic control, and the relationship of building to site.

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The resources contained in these contexts come under Criterion Consideration G, as less than 50 years old, though the oldest of them are only a few years short of that mark. As a group, however, they form an consistent body of work with identifiable traits from the beginning to the end of the period. The Modern Movement is one of the most widely-studied developments in architectural history, with an enormous body of scholarly work and a recognized historic significance. However, on the local level, monuments of early modern architecture are in danger of being altered or destroyed before they can be officially recognized. Because of their distinctive forms, which run contrary to contemporary tastes in housing, these residences are dependent for their preservation on a small group of knowledgeable persons, and thus are endangered. Some of the houses are also set on comparatively large lots, which form an important part of their significance, but which are susceptible to subdivision pressures in the tight local real estate market.

Registration Requirements

The following list of considerations and requirements was used to assess the potential National Register eligibility of houses under the contexts contained in this Multiple Property Documentation Form. To be eligible, residences

1. Must have been designed by one of the architecture faculty members or former faculty members of the North Carolina State University School of Design during the period 1948-1972.
2. Must retain a substantial integrity of form, workmanship, materials, location and site.
3. Must demonstrate an adherence to early modern design principles relating to the articulation of space by lightweight roof and wall planes and to the absence of applied ornament.
4. Must possess most of the qualities of innovation in form, structure, use of materials, arrangement of interior space, and adjustment of the building form to provide passive heating and cooling.
5. Must demonstrate sensitivity to the integration of the building with the site.

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F. Associated Property Type:

**Early Modern Commercial/Institutional Architecture in Raleigh Associated
with the Faculty of the School of Design, 1948-1972**

Description:

Although many of the earliest works of School of Design faculty architects in Raleigh were residential projects, some of their most influential work came in the area of institutional design. Undoubtedly the most internationally-influential and distinctive of all the buildings designed by School of Design faculty is Dorton Arena (NR) on the North Carolina State Fair Grounds in Raleigh. Matthew Nowicki was in the conceptual design stages for the building when he was killed in a plane crash in 1950 and the building was completed by William Henley Deitrick, his associate on the project. Essentially quite simple in conception but bold in execution, the arena roof spans the floor with two intersecting concrete parabolic arches from which are suspended cables running in two directions. The result is a hyperbolic paraboloid figure in which the cables resist the outward thrust of the arches and the arches lift the cables.

The most prolific and skilled practitioner of Miesian commercial architecture in the Raleigh area was G. Milton Small. Small created a body of work in which he explored the vocabulary of architectural forms and issues developed by Mies van der Rohe in the 1940s to 1960s. Several projects that Small designed while heading William Henley Deitrick's office in the late 1940s brought Miesian design to Raleigh for the first time. The more elegant of these, the Carolina Country Club Clubhouse, was destroyed in 1992, but the Wake County Social Services building of 1950 survives. This flat-roofed cube has corners formed by exposed vertical steel I beams, while the elevations are composed of horizontal strips of glazing and flat infill panels of tan brick. The utilitarian nature of the building is stressed by the exposed steel window-washing tracks that run around the building above each level.

One of Small's earliest independent projects was a building for the research nuclear reactor on the North Carolina State College campus, completed in 1953. This simple, one-

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story, flat-roofed brick building with inset panels of windows still stands, although the reactor has been moved to an adjacent addition. Small designed several other buildings for the campus, notably the Student Service Center in the early 1960s. Built on two levels, the building's main level has a broad concrete plinth on which the flat-roofed mass of the sales area is defined by brick and glass planes. An unusual feature of the design is the large, free-standing, folded-plane concrete awning that shelters the front of the building. Small was also the architect for the university's 1967 Carter-Finley (football) Stadium, built on a wooded site adjacent to the State Fair Grounds. The stands for the stadium are gracefully-inclined planes, while the accessory buildings and fieldhouse are clean, flat-roofed, brick, concrete and glass horizontal forms.

One of Small's most notable designs of the 1950s was a sales and service facility for Gregory Poole Equipment Company done with George Matsumoto in 1955. This building featured a showroom which was a pristine rectangular steel and glass box. Unfortunately, the showroom has been enclosed in recent years.

In 1960, Small designed a new Municipal Building for the City of Raleigh. The site is below the adjacent street level, so Small set the cubical mass of the building on concrete-enclosed steel columns above a recessed brick basement. A bridge joins the main level of the building with Dawson street, creating a formal sense of entry, but orienting the building toward a blank wall rather than the adjacent Nash Square. Vertical strips of glazing interspersed with vertical panels of blue-glazed brick, and with Miesian cusped corners, make up the planar facades of the building. In true Miesian fashion, there is no exterior expression of the interior uses of the building.

Two commercial buildings designed by Small in the Raleigh area in the mid-1960s demonstrate the deftness with which Small could handle the Miesian vocabulary. One is the Northwestern Mutual Life Insurance Building on Glenwood Avenue, completed in 1962. The base of the building is dark brown square brick, over which are cantilevered two planes forming the floor and roof, and separated by black steel columns. The enclosure of the building is of dark glass with light-colored aluminum muntins, and it is set back from the plane of the columns to form a peripheral walkway. This building has been doubled in

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size, and although the same detailing has been kept, it has lost some of its original grace. In the Research Triangle Park adjacent to Raleigh is the National Headquarters Building of the American Association of Textile Chemist and Colorists, designed by Small in the early 1960s. Like the insurance building, the planes of roof and floor are cantilevered over a masonry base. However, in this case the walkway around the perimeter of the building is enclosed by glass to form an internal hallway which, in addition to providing for circulation, also acts as an environmental buffer for the glazed interior lab and meeting spaces. Another Raleigh commission which makes use of the platform or plinth as a defining element is the Richard B. Harrison Library on New Bern Avenue, completed in 1968, in which the thick, black slab of the roof, held up by steel columns, appears to generate a space between itself and the plinth, the subdivision of which is defined by glass and tan brick walls.

Small's own office building on Brooks Avenue, completed in 1966, is a deft summary of some of the key elements of Small's work over the previous twenty years. To make the best use of a small site, the occupied space of the building is raised a story on steel columns, allowing for parking and a fountain-lined approach underneath. The building seems to hover in the trees next to the street. Superficially, the structure is a rectangular box of glass and metal panels with aluminum mullions, cusped corners, and an overhanging, broad-faced roof slab. A close examination of the facades, however, reveals subtle differentiations in window and panel configurations, depending on the type of space that occurs behind the wall in each area. The plan of the building has a clear hierarchy of spaces, from the reception area and conference room/principal's office, which are finished with walnut veneers, stained fir, bronze-toned metal and framed wall panels, to the linear drafting room with its frankly-exposed structure. Throughout the building, the black-painted steel columns are exposed in Miesian fashion, and the wall panels are painted in the Die Stijl colors of black, white, and primary red, blue and yellow.

Small also designed several churches, the most distinctive of which is Our Savior Lutheran Church, completed in 1964. The sanctuary of the church is defined by its two gabled roof planes, which reach down over low, brick side walls. The street end wall is

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glazed, and the scissors truss that supports the roof is painted black, increasing the appearance of a hovering roof. In Miesian fashion, the sanctuary sits on a raised plinth.

Another important church designed by a School of Design architect is St. Giles Church by Harwell Hamilton Harris. Planned for construction in stages, it was begun in 1968 and completed in 1974 and 1983. The fellowship hall, classrooms, offices and sanctuary are loosely-organized around an informal central space. The common vocabulary of the complex is low-sloped gable roofs and shingled exterior walls, which integrate gracefully into a site dominated by tall pines.

School of Design architects played an important role in bringing modern architecture to the construction of North Carolina public school buildings. However, most of their early work has been demolished or overbuilt. An unusual classroom building design by Edward Waugh is Harrelson Hall at North Carolina State University, completed in 1961. The cylindrical building has inner and outer layers of classrooms accessed by a central ramp.

Some measure of the influence of G. Milton Small's Miesian approach on the work of George Matsumoto can be seen in the classroom wing designed by Matsumoto in 1956 as part of the adaptation of the old D. H. Hill Library into a new complex for the School of Design. As with several of Small's projects during this period, the flat-roofed rectangular addition has brick end walls. The side walls are a syncopated pattern of vertical strips of glass, pre-finished metal panels, and aluminum mullions, all slightly cantilevered over a brick base.

Significance

Between 1948 and 1972, faculty or former faculty members of the School of Design at North Carolina State University created designs for a wide variety of commercial and institutional buildings in Raleigh. These buildings, produced by a small group of highly-talented architects representing one of the best-known American schools of design during the period, played an important role in shaping the appearance of Raleigh in the Post-War period. Several of the designs represented structural innovations, such as Matthew Nowicki's Dorton Arena or the Geodesic domes of Buckminster Fuller, James Fitzgibbon and

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Duncan Stuart, that received international recognition and emulation. Other innovations included experiments in school design like Edward Waugh's cylindrical Harrelson Hall at North Carolina State University. A third class of designs involved the high-level development in Raleigh of Miesian architectural concepts by G. Milton Small and George Matsumoto, and graceful, sensitive church designs by Harwell Hamilton Harris and Small. The high quality of these buildings was given contemporary recognition through wide-spread publication in magazines, as well as awards from the North Carolina Chapter of the American Institute of Architects, thus extending their influence. These buildings are eligible for nomination under Criterion C, as the works of a master, and for their high artistic value.

The resources contained in these contexts come under Criterion Consideration G, as less than 50 years old. As a group, however, they form a consistent body of work that is representative of the best of Modern Movement design in North Carolina. The Modern Movement is one of the most widely-studied developments in architectural history, with an enormous body of scholarly criticism and a recognized historical significance. However, on the local level, monuments of early modern architecture, including these buildings, are in danger of being altered or destroyed before they can be officially recognized.

Registration Requirements

The following list of considerations and requirements was used to assess the potential National Register eligibility of commercial/institutional buildings covered under this Multiple Property Designation Form. To be eligible, buildings

1. Must have been designed by one of the architecture faculty members or former faculty members of the North Carolina State University School of Design during the period 1948-1972.
2. Must retain a substantial integrity of form, workmanship, materials, location and site.
3. Must represent innovation in structure, form, materials or plan or:

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4. Must represent a skilled and thoughtful exploration of Modern Movement aesthetic principles, as in Miesian Modernism.

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G. Geographical Data

The corporate limits of the city of Raleigh, Wake County, North Carolina.

H. Summary of Identification and Evaluation Methods

The multiple property listing for early modern architectural resources associated with the North Carolina State University School of Design is based on the ongoing statewide survey and on a series of architectural inventories which have been carried out in Wake County and Raleigh. The statewide survey has included activity in all of the 100 counties of North Carolina, 58 of which have been comprehensively surveyed, generating more than 60,000 files. Raleigh studies have included the 1978-79 Raleigh architectural survey by Linda Harris and Mary Ann Lee; surveys of the Glenwood, Boylan Heights, Cameron Park and Moore Square area in the early 1980s by Charlotte V. Brown; the 1988-90 African American historic and architectural resources survey; an 1989-91 survey of early to mid-twentieth century architecture inside the Raleigh beltline carried out by Helen Ross; and twenty years of staff survey of the Raleigh area. Documentary research to compile background information for the multiple property listing included an examination of early records of the School of Design at the North Carolina State University Archives, a review of the publication of the North Carolina chapter of the American Institute of Architects (Southern Architect, later North Carolina Architect) from 1955-1970, an inspection of selected architectural registration files at the North Carolina Board of Architects, and research in a number of existing publications about Raleigh and North Carolina architecture. Some interviews with area architects, building designers and owners were also carried out.

The historic contexts listed in the multiple property form represent a thematic approach to information about early modern architecture in North Carolina and Raleigh. The time periods used reflect both the specific and general parameters of the Modern Movement as it manifested itself in the state and Raleigh in its earlier forms. In the

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case of the School of Design, the dates are those of the tenure of Henry Kamphoefner as dean of the School. Kamphoefner's role in the selection of faculty and definition of the program of the school is generally recognized as the key influence on the school's consistent involvement with the modern movement during the period.

Significant property types included in the multiple property listing are those functional and stylistic types identified the course of the survey and research activities. These are the types representative of the theme during the period of time being investigated.

Integrity requirements for the listing of member properties were based on a knowledge of the condition of existing properties.

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