Cover: Northern High Gym, Durham County; under construction.
In North Carolina, the statutory responsibility for operating public schools is assigned to local boards of education. A board of education also has the legal responsibility and authority for entering into contracts for the design and construction of public school buildings within its jurisdiction.

Charged with these responsibilities, conscientious school boards and superintendents keep abreast of recent developments and trends in public education, utilize extensive professional resources and plan continuously for the improvement of educational programs and facilities.

We commend this sixth edition of Schools of Interest to you. Since the first edition in 1971, these documents have served to stimulate effective and imaginative school planning and to strengthen and improve building programs. The staff of the Department of Public Instruction is available for consultation and assistance in all aspects of the planning process.

A. Craig Phillips, State Superintendent
N. C. Department of Public Instruction
March, 1986
We are pleased to present several examples of schools constructed in recent years. As with the previous five publications, the Division of School Planning is keenly aware that there are many other schools which are worthy of presentation. Almost all administrative units have a new school or an addition to an older school which is of particular educational or architectural interest and significance. These outstanding schools across the state are a result of quality planning by professional educators, school board members and design professionals.

Each school is an expression of local preferences and objectives. Through school planning, each community has expressed its own individuality. The public school planning process is remarkably responsive in this respect.

The process of public school programming, planning, design and construction has continued to mature during the 1970's and 1980's. School administrators and boards of education demand flexibility in school design. Likewise, there is increased concern for quality of materials and workmanship. There is continued interest in energy conservation and solar applications for lighting and heating; there is continued interest in planning facilities which are easy to maintain and operate. School design, however, continues to reflect a sensitivity to children and teachers in providing quality space for learning.

The objective of this publication is to stimulate good planning. Staff members of the Division of School Planning are available to work with local superintendents and their boards of education toward this objective.

Darrell Spencer
Director
Division of School Planning
N. C. Department of Public Instruction
March, 1986
Knightdale Elementary Park, Wake County
• PREVIOUS SCHOOLS OF INTEREST
A very low construction budget was the chief determinant for the plan and design. The architect's plan took advantage of this limitation and produced an exceptional school building. The high ceiling areas for use by large groups are located along the high part of the sloping exposed roof structure. The adjacent classrooms also have the spatial advantage of high ceilings at the corridor lines and low ceilings at the exterior wall lines. The library and cafeteria gain additional spaciousness by being open to adjacent corridors. Here is proof that low cost schools can be designed without omitting the most important architectural amenity of space.
The original school was housed in a two-story 1922 building. It was demolished and the new classrooms and library were built to replace it. Other existing facilities have been renovated. The new building is unique because it is designed to take advantage of passive solar heating and lighting. The roof shapes are the result of solar design considerations. Also, the classroom shed roofs follow site contours by appearing to step down the hillside. Interior corridors are ramped. The shed roofs necessitate classrooms with high ceilings in order to bring solar heat and light deep inside each room. The high ceilings contribute a great deal to hot weather cooling and comfort.

Administrative Unit ........................................... Wake County
Superintendent ................................................... Robert E. Bridges
Grade Organization ............................................... K-2
Approximate Capacity ........................................... 500
Opening Date ....................................................... January, 1983
Architects .......................................................... Smith-Sinnett Architects, P.A.
Landscape Architect .............................................. McNeely & Associates
Structural Engineers ............................................. Lasater-Hopkins, Engineers
Mechanical Engineers ........................................... Shelton Y. Adcock
Electrical Engineers ............................................ Shelton Y. Adcock
Square Footage .................................................... 43,000
Total Cost .......................................................... $1,701,434.00
Site Development Cost ......................................... $191,360.00
Building Cost Per Square Foot .............................. $39.57
Two schools have been built using this plan. The plan is unique for an elementary school because it includes separate classrooms for music, art and science. Other planning features include separate entrances for the administrative area and a stage in the gymnasium and the cafeteria. Also, the bus passengers have a spacious lobby as is appropriate for large numbers of bus passengers. The interior courtyard is an important design feature as a source of light and air for classrooms. Finishes and equipment include terrazzo corridor and cafeteria floors, simplified heating and cooling controls and metal roofing.

Administrative Unit ........ Haywood County Superintendent ................ Charles C. McConnell Grade Organization ................. K-6 Approximate Capacity ................. 550 Opening Date ....................... Spring, 1986 Architects ...................... Foy & Lee Associates Landscape Architect .... John A. Broadbooks, ASLA Structural Engineers .............. Sutton, Kennerly & Associates Mechanical Engineers ............ Reece, Noland & McElrath Engineers Electrical Engineers .............. Reece, Noland & McElrath Engineers Square Footage .................... 6,600 Total Cost ................................ $2,879,065.00 Site Development Cost .......... $250,000.00 Building Cost Per Square Foot .... $43.62
Two parallel corridors designed as collectors for passive solar heat connect a series of rectangular classroom buildings. The accompanying corridor section drawing explains how the solar heated air is distributed. Lots of glass along the corridors and in the classrooms contributes to the extraordinary school environment. The generally mild climate of North Carolina makes it possible to design school buildings such as this. Also, this is a more humane environment for children than the almost windowless schools which have become a standard approach to energy conservation design.

Administrative Unit: Henderson County
Superintendent: Glenn C. Marlow
Grade Organization: K-6
Approximate Capacity: 440
Opening Date: June, 1983
Architects: Six Associates, Inc.
Landscape Architect: In-house
Structural Engineers: In-house
Mechanical Engineers: In-house
Electrical Engineers: In-house
Square Footage: 47,855
Total Cost: $2,274,181.00
Site Development Cost: $300,000.00
Building Cost Per Square Foot: $45.38
The spring of 1984 will be remembered because of the tornados that destroyed many buildings in southeastern North Carolina. The old Peterson Elementary School was one of them. It was necessary to evaluate the situation quickly and determine how to proceed with educational and financial planning. Generous federal financial assistance became available; so educational programming and schematic design proceeded rapidly. Red Springs administrators, the architects and the Division of School Planning staff quickly agreed on a site plan and architectural design. The attractive and economical school building which resulted from this collaboration is now being constructed.
Administrative Unit: Red Springs City
Superintendent: John C. Ray
Grade Organization: K-3
Approximate Capacity: 630
Opening Date: Fall, 1986
Architects: Hayes-Howell & Associates
Landscape Architect: In-house
Structural Engineers: W.H. Gardner, Jr., & Associates
Mechanical Engineers: McKnight-Smith Engineers, Inc.
Electrical Engineers: McKnight-Smith Engineers, Inc.
Consultants: Food Design
Square Footage: 51,100
Total Cost: $2,308,780.00
Site Development Cost: $278,390.00
Building Cost Per Square Foot: $49.50
Administrative Unit: Carteret County
Superintendent: T. L. Lee
Grade Organization: 6-8
Approximate Capacity: 630
Opening Date: Dedication - November 23, 1980
Architects: James B. Willis, Jr.
Landscape Architect: Bell Design Group
Structural Engineers: Bigger & Agnew, Inc.
Mechanical Engineers: Fenner & Proffitt, Engineer
Electrical Engineers: Fenner & Proffitt, Engineer
Square Footage: 70,953
Total Cost: $2,738,379.00
Site Development Cost: Included above
Building Cost Per Square Foot: $38.59
School buildings planned around courtyards have an architectural focus missing from the conventional double-loaded corridor schools. Here the courtyard is defined by three separate hipped roof classroom buildings and a gymnasium building. The sloping exterior walls are unusual for school buildings. The bermed and landscaped site is an additional feature of this compact quadrangle of school buildings.
The landscape architect's site planning is an attractive introduction to the heart of this school. The open courtyard complements the open area inside which is the cafeteria/commons. Only the kitchen and serving line are enclosed. The exterior sloping roofs permit areas such as classrooms and the library to have sloping ceilings related to the roof slopes. This small school has architectural features not usually attempted with a low construction budget.

Administrative Unit ................... Carteret County
Superintendent ....................... T. L. Lee
Grade Organization .................... 6-8
Approximate Capacity .................. 350
Opening Date ............................. Fall, 1980
Architects .................. Ballard, McKim & Sawyer
Landscape Architect ................... Jerry Turner & Associates
Structural Engineers ................... McKim & Creed Engineers
Mechanical Engineers .................. Fenner & Proffitt, Inc.
Electrical Engineers ................... Fenner & Proffitt, Inc.
Square Footage ......................... 52,000
Total Cost ............................. $1,875,000.00
Site Development Cost ................. Included above
Building Cost Per Square Foot .......... $36.05
Here is another example of a school at a North Carolina military post which has been programmed for quality design and construction. A long sloping site was one of the determinants of the plan shape. The three courtyards provide architectural focal points for the entire scheme. This extensive middle school building was thoroughly programmed during several conferences which involved the design architects and engineers, the Fort Bragg School staff, the Division of School Planning staff, the post engineers and the United States Department of Education.

Administrative Unit.........Federal Schools-Fort Bragg
Superintendent...............Joseph V. Brust
Grade Organization...........5-8
Approximate Capacity........900
Opening Date.................August, 1983
Architects....................Hayes-Howell & Associates
Landscape Architect........Lewis Clarke & Associates
Structural Engineers........W. H. Gardner, Jr., & Associates
Mechanical Engineers........
Electrical Engineers........
Consultants...................Food Design
Square Footage................99,649
Total Cost......................$5,177,300.00
Site Development Cost........$636,000.00
Building Cost Per Square Foot....$45.57
It is unusual for an architectural firm to be able to carry out the original plan of phased construction on a school site. The first phase media center was included in "Schools of Interest 5." The second phase, two-story classroom building makes the most of a sloping and crowded site. The building is architecturally strong without compromising educational program requirements. Phase three is now proceeding and completes the campus. This project demonstrates how an extremely crowded site can successfully contain an entire middle grades program when the community insists on it.

Administrative Unit ................. Wake County
Superintendent. ................... Robert E. Bridges
Grade Organization. ............... 6-8
Approximate Capacity. ............. 600
Opening Date. ...................... January, 1984
Architects. ........................ Shawcroft-Taylor
Landscape Architect ............... In-house
Structural Engineers. .............. David Fischetti
Mechanical Engineers. .............
.................................... Progressive Design Collaborative, Inc.
Electrical Engineers. ..............
.................................... Progressive Design Collaborative, Inc.
Square Footage. .................... 66,883
Total Cost. ......................... $2,592,286.00
Site Development Cost ............. $51,500.00
Building Cost Per Square Foot .... $38.76
A cluster plan is reasonable for all school grade organizations. It is especially functional for a middle school and junior high school. The clusters can be arranged by grades or by departmentalization of curriculum groups. Clusters can be varied by area, shape and degree of connection to a central core. Even the structural systems and HVAC systems can vary from cluster to cluster when design criteria change. Central cores can contain the speciality areas and one-of-a-kind areas which are used by all of the children and staff. Western Middle School is a successful example of a well-planned cluster school.

Administrative Unit: Alamance County
Superintendent: Leonard H. Simmons
Grade Organization: 6-8
Approximate Capacity: 900
Opening Date: January, 1979
Architects: Smart-Isley-Herring, Inc.
Landscape Architect: In-house
Structural Engineers: In-house
Mechanical Engineers: In-house
Electrical Engineers: In-house
Square Footage: 69,000
Total Cost: $2,213,054.00
Site Development Cost: Included above
Building Cost Per Square Foot: $29.68
Many school campuses have a series of buildings from different periods of construction. Frequently, these campuses are difficult to organize educationally and to administer. Also, energy conservation possibilities are limited. The challenge at Chaloner was to connect all existing buildings by adding needed new facilities, adapt to a site with many floor evaluations and provide more clearly defined vehicle and pedestrian traffic patterns. The shapes of the new plan are the result of making the necessary adaptations to existing patterns. The addition has unified a collection of ordinary school buildings and has established stronger visual identity for the school.

Administrative Unit . . . . . . Roanoke Rapids City
Superintendent . . . . . . . . Robert C. Clary
Grade Organization . . . . . . 6-8
School Capacity . . . . . . . . 900
Opening Date . . . . . . . . August, 1982
Architects . . . . . . . . . . George M. Smart Architect, Inc.
Landscape Architect . . . . . In-house
Mechanical Engineers . . . . L. E. Wooten & Company
Electrical Engineers . . . . L. E. Wooten & Company
Square Footage . . . . . . . . 39,121
Total Cost . . . . . . . . . . $1,931,800.00
Site Development Cost . . . Included above
Building Cost Per Square Foot (includes costs for renovation of existing building). . . . . . . $49.37
Construction began in May, 1985. The project proceeded along the recommended path of educational specifications prepared by the Camp Lejeune superintendent of schools and his staff. It continued with architectural interpretation of the educational specifications and schematic sketches. The resulting plan clearly separates regular classrooms and their support areas. The library core is surrounded by support areas and special activity rooms. Also, the plan is arranged so that areas for large groups are accessible from a common lobby or "commons." Other interior circulation patterns are clear and direct.

Administrative Unit .... Federal Schools-Camp Lejeune
Superintendent. .......... E. Conrad Sloan
Grade Organization. ............... 9-12
Approximate Capacity. ............. 600
Opening Date. ................ Fall, 1987
Architects. ............ Ballard, McKim & Sawyer
Landscape Architect. .......... Jerry Turner & Associates
Structural Engineers. .......... McKim & Creed, Engineers
Mechanical Engineers. .......... Cheatham & Associates
Electrical Engineers. .......... Baldwin Associates
Square Footage. ............... 120,819
Total Cost. ................ (estimated) $8 million
Site Development Cost ........... Included above
Building Cost Per Square Foot .... (estimated) $66.67
Here is an example of interior traffic patterns determining the two main features of the school. They are the cafeteria and the auditorium. The cafeteria is an attractive open space defined by the corridor and separated from it by a ramp and a low railing. This open space visually connects the main lobby and the gymnasium lobby. The arena type auditorium extends the seating areas over two levels, from the first floor to the second floor. It can be entered from either floor.

Exterior materials are brick veneer, industrial type metal siding and standing seams prefinished metal roofing. The site is suitably finished with curbs and gutters at main parking areas and entrances.

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<tr>
<th>Administrative Unit</th>
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<tr>
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<tr>
<td>Building Cost Per Square Foot</td>
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Large schools on crowded sites require that additional construction be compact. This two-story gymnasium is adjacent to a recently built two-story classroom building. The ground floor dressing rooms and special rooms are adjacent to play fields. Large public areas are on the upper floor. Acoustical design was an important consideration. The building frame is steel throughout. The exterior skin is standard prefinished metal siding and Kalwall daylighting panels.
This large cerebral palsy and orthopedic facility was planned to serve all of Guilford County. It is available to physically handicapped students of any age who are unable to attend a regular school, including preschool age children and adults. Architectural interpretation of the educational specifications resulted in three main planning groups. They are food service, physical and occupational therapy and administration and classroom facilities. A nearby school has a covered walk which connects to the Gateway Education Center cafeteria.

Administrative Unit ......................................................... Greensboro City
Superintendent ................................................................. Joseph R. Brooks
Grade Organization ............................................................ Ages 0-21
Approximate Capacity ........................................................ 130
Opening Date ................................................................. 1983
Architects ................................................................. J. Hyatt Hammond Associates, Inc.
Landscape Architect ......................................................... In-house
Structural Engineers ......................................................... In-house
Mechanical Engineers ......................................................... In-house
Electrical Engineers ......................................................... In-house
Square Footage ............................................................. 105,214
Total Cost ................................................................. $4,458,735.00
Site Development Cost ...................................................... Included above
Building Cost Per Square Foot ........................................... $42.38
The Wake County Parks Department and the Wake County Schools agreed upon a cooperative program whereby public parks, toilets, shelters and playgrounds would be designed and constructed on school sites. Three other projects have been completed. They are located at Swift Creek Elementary School, Knightdale Elementary School (see #2) and West Millbrook Junior High School. All four projects were designed by Wake County Parks staff people. Each project was coordinated with Wake County school people so that local site and community needs could be accommodated. These model projects demonstrate how public school sites can be fully developed as "community schools."

Administrative Unit ................... Wake County
Superintendent ....................... Robert E. Bridges
Grade Organization ................... 0
Opening Date ......................... Fall, 1982
Architects ........................... Wake County Parks & Recreation Department
Landscape Architect ................... In-house
Structural Engineers ................... In-house
Mechanical Engineers ................... In-house
Electrical Engineers ................... Booth & Associates, Inc.
Square Footage ....................... Park
Total Cost ........................... $243,008.00
Site Development Cost ............... Included above
The Julius Rosenwald Fund was chartered in 1917 and during the twenties was concerned, among other things, with the promotion of schools for the blacks. Donations of standard plans and funds to the Interstate School Building Service at Peabody College enabled school systems throughout the south to build standard community schools for both black and white children. Most recognizable of the Rosenwald plan schools is the scheme which has classrooms located around and opening directly into a central auditorium. The plan exhibited many of the positive features of the later open plan school. Unfortunately the plan had serious safety deficiencies in case of fire. Inexpensive construction, age, lack of routine maintenance and the termite have resulted in the disappearance of this interesting but potentially dangerous type of school facility.
Cherokee County Schools needed a building that could be built at Hiwassee Dam, Andrews High School and Murphy High School. The cultural arts program and facilities were intended to be accessible to school children and the community. The design program is successful and the users are satisfied. Need anything more be said?

Administrative Unit ............... Cherokee County Superintendent ............... William Roy Pipes
Grade Organization ............... 7-12
Approximate Capacity ............... 40
Opening Date ............... Fall, 1985
Architects ............... Eric Townsend
Landscape Architect ............... In-house
Structural Engineers ............... Reece, Noland & McElrath Engineers
Mechanical Engineers ............... Reece, Noland & McElrath Engineers
Electrical Engineers ............... Reece, Noland & McElrath Engineers
Square Footage ............... 2,970
Total Cost ............... $322,772.00
Site Development Cost ............... Included above
Building Cost Per Square Foot ............... $37.34
Albritton Middle, Fort Bragg; Media Center with large Kalwall skylight.