

**CHATHAM COUNTY PUBLIC LIBRARY
HEADQUARTERS**

Pittsboro, North Carolina

SPACE NEEDS STUDY

Phillip Barton & Jeff Hall

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2006

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COMMUNITY BACKGROUND

In 2001 a report was prepared entitled *Chatham County, NC, Strategic Plan for Library Facilities* (Barton and Lytle). The purpose of this report was to lay out a plan for the future development of library facilities in Chatham County. At the time this report was written Chatham County libraries were operating as part of the Central North Carolina Regional Library System, which consisted of Alamance and Chatham counties. The regional headquarters was based at the May Memorial Library in Burlington, NC.

Chatham County libraries included the Goldston Public Library (Goldston), the Pittsboro Memorial Library (Pittsboro) and the Wren Memorial Library (Siler City). It was agreed at the outset that the existing libraries would remain, but plans would be developed for future expansion to accommodate the population growth in each library's service area. The plan also recommended a new library facility in northeast Chatham County to serve the rapidly growing population in this area of the county.

Since the original report was prepared, an unanticipated development occurred that was simply not envisioned at that time. That development was the dissolution of the Central North Carolina Regional Library System, the first such occurrence in the history of North Carolina's regional library systems. This has resulted in the creation of two new county library systems, the Alamance County Public Library and the Chatham County Public Library.

The establishment of the Chatham County Public Library System has created the need for a library headquarters. Following the lead of other county library systems throughout the state, it was determined that the library headquarters would be located in the county seat of Pittsboro.

Another new development, which was suggested in the earlier *Strategic Plan* for library facilities, was to consider the possibility of building a joint-use library that would serve as both a public library and a community college library for the Pittsboro campus of Central Carolina Community College. Earlier this year planning was conducted to establish such a library, resulting in an agreement to implement and operate a joint-use library.

These two changes have significantly impacted the plans for a new library in Pittsboro. The 2001 *Strategic Plan* recommended a library of 13,000 square feet to serve adequately the Pittsboro Service area for a 20-year period (2000 – 2020). The plan also recommended a much larger, new 23,000 square foot facility, to serve northeast Chatham County.

In view of the changes noted above, it is recommended that the plans for future library facilities be revised to include a larger library facility in Pittsboro. The new public library will serve as the primary library for the community defined as the Pittsboro Service Area (see “Service Areas” section that follows). Additionally, the library will serve as headquarters for the new Chatham County Public Library System, as well as a library for the local community college.

To achieve this end it is recommended that the library headquarters in Pittsboro be increased in size to nearly 25,000 square feet, to accommodate growth for a 20-year period, and that the proposed library that would serve the northeast area of the county be reduced in size to about 10,000 square feet. Of course, as with most library facilities, the design should include consideration of the future expansion of the facility.

SERVICE AREA

An integral part of the 2001 *Strategic Plan* was the determination of “service areas,” representing the geographic area from which a library draws most of its users. The determination of a service area is based on the concept that, all things being equal, people will travel to the nearest facility. Distance is therefore the first criterion for determining a service area. Other factors that influence the size of the service area include physical barriers, such as road, rivers, and areas that are more difficult to travel through (e.g. congested roads).

For the purpose of the *Strategic Plan*, Chatham County was divided into four service areas with each existing or proposed library having approximately an eight-mile service radius. The Pittsboro Service Area was approximately 176 square miles, bounded on the east and northeast by Jordan Lake and the Haw River, which is the common boundary with the Northeast Service Area. It includes the far southeastern corner of the county and follows the Rocky River northwest to a ridgeline in the center of the county and then runs due north following Bowers Store Road, White Smith Road and Castle Rock Road to the county line.

The 2000 population for the Pittsboro Service Area was 10,637. The 2001 *Strategic Plan* projected that the population for the Pittsboro Service Area would grow at a 3.0% annual rate from 2000 to 2010 and 2.5% rate from 2010 to 2020. Based on the 3.0% growth rate the current service area population is estimated to be at nearly 13,100 people. The population is estimated to grow to nearly 21,250 by 2026.

ANALYSIS OF NEED

An assessment of space needs is one of the essential steps in the planning of any library-building project. Before the planners can evaluate alternatives for meeting the library's space needs, they must have some idea of the amount of floor space the library will need to implement its service program over a period of years.

The space needs study will also help identify the overall costs for the project. With an estimate of the space need in hand, planners can begin to develop a realistic budget for library expansion.

The space needs assessment methodology used in this study will serve as a starting point. Results are based on the broad outline of the joint-use library's program of service. They will be accurate enough to allow a reasonable evaluation of alternatives to meet the library's long-term need. It is considered most effective to make such projections over a 20-year period. (Dahlgren)

Six basic types of library space are addressed here: collection space, public seating space, computer space, special use space, staff work space and meeting space. Standard formulas are applied to the local library to translate its program needs in each of the six types of space into a space need. Calculation of the needs in these six types of space will quantify the largest share of the library's overall, projected space needs. Non-assignable space will be calculated based on the total net square feet of the six types of library space.

This analysis also reflects input provided by various members of the Chatham County community. Some of the input was obtained through a survey of 500+ citizens conducted by the Friends of the Pittsboro Public Library, which asked people to indicate what they hoped to see in a new library facility. For example, the survey indicated that the library should be a sustainable design, or "green" building.

A second method to gather input consisted of a series of four charettes. The charettes functioned similar to public forums, which invited people to ask questions about the proposed library, as well as offer their thoughts and suggestions regarding the new library. For instance, it appears to be important that the new library include facilities to accommodate public art exhibits.

Some of the input from the surveys and charettes is reflected in the space needs study in terms of specific space allocations. For instance, the on-site storage area for book sale materials and a children's multipurpose programming space are explicitly noted. Other input will be reflected in the more detailed building program for the new library.

COLLECTION SPACE

The purpose of the collection analysis is to determine the amount of space needed to house the library's materials collection. Using the library's collection size, the space needed to house the collection can be quantified.

Currently the Pittsboro Memorial Library has a collection of nearly 46,000 books, and audiovisual materials. The Central Carolina Community College Pittsboro Campus Library has a collection of nearly 6,000 books and audiovisual materials. When combined, the collection will consist of approximately 51,000 items.

Current Collection Comparison and Totals

	<i>Pittsboro Library</i>	<i>CCCC Library</i>
Adult Books	28,216	5,354
Children's Books	10,965	N/A
Adult Nonbook	6,212	469
Children's Nonbook	532	N/A
Total Collection	45,925	5,832

In the usual methodology the current collection's future growth is based on an examination of the library's rate of net additions to the collection for a period of time. However, in this case the usual methodology will not work. For several years the collection at the Pittsboro Memorial Library has not grown due to severe space limitations. Each time a book has been added to the collection, one has also been removed creating a no-growth situation. In addition, it is likely that a local history and genealogy section will be added to the new library. Local history and genealogy sections may have significantly higher growth rates than regular library collections because they are largely reference areas from which materials neither circulate nor are they weeded, but become a permanent part of the library's collection.

Because of the lack of collection growth at the Pittsboro Memorial Library for the past several years, projections for collection space needs will be based on the North Carolina Public Library Directors Association (NCPLDA) *Guidelines for Public Libraries*. These guidelines recommend that a library provide a minimum of two books per capita plus other materials. Because the NCPLDA guideline only makes a recommendation for number of books, an adjustment of one additional item per capita will be made in the projection to allow for growth of non-print and media collections. Using three items per capita, the chart below indicates the size of the collection based on population projections for 2006, 2016 and 2026.

Collection Growth Projection

<i>Year</i>	<i>Projected Population</i>	<i>Number of Items</i>
2006	13,100	39,300 (45,925*)
2026	21,250	64,000

**The Pittsboro Memorial Library's current collection of 45,925 items already exceeds the number of items based on projected population.*

Unlike the Pittsboro Memorial Library, growth in the CCCC Pittsboro Campus Library collection has been steady. Over the past four years collection growth has averaged 5.15% per year. This average percentage of growth is higher than usual for library collections. It is expected that as the size of the collection grows over time the average growth rate will decline.

CCCC Library Collection Growth Analysis
 (Average Growth Rate: 5.15%)

<i>Year</i>	<i>Number of Items</i>	<i>Change</i>	<i>%</i>
2000-2001	4,770		
2001-2002	5,080	310	6.49
2002-2003	5,309	229	4.50
2003-2004	5,664	355	6.68
2004-2005	5,832	168	2.96

For this study 3% annual growth will be used to project the growth of the CCCC Pittsboro Campus collection. This rate of growth will allow the collection to nearly double in size within twenty years.

CCCC Library Collection Growth Projection
 (Average Growth Rate: 3%)

<i>Year</i>	<i>Number of Items</i>
2006	5,832
2026	10,533

**Combined Collection Growth
 20-Year Projection**

<i>Year</i>	<i>Pittsboro Library</i>	<i>CCCC Library</i>	<i>Joint-Use Library</i>
2006	46,000	5,800	51,800
2026	64,000	10,500	74,500

The number of square feet needed for collections is based on the amount of linear feet of shelving required to store the collection. It is estimated that one linear foot of shelving is equal to one square foot of need. This is based on the fact that approximately ten volumes equal one square foot and that one linear foot of shelving can house ten volumes of materials: one linear foot equals one square foot. (Cohen)

The chart below presents the library’s shelving needs for the next 20-year period. By 2026 approximately 7,425 square feet will be needed to house library collections.

Collection Space Needs

<i>Year</i>	<i>Number of Items</i>	<i>Linear Feet</i>	<i>Net Sq Ft</i>
2026	74,500	7,450	7,450

Any consideration of a library’s collection should take into account the collection of the entire library system and not just a single facility. The total collections of the three

existing libraries that comprise the new Chatham County Public Library System already exceed 100,000 items and it is very likely that this number will easily exceed 200,000 items within a 20-year period, as projected in the 2001 *Strategic Plan*. Bear in mind that there is also a likely possibility that a fourth library facility, with a collection capacity of at least 40,000 items, will be built to serve the northeast area of the county. Combined with a daily courier service the library system's whole collection should be readily accessible to all library users throughout Chatham County.

PUBLIC SEATING SPACE

Public seating consists of a variety of seating provided for library users, including seating at tables and study carrels, lounge seating and task seating, however it does not include seating at public computer workstations or meeting room seating, which are addressed in separate sections.

When projecting the amount of seating needed for a library, it is important to determine the kind of service the library plans to emphasize. For instance, if a library emphasizes current materials and bestsellers and encourages browsing use of the collection, it is likely that fewer seats would be needed and the projection could be adjusted downward. On the other hand, if a library encourages long-term use by students and researchers, additional seating may be needed and the projection should be adjusted upward.

In the case of the new joint-use library it is reasonable to assume the need for individual and group study space. Also, it is intended that the library will include an area dedicated to local history and genealogical research. As with most new library facilities, the library will likely experience a significant increase in use by the public and a commensurate need for additional seating.

Besides having enough user seating, it is also important to have seating that is “behaviorally usable.” Usability has to do with the privacy that users need in order to perform library-related tasks, such as quiet space for reading and studying. (Cohen) The amount of space provided for seating, the location of the seating, and the seating design, determine whether it is behaviorally usable.

The amount of seating recommended for the new joint-use library is delineated below. The recommendation represents estimates of needed seating based on the type of resources

and services offered by the proposed library. For the purposes of this report, an average of 30 square feet per seat is used to calculate seating space for study seating, 35 square feet per task seat and 40 square feet per lounge seat.

Typically, a library that provides three to five seats per 1,000 people can generally meet the seating needs of the community it serves. The 2001 *Strategic Plan* recommended three seats per 1,000 people. Because of the added role as library for the community college and the desire for a local history and genealogy research area, it is recommended that the new joint-use library provide approximately five seats per 1,000 people.

User Seating Space Needs

<i>Seating Type</i>	<i>Existing</i>		<i>Future 2026</i>	
	<i>Qty</i>	<i>Sq Ft</i>	<i>Qty</i>	<i>Sq Ft</i>
Study/Research seating	38	N.A.	44	1,320
Study/Tutor room seating (2 seats/room)	0	N.A.	12	360
Group study room seating (6 seats/room)	0	N.A.	18	540
Task seating	7	N.A.	4	140
Lounge seating	14	N.A.	24	960
Total	59	N.A.	102	3,320

It is proposed that a modest-sized porch with a combination of outdoor lounge seating and table seating be included in the building design as an add-alternate on this project.

PUBLIC COMPUTER SPACE

While traditional library materials continue to play a major role in today's libraries, computers and multimedia technology have become a typical aspect of a modern library. Computer technology is now used for catalog access, reference work, Internet access and desktop software applications in most libraries. Essentially, any visit to a library today involves the use of a computer.

Even though more and more people have computers in their homes, there are still many people who do not. Computers and technology will impact significantly on both the physical and functional organization of the library. Computer equipment requires space and this must be calculated into the library's space needs. Also, the technology will give rise to a host of new technical issues, such as access to adequate power sources, installation of a flexible and expandable wiring distribution system, improved lighting and increased security. (Fisher) Any planning for a new library must include consideration of the potential impact of technology.

The *Strategic Plan* recommended that Chatham County libraries aim to provide at least one computer per 1,000 people. Because the proposed library will be serving as both a public library and community college library, 32 computer workstations are recommended for the new library, representing approximately 1.5 computers per 1,000 people.

It is further recommended that the library include a computer lab that will house 16 of the 32 computer workstations. The lab will be used for public library training programs, as well as community college purposes, such as bibliographic instruction. When the lab is not in use for instructional purposes, these computers would be available for general public use. The library should also provide docking ports and/or wireless access for people to use their own computers while in the library.

The chart below delineates the number of computer workstations and amount of space required for these stations. An average of 35 square feet for each computer workstation is used to calculate computer space requirements.

Computer Space Needs

	<i>Existing</i>		<i>Future 2026</i>	
	<i>Qty</i>	<i>Sq Ft</i>	<i>Qty</i>	<i>Sq Ft</i>
Computer Workstations	14	N.A.	16	560
Computer Lab Workstations	0	0	15	525
Instructor's Station	N.A.	N.A.	1	60
Total	14		32	1,145

MEETING / PROGRAMMING SPACE

Most public libraries have meeting rooms to accommodate library-sponsored programs and other community meetings. The number and size of meeting rooms is usually determined by the library’s anticipated programming activities and by the availability of similar rooms elsewhere in the community for general public use. Types of library meeting space generally include lecture hall, or theater seating, and conference room seating. Some libraries also provide a special programming area in the children’s room.

As a community center, the library needs some public meeting space for library-sponsored programs, as well as for general public use. A new library facility would ideally include a meeting room with seating for 150 people, a small catering kitchen and storage for tables and chairs. In addition, a storytime/multipurpose area that will accommodate at least 40 children is also recommended. Consideration should also be given to including an outside storytime area for children, which could be incorporated into the landscape plan.

Meeting Space Needs

<i>Type of Meeting Space</i>	<i>Seats</i>	<i>Sq Ft</i>
Children’s story area	40	400
Meeting room	150	1,500
Kitchenette	N.A.	100
Storage	N.A.	200
Total	190	2,200

SPECIAL USE SPACE

Special use space refers to public space for elements of a library's service program or special types of furnishings that have not been accounted for in the previous sections of the space needs study. The type and amount of special use space are delineated in the table below.

Special Use Space Needs

<i>Furniture/ Equipment/Area</i>	<i>Qty</i>	<i>Sq Ft</i>
Atlas stand	1	30
Dictionary stand	1	30
Display case	3	150
Lateral file	3	60
Online catalog station	7	210
Photocopier with sorting table	1	50
Vestibule	1	200
Total		730

STAFF WORK SPACE

Staff work space includes public service points, such as the circulation desk and work spaces away from public service points. It also includes storage space and a lounge/eating area.

Today, an efficient work environment must have adequate and flexible space, including expandable and flexible electrical and telecommunication wiring systems. Also, the work environment should be ergonomic in design to facilitate efficiency and the worker's comfort and safety. If staff is expected to perform efficiently and effectively, then they must have adequate space that will accommodate and facilitate efficiency.

Staff space needs are based on personal observations and feedback provided by the staff. Using this information, in combination with basic principles of modern office and library design, the amount needed for staff workspace was calculated.

In the analysis that follows, the number of workstations is referenced, not the number of employees. Several different employees can occupy a single workstation at different times. Conversely, it may be desirable to provide two or more workstations for certain employees.

Staff Work Space Needs

<i>Staff Area</i>	<i>Workstations</i>	<i>Sq Ft</i>
Circulation services desk	3	300
Information services desk	1	100
Children's services desk	1	100
Children's services workroom	2	300
Workroom/Processing	5	700
Director's Office	1	200
Branch Manager's Office	1	120
Staff lounge	1	200
Custodial supply storage	N.A.	100
Book sale storage (10,000 vols. stored in boxes)	2	500
Total	14	2,620

It is proposed that the original building design include a covered area attached to the building, similar to a porte cochere, near the service entrance to the building. This would provide some cover for the bookmobile and staff when loading and unloading the vehicle. ***It is further recommended that a garage large enough to house the bookmobile be designed and bid as an add-alternate.***

ASSIGNABLE / NONASSIGNABLE SPACE

The total area in a building, the area on all floors enclosed by the outer walls of the structure, is known as the building's gross area. It can be divided into "assignable" and "non-assignable" space.

Assignable space, also referred to as net square feet, is defined as the sum of all areas (measured in square feet) on all floors of the building, assignable to, or useful for, library functions and purposes." Some examples of assignable space include public seating, shelving and the aisles between shelf ranges, library furnishings, computers, and staff work spaces.

Non-assignable space refers to that portion of the building's floor space that cannot be applied directly to library functions and services. Some representative types of nonassignable space include mechanical rooms, janitor's closets, corridors, stairwells and restrooms. Such space is necessary to support the operation of the building, but it cannot be used for the provision of library service.

Non-assignable space generally comprises 20 to 30 percent of the gross square footage of the finished building, though it can comprise an even smaller proportion of the gross area in a very tightly designed building. The final allocation of non-assignable space will depend on the efficiency of design, and the size of the project. Larger projects tend to allot closer to 20% or less of their gross area to non-assignable purposes, while smaller projects tend to allot closer to 30%.

A 70:30 balance between assignable and non-assignable space is used here to calculate the total, or gross square footage for the new library. In this case the gross square footage is calculated by dividing the sum of assignable square feet by .70. Non-assignable space is the difference between gross square footage and the sum of the assignable square feet.

SUMMARY OF SPACE NEEDS

Presented below is a summary analysis showing the amounts of space that will be necessary for a new library to function adequately during the next twenty years. The reader should be aware that these are preliminary figures, intended to assist the client in developing the scope of work.

Summary of Space Needs

<i>Elements Analyzed</i>	<i>20-Years</i>
Collection space	7,450
User seating space	3,320
Computer Space	1,145
Meeting space	2,200
Special use space	730
Staff space	2,620
Net Square Feet	17,465
Gross Square Feet	24,950

This analysis indicates that the library needs a facility of 24,950 square feet to accommodate adequately the projected growth for the next 20 years. The proposed library facility will mean a new day in public library services for the citizens of Chatham County. The building will accommodate comfortably library users and provide space for more resources in a variety of formats, including the latest computer technology. Noted below are some of the benefits that the new library will provide.

- adequate space for growing collections of library materials, including books, audiovisual materials, and computer resources, with a shelf capacity for nearly 75,000 items;
- public seating space, with a capacity for 102 behaviorally usable seats, including individual study/tutoring rooms and group study rooms;

- meeting and programming space, including a multipurpose meeting room with seating for 150 and a children's storytime/multipurpose area to accommodate at least 40 children;
- 31 public computer workstations, including an instructional lab with 15 computer workstations and an instructor's station;
- adequate staff workspace, efficient and ergonomic in design, and a staff lounge; and
- an on-site book sale storage room to accommodate 10,000 volumes.

A large, modern public library will certainly enable the library to improve its provision of services. It will also greatly enhance the quality of life for all who live in Chatham County.

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