

*HARNETT COUNTY PUBLIC LIBRARY
WEST BRANCH*

SPACE NEEDS STUDY

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2005

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In 2004 the author of this report was engaged by the Harnett County Public Library to do a space needs study for a new library facility in western Harnett County. The purpose of this study is to help library staff determine the amount of space needed for such a facility.

COMMUNITY BACKGROUND

Harnett County is located in the coastal plains of east central North Carolina. Wake, Johnson, Sampson, Cumberland, Moore, Lee, and Chatham counties surround it.

The County was formed from Cumberland County in 1855 and was named for Cornelius Harnett, a revolutionary war leader. Early inhabitants of Harnett County included English and Scottish settlers, Tuscarora and Cheraw Native Americans, and Africans. (Tetterton) Today, the population of Harnett County is much more diverse. Much of the diversity found in modern day Harnett County can be attributed to population growth due to migration into the county.

Harnett County is the eighth fastest growing county in North Carolina. According to the United States Census Bureau the population of Harnett County grew from 67,822 to 91,025 citizens, or 21.4%, from 1990 to 2000. By 2004 the projected population of Harnett County had increased to slightly more than 100,000 people. The North Carolina State Demographics office estimates that by 2010 the county's population will increase to approximately 115,490 people and by 2020 it will grow to 142,708 people.

HARNETT COUNTY – POPULATION GROWTH

<i>Year</i>	<i>Population</i>	<i>% Growth</i>
1990	67,822	
2000	91,025	21.4% (US CENSUS)
2010	115,490 (<i>Estimated</i>)	26.9% (NCSD)
2020	142,708 (<i>Estimated</i>)	23.6% (NCSD)

Much of the recent growth in Harnett County occurred in the western area of the county. According to the Harnett County Economic Development Commission more than 42% of the county's population growth from 1990 to 2000 occurred in the west, particularly along the Highway 87 corridor, which cuts through western Harnett County, from Lee County to the north and Cumberland County to the south. It is expected that the expansion of Highway 87 from a two-lane to a four-lane highway will promote more growth in this area of the county.

Western Harnett County, which is the focus of this study, is comprised primarily of two townships, Barbecue Township and Johnsonville Township. Both of these townships experienced triple digit growth from 1990 to 2000. Barbecue Township's population increased from 4,240 to 9,981, or 135.4%, and Johnsonville Township's population increased from 2,977 to 6,927, or 132.7%. (U.S. Census Bureau)

With the expansion of Highway 87 and development of the Western Harnett Industrial Park, much more growth is anticipated in this area of the county. Below are projections of population growth for Barbecue and Johnsonville townships. An average annual growth rate of about 9% has been used, which is consistent with the growth rate of the previous ten years.

TOWNSHIP POPULATION PROJECTIONS

<i>Year</i>	<i>Barbecue Township</i>	<i>Johnsonville Township</i>
2000	9,981	6,927
2005	15,357	10,658
2010	23,629	16,399
2015	36,356	25,231

There is a good possibility that the population growth in western Harnett County may exceed the above projection. On June 3, 2003 the *Fayetteville Observer* reported that Fort Bragg is planning to construct 1,538 three and four bedroom homes in this area of the county, just off of

Highway 87. (Solano) It is estimated that this action will expand the population of western Harnett County by more than 8,500 people.

Like many counties throughout North Carolina, Harnett County has experienced a shift in its economy from agri-business to more retail trade, manufacturing and construction. This trend has not gone unnoticed by governmental, business and civic leaders in Harnett County. The Harnett Together Forward Committee, Harnett County Commissioners, Harnett County Economic Development Commission, Western Harnett Industrial Park Board and Central Carolina Community College have worked together to bring new businesses and industries to the county, as well as to support the expansion of existing businesses.

With the rapid growth of western Harnett County in mind, these groups have worked together to develop the Western Harnett Industrial Park (WHIP) along Highway 87 in Barbecue Township. WHIP is a state-certified industrial park that consists of more than 250 acres that are available for office, industrial and flex space.

The forward thinking leaders of Harnett County envision the new industrial park as an economic development engine that will sustain and enrich the growing population of this area of the county. This engine will consist not only of the businesses that locate in the park, but will also include valuable community resources. One of those resources will be a satellite campus of Central Carolina Community College, which will assist with workforce development in the area.

Another exciting possibility is the inclusion of a branch of the Harnett County Public Library in the industrial park. Library Director Melanie Collins believes that such a branch would include library collections and services typical of a modern public library and would become a community center for western Harnett County. There is even a possibility that other departments of county government would operate satellite offices in this same area.

THE LIBRARY

The Harnett County Public Library serves a population of slightly more than 100,000 people spread over 595 square miles. The library is headquartered in the county seat of Lillington, North Carolina. In addition to the library headquarters, citizens are served through affiliated libraries in the towns of Angier, Coats, Dunn and Erwin, as well as a branch in the Anderson Creek Elementary School, which operates during after-school hours.

The library's vision is to "support the love of reading, the joy of learning and the search for information" for all citizens of Harnett County. To achieve its vision, the library "provides its users with the means to meet their recreational reading interests; to continue to learn throughout their lives; to find, evaluate, and use information in a variety of formats; to get answers to their questions; and to enhance their formal education from preschool through high school."

Approximately 38,000 people, representing 38% of the county's population, are registered library users. These users made more than 300,000 visits to the library in 2003-04.

The library operates on an annual budget of about \$620,000, of which \$400,000 is county funding. The library receives about \$200,000 annually in state funding. A recent statistical analysis that compared the Harnett County Public Library System with 50 other North Carolina county library systems ranked Harnett County 49th among 51 in expenditures per capita on libraries (83 cents compared to a median of \$2.04).

In pursuing its mission the library aims to provide materials and services that will meet the information, education and recreation needs of its local citizenry. To this end the library has developed an extensive collection of library materials, including 184,000+ books and 11,000+ audiovisual items. Library users checked out 341,655 items in 2003-04.

Like most public libraries, the Harnett County Public Library is an important part of the local education system, providing students with resources and assistance in meeting their curricular needs, especially during after-school hours. In addition to assisting students with their information needs, the library is frequently the primary information provider for many adults. Using traditional and online electronic resources, such as the statewide electronic library known as NC-LIVE, library staff answered nearly 18,000 reference questions last year.

Like so many libraries throughout the country, the Harnett County Public Library has become the primary point of public access to computers and the Internet for many citizens. Not only does the library provide public access, but it is also taking an active role in training people to use these resources more effectively. The library provides currently 58 computers for public use, which were used 52,466 times in 2003-04.

The library has a presence throughout most of the county, except for the western area. Currently, the nearest point of service to the western area of Harnett County is the branch library located in Anderson Creek Elementary School. In spite of being open during after-school hours only, the library is relatively busy. More than 9000 library users checked out 36,000+ books last year at this location. The summer reading program had nearly 1,700 participants.

Still, the Anderson Creek Branch Library is not centrally located in western Harnett County, nor does it lie within the two townships that essentially constitute that section of the county – Barbecue and Johnsonville townships. Bear in mind that these two townships are experiencing the highest rate of population growth in the county.

In view of the rapidly growing population and other major developments in this area of the county, it seems especially appropriate that the public library should also be considering the possibility of establishing a full-service branch library there. Without doubt, many more people

will be served through such a branch. As of the 2000 census, Barbecue and Johnsonville townships had a combined population of nearly 17,000 people, having grown nearly nine per cent annually since 1990. Should the nine percent growth rate continue, which is very likely, the population of these two townships will exceed 40,000 by 2010.

A library's primary service area generally consists of people living within a five-mile radius of the library. The possibility of locating a branch library in the new Western Harnett Industrial Park would situate it near the center point of the western Harnett service area. It would also locate it along a major thoroughfare, Highway 87 that would be convenient to many people traveling to work, to school and to shop. The potential partnership with Central Carolina Community College, which is planning to build a satellite campus in the park, would certainly be mutually beneficial and create a vibrant center for community life in western Harnett County!

ANALYSIS OF NEED

An assessment of space need is one of the essential steps in the planning of any library-building project. Before planners can evaluate alternatives for meeting a 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 of 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 a 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.

Five basic types of library space are addressed here: collection space, user seating space, special use space, staff work space, and meeting space. Standard formulas are applied to the local library to translate its program needs into quantifiable space needs. Calculation of the needs in these five types of space will quantify the largest share of the library's overall, projected space needs.

COLLECTION SPACE

The purpose of the collection analysis is to determine the amount of space needed to house the library's collection of materials, including books, magazines, audio and videotapes, CDs and other items. Using the library's collection size, the space needed to house the collection can be quantified. Currently no collection exists for the proposed west branch library.

Libraries need to offer a range of books and other materials that meet the needs and interests of the population they serve. To be effective, the collection needs to be broad enough to offer library users a variety of choices and ample enough to offer multiple copies of popular, high-demand titles.

In planning for a new library to serve western Harnett County, it is recommended that the library include enough shelving to house a collection of at least 34,000 items. These resources, combined with the resources of the other libraries throughout the system, along with an effective delivery system, will ensure that the residents of western Harnett County have ready access to an extensive collection of materials.

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 based on a collection capacity of 34,000 items. Since no collection currently exists, it is anticipated that it will take five to ten years to build the collection to the targeted size.

COLLECTION SPACE ANALYSIS

<i>Collection Categories</i>	<i>Collection Size</i>	<i>Square Feet</i>
Adult books	20,000	2,000
Children's books	10,000	1,000
Audiovisual materials	4,000	400
Total	34,000	3,400

Planning for future collection space needs is commonly based on an examination of a library's net collection growth for a period of several years. An average annual rate of growth is determined and then used to calculate future growth for a projected time period. The average rate of growth may be adjusted higher or lower depending on reasonable assumptions concerning future growth.

An analysis of collection growth of Harnett County Public Library over the past five years indicates that the library's collection has been growing at an average annual growth rate of 3.5%. (See chart below) It seems reasonable to use this growth rate to project future collection growth of the proposed west branch library.

COLLECTION GROWTH ANALYSIS

<i>Year</i>	<i>Number of Items</i>	<i>Net Change</i>	<i>%</i>
1998-1999	166071		
1999-2000	165173	-898	-0.5
2000-2001	180023	14,850	9.0
2001-2002	183057	3,034	1.7
2002-2003	186895	3,838	2.1
2003-2004	196741	9,846	5.3

Average Annual Growth Rate: 3.5%

Bear in mind that collection growth can be affected by a number of variables, such as the amount of money a library spends on materials, space required to house new formats (e.g. CDs require less shelving space than videotapes), frequency of weeding the collection and new technologies.

USER SEATING SPACE

User seating consists of the seating provided for library users, including seating at tables and study carrels and lounge seating. It does not include meeting room seating, nor task seating, such as seating at public computers.

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 best sellers, and encourages browsing use of the collection, it is likely that fewer seats will be needed and the projection can be adjusted downward. On the other hand, if a library emphasizes research material and encourages long-term use by students and researchers, additional seats may be needed and the projection can be adjusted upward. In this case, it is likely that the proposed west branch will emphasize primarily current materials and encourage

browsing use of the collection, though some seating should be provided for student use and leisure reading.

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 west branch 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 requirements.

USER SEATING SPACE ANALYSIS

<i>User Seating Categories</i>	<i>Seating Capacity</i>	<i>Square Feet</i>
Children’s seating	12	360
Adult seating	24	720
Total	36	1,080

COMPUTER SPACE

While traditional library materials continue to play a major role in today’s library, computers and multimedia technology have become a typical aspect of the modern public library. Computer technology is now used for catalog access, reference work, Internet access and desktop software applications in most public libraries. Essentially, any visit to a public 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. Currently, the public library is the place in most communities where everyone can have free access to a computer. In addition to providing computers for public access, many libraries are playing an active role in improving computer literacy within their communities through public training workshops. It is anticipated that the proposed west branch library would offer such programs to its public.

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 west branch library must include consideration of the potential impact of technology.

This plan recommends that the proposed west branch library provide at least 14 public computer workstations. Additionally, the library should also provide docking ports for people to hook up their own computers in the library. The chart below delineates the number of computer workstations and amount of space required for these stations. An average of 50 square feet for each children's computer station (two people per station – child and parent) and 35 square feet for each adult computer station is used to calculate computer space requirements.

COMPUTER SPACE ANALYSIS

<i>Area</i>	<i>Computer Stations</i>	<i>Square Feet</i>
Children's computer	4	200
Adult computer	10	350
Total	14	550

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 ANALYSIS

<i>Furniture/Equipment</i>	<i>Qty.</i>	<i>Square Feet</i>
Display case	1	100
Photocopier with sorting table	1	50
Computer catalog station	4	120
Lateral file	1	10
Book carts	6	50
Total		320

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 a staff breakroom and storage space.

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 employees are 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 input from the library director. Using this information, in combination with basic principles of modern office and library design, the amount needed for staff work space 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 ANALYSIS

<i>Staff Area</i>	<i>Workstations</i>	<i>Square Feet</i>
Public service desk (3 stations)	1	300
Workroom (includes staff breakroom)	4	500
Storage (supplies; weeded materials)	--	100
Total	5	900

MEETING SPACE

Many public libraries have meeting rooms to accommodate library-sponsored programs and other community meetings and programs. The number and size of meeting rooms is usually determined by the library’s anticipated programming activities and 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 space in the children’s area.

As a community center, the proposed west branch of the Harnett County Public Library needs some public meeting space for library-sponsored programs, as well as for general public use. The new library would ideally include a meeting room with seating for 80 people, a catering kitchen and storage for tables and chairs. An average of 10 square feet per seat is used to calculate the meeting/programming space requirements.

MEETING SPACE ANALYSIS

	<i>Seats</i>	<i>Square Feet</i>
Meeting/Programming Room	80	800
Catering kitchen	N.A.	100
Storage (tables and chairs)	N.A.	100
Total		1,000

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 “nonassignable” 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.

Nonassignable space refers to that portion of the building’s floor space that cannot be applied directly toward library service. Some representative types of nonassignable space include mechanical rooms, janitor’s closets, vestibules, 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.

Nonassignable 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 nonassignable 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 nonassignable purposes, while smaller projects tend to allot closer to 30%.

A 70:30 balance between assignable and nonassignable space is used here to calculate the total, or gross square footage for the proposed west branch of Harnett County Public Library. In this case the gross square footage is calculated by dividing the sum of assignable square feet by .70. Nonassignable space is the difference between gross square footage and the sum of the assignable square feet.

SUMMARY OF SPACE NEEDS

To provide the resources and services of a full-service branch library to serve adequately the growing population of western Harnett County, the library needs a facility of at least 10,400 square feet. Presented below is a summary analysis showing the amounts of space allocated for the primary space elements that comprise a modern public library. (The reader should be aware that these are preliminary figures, intended to assist the client in developing the scope of work.)

SUMMARY SPACE ANALYSIS

<i>Elements Analyzed</i>	<i>Square Feet (Initial)</i>
Collection space	3,400
User seating space	1,080
Computer Space	550
Special use space	320
Staff space	900
Meeting space	1,000
Net Square Feet	7,250
Gross Square Feet	10,400

The proposed library facility will mean a new day in public library services for the citizens living in western Harnett County. The building will accommodate comfortably a

number of library users and provide space for a growing collection of resources in a variety of formats, including the latest computer technology. Noted below are some of the features that the new west branch library would include:

- adequate space for a growing collection of library materials, including books, current magazines, CDs, audio and videotapes, with a shelf capacity for 34,000 items;
- 14 public computer workstations;
- public seating capacity for 50 people, including study and lounge seating for children and adults;
- meeting and programming space with seating capacity for 80 people;
- adequate staff workspace.

Because of the rapid and significant population growth occurring in western Harnett County, it is very important that a new library building be designed to facilitate future expansion. The design should allow the building to be expanded in a manner that will cause the least amount of disruption to library services and operations.

The significant population growth in western Harnett County has resulted in the construction of many new residences and new opportunities for economic growth. While this growth has created a larger tax base, it has also resulted in greater demands for new and expanded services, including public library services.

The Harnett County Public Library has the opportunity to enhance significantly the quality of life for all who live in western Harnett County by expanding library services to this area of the county. It is also in the unique position of being part of the economic engine that will draw new businesses to the area by providing services to businesses and participating in workforce development.

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