

## **CHAPTER V-F**

### **COMMUNITY FACILITIES AND PUBLIC INFRASTRUCTURE**

#### **1. Water and Wastewater**

The City of Concord is a regional provider of water and sewer services not only within the City limits, but also throughout a large portion of Cabarrus County. Concord operates two water plants and pulls raw water from three different lakes. Concord supplies water to Harrisburg and is the provider within the newly incorporated Town of Midland. Concord provides retail sanitary sewer service with the Water and Sewer Authority of Cabarrus County (WSACC) providing treatment.

Concord, Kannapolis, WSACC, Mt. Pleasant and Harrisburg provide water and wastewater services not only in Cabarrus County, but also portions of Rowan and Mecklenburg Counties. These entities serve a residential population of approximately 113,000 residents and a number of industries. Raw water for Concord, Kannapolis and Mr. Pleasant comes from seven surface and two groundwater sources throughout the County. Concord's water distribution system consists of approximately 540 miles of waterline that ranges from 1" to 30" in diameter. The wastewater collection system consists of 800 miles with Concord accounting for over 500 miles, with pipes ranging from 6" to 72" in diameter. Two wastewater treatment plants with a design capacity of more than 24 million gallons per day serve the County. Four water treatment plants with a design capacity of approximately forty million gallons per day.

While water and wastewater services are provided to individual properties within the City, developers who wish to obtain water and sewer service for new subdivisions are responsible for the cost of connecting to the system. New subdivisions that are located adjacent to public water and/or sewage systems are required to include plans for connection to the adjacent systems per Chapter 62 of the City of Concord Code of Ordinances. The developer of a new subdivision is responsible for extending water and sewer lines to and within the new subdivisions or other new development, in accordance with the requirements of the City for the construction of the system. The City will provide public water infrastructure within the corporate limits for fire protection and individual service connections to private property. However, extensions within private property are the responsibility of the owner or developer. The City will provide public sanitary sewer infrastructure within the corporate limits to allow individual service connections to private property within drainage basins. As with water, sanitary sewer extensions within private property are the responsibility of the owner or developer. Water and sewer service can be extended outside of the City in certain circumstances. This process is also being better defined with the establishment of water and sewer service area boundaries. These boundaries will provide prospective developers with information about water and sewer service providers within areas outside the corporate limits.

The WSACC recently completed a countywide *Water and Wastewater System Master Plan* in 2002, which the City adopted, with the primary goal of maximizing the use of existing facilities and resources. The Plan also provides the long-range planning needed to address and manage anticipated growth in the service area over the next 50 years. In addition to updating and

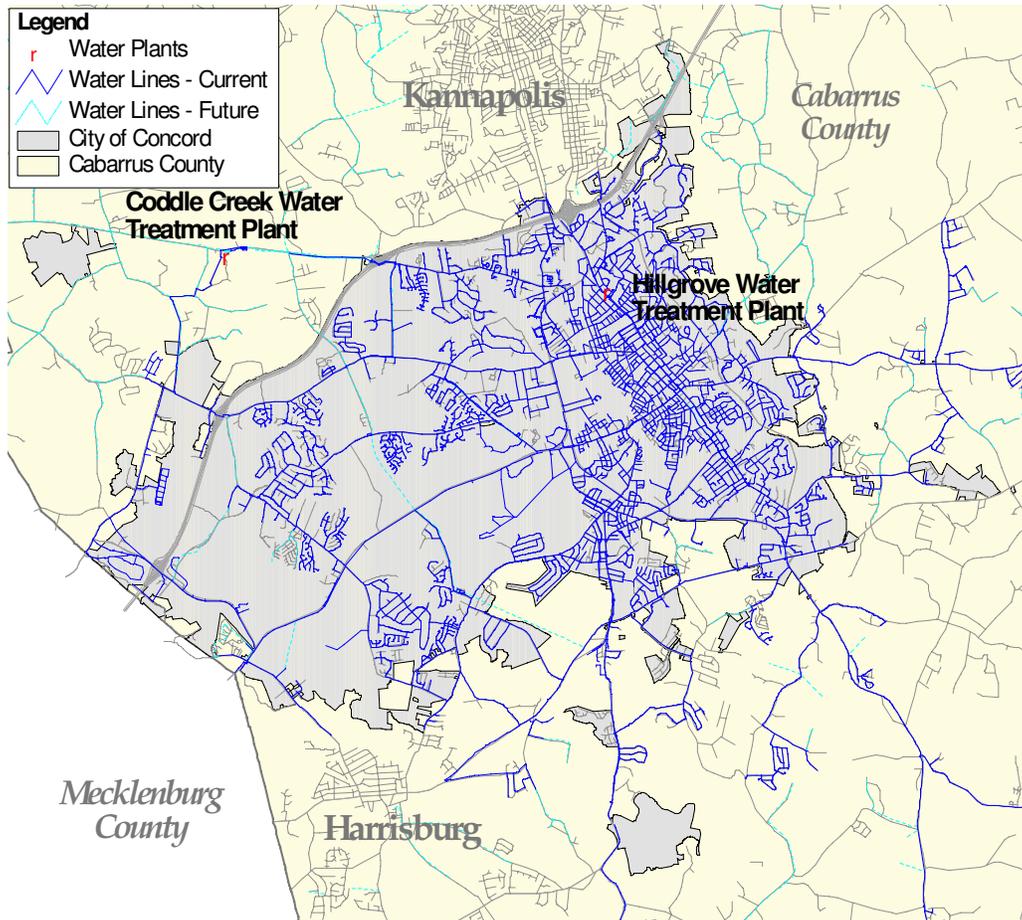
revising population and program recommendations included in the *1995 Master Plan Study*, the *2002 Master Plan* focuses on evaluation of the service area supply; the treatment, transmission, pumping, and storage needs for the water system; and the treatment, interceptor, and pumping needs of the wastewater system.

#### A. Water

The City of Concord regional water system is served by an extensive network of water lines that provide service not only within the corporate limits, but to other areas including, Harrisburg, and Midland. As illustrated in Figure V-F-1, water service is concentrated in the Center City area and extends to subdivisions, developments, and commercial and industrial clients to the east, west, north and south. The Hillgrove Water Treatment Plant is located within the Center City area as well, and the Coddle Creek Water Treatment Plant is sited northwest of the City off of NC Highway 73. The City currently has 26,400 customers which represents approximately 68,900 residents of the area.

Water supply has emerged as a growing concern in the City of Concord and surrounding area. Prolonged drought conditions, coupled with an explosion in residential construction in recent years, have severely taxed local water resources. These factors have prompted water conservation measures and made it necessary for Concord to look outside of its borders for alternative water source solutions. A recent agreement with Charlotte-Mecklenburg Utilities (CMU) helps ensure that the residents of Concord will continue to receive the water that they need to meet basic needs. The CMU agreement resulted in the construction of new waterlines, from which Concord and the communities that it supplies will receive up to 5 million gallons a day (MGD) on a temporary basis. Currently, Concord area lakes 50-year safe yield is 22.3 MGD. In *Phase 1* of the CMU project, a new 24-inch diameter water main was installed along Harris Road and Poplar Tent Road. In *Phase 2*, an upgrade was made to 24-inch diameter lines of the waterline to Highway 73. *Phase 3*, consisted of the extension of a waterline along Highway 73, which is 12-inches in diameter along part of its length and 24-inches for the section extending to the County line. Ultimately, it is projected that the long-term water supply solution will rely on water piped in from the Yadkin River or Catawba River basins. Efforts are underway to accomplish that task.

Figure V-F-1  
City of Concord, Water Distribution System



Source: City of Concord, 2002

In addition to these projects, improvements to the water system recently completed include:

- ❑ Renovation and upgrade of the Hillgrove Water Treatment Plant
- ❑ Upgrade facilities at the Coddle Creek Treatment Plant
- ❑ New 750,000 gallon elevated tank and pump station added along Highway 73 to improve water flow and pressure
- ❑ New waterline added along Highway 49 to improve water flow and pressure
- ❑ Purchase and installation of backup generator for emergency and peak usage at the Hillgrove Treatment Plant

Concord currently uses an average of 9 million gallons per day for its 26,400 customers. Once these planned improvements are completed, Concord could produce 24 million gallons of water per day when reservoirs are full, which would more than double the number of available. This additional production capacity will be necessary to meet future residential, commercial and industrial demand as Concord continues to grow.

Such expansions and renovations of the water system come with a steep price, however, which must ultimately be passed on to consumers. Revenue bonds have been issued to pay for the projects shown above, which can be paid off only through the sale of water and sewer services. To plan for the needed revenues, the City programmed a rate increase for water users as well as an increase in water connection and tap fees for new customers. Residential water customers inside the City limits realized a rate increase of 18% in 2002, while rates for customers outside of the City increased by more than 20%.

The revised *Water and Wastewater System Master Plan* projects water system demand in Concord on an average annual day to grow by more than 51% from 2000 to 2010. Concord water demand is predicted to grow by a staggering 228% from 2000 to 2050. In comparison, water demand for the entire system is projected to grow by 40% from 2000 to 2010 and 174% from 2000 to 2050. Table V-F-1 shows projected water demand to the year 2050.

**Table V-F-1  
Current and Projected Water System Demands (MGD)**

Planning Area	Planning Year									
	2000		2005		2010		2020		2050	
	AD	MD	AD	MD	AD	MD	AD	MD	AD	MD
Concord	10.7	17.1	13.9	23.7	16.2	27.6	21.4	35.8	35.1	57.8
Kannapolis	8.6	11.8	9.8	13.8	10.8	15.5	12.9	18.9	17.6	26.4
Mt. Pleasant	0.3	0.5	0.3	0.5	0.4	0.7	0.5	0.9	1.1	1.9
<b>Total</b>	<b>19.6</b>	<b>29.4</b>	<b>24</b>	<b>38</b>	<b>27.4</b>	<b>43.8</b>	<b>34.9</b>	<b>55.6</b>	<b>53.8</b>	<b>86.1</b>

*Note: AD=Average Annual Day, MD= Maximum Annual Day  
(Source: 2002 WSACC Water and Wastewater System Master Plan)*

The *Water and Wastewater System Master Plan* provides projections of water supply that are determined using the 50-year safe yields. The North Carolina Department of Environment, Health, and Natural Resources (NCDEHNR) provides guidelines for the determination of the safe yield of a water supply system. Water is supplied to the Concord service area by Lake Howell with a 50-year safe yield of 16.2 MGD, Lake Fisher with a 50-year safe yield of 4.9

MGD, and Lake Concord with a 50-year safe yield of 1.15 MGD. Water is treated by 2 plants in the Concord service area, the Coddle Creek Treatment Plant at 12 MGD and the Hillgrove Treatment Plan at 12 MGD.

Water system deficits based on existing treatment plant capacities and planned improvements through 2003 are provided in Table V-F-2. Although the Concord service area is expected to have an adequate water supply until 2005, a deficit of 0.6 MGD is projected by 2010, rising to 8.8 MGD in 2020, and to 30.8 MGD by 2050.

**Table V-F-2  
Water Supply Deficit (MGD)**

Planning Area	Safe Yield	Planning Year				
		2000	2005	2010	2020	2050
Concord	27.00	0.0	0.0	(0.6)	(8.8)	(30.8)
Kannapolis	15.00	0.0	0.0	(0.5)	(3.9)	(11.4)
Mt. Pleasant	0.09	(0.2)	0.0	0.0	0.0	(1.0)
<b>Total</b>	<b>42.70</b>	<b>0.0</b>	<b>0.0</b>	<b>(1.1)</b>	<b>(12.7)</b>	<b>(43.2)</b>

*(Source: 2002 WSACC Water and Wastewater System Master Plan)*

The 2002 System Master Plan outlines recommendations that will alleviate predicted water supply shortages. Included in the recommendations are additional connections to Charlotte-Mecklenburg Utilities, pipeline extensions, and facility improvements as well as pipeline extensions to the Yadkin River (connection work is currently in progress). Projected costs (in 2001 dollars) for required system capital improvements to meet projected service area demand approach \$30.5 million by 2020 and reach \$186 million by 2050.

**B. Wastewater**

The City of Concord's Wastewater Resources Department operates and maintains the City's wastewater collection system, which serves approximately 23,000 customers representing 60,030 residents of the area. The City's collection system consists of more than 500 miles of sewer pipelines, approximately 9,500 manholes, and 29 wastewater pump stations. As illustrated in Figure V-F-2, sewer service in the City is extensive. Service is concentrated in the Center City area, and extends outward to subdivisions, developments, and commercial and industrial clients to the east and west. Service and maintenance of the system is provided by nine crews tasked with emergency call response, regular and emergency maintenance on lines and equipment, installation of new connections and lines, inspection of new lines and connections, and upgrade and maintenance of older sewer lines. An inspection crew utilizes closed-circuit TV cameras to videotape sewer lines to locate defects and obstructions. The City's right-of-way maintenance crew uses a Global Positioning System (GPS) to collect data on the location of the various components of the City's system, provide maintenance of wastewater collection system rights-of-way, and perform semi-annual system inspections.

The re-payment of revenue bonds issued to finance the sewer line projects and other system upgrades prompted a programmed rate increase for sewer service for current residents as well as an increase in sewer connection fees for new customers. Residential sewer customers both inside and outside of the City limits experienced a \$.10 per 1,000 gallons increase in sewer service rates in 2002.

Wastewater treatment for Concord is provided by the Rocky River Regional Wastewater Treatment Plant – a two-stage, 24 million gallon per day, biological wastewater treatment facility owned and operated by the WSACC. The Plant also serves the City of Kannapolis, the Towns of Harrisburg and Mount Pleasant, Cabarrus County, and portions of Mecklenburg County under a separate agreement with the City of Charlotte. Current average daily flow at the Plant surpasses 16 MGD. Major trunk sewers run north to south along the Rocky River, Irish Buffalo Creek and Cold Water Creek. The Irish Buffalo Creek interceptor carries the majority of the existing average daily flow to the Rocky River Treatment Plant. WSACC also owns and maintains 67 miles of interceptor sewer lines and four wastewater pump stations that provide services for the representing jurisdictions.

Calculations from the 2002 Master Plan indicate that peak flows will increase substantially in the future (Table V-F-3). An increase in peak month wastewater flow of 43% is projected from 2000 to 2010. By 2050, there will be an increase of 225% in peak month flow above the 2000 rate.

**Table V-F-3  
Projected Wastewater Flows at the Rocky River Regional Water Treatment Plant**

<i>Year</i>	<i>Total Population Served</i>	<i>Cumulative Growth Population</i>	<i>Developed Acres</i>	<i>Peak Hour (MGD)</i>	<i>Peak Month (MGD)</i>
2000	113,417	0	28,354	80.9	20.3
2005	163,813	50,396	40,953	100.0	26.0
2010	205,403	91,986	51,351	115.5	30.6
2020	286,477	173,060	71,619	144.8	39.6
2050	525,130	411,713	131,283	226.8	66.0

*(Source: 2002 WSACC Water and Wastewater System Master Plan)*

There are 54 miles of wastewater lines in Concord – more than 80% of the total wastewater pipe in the WSACC system. Most of the pipe in Concord is 24 inches or less in diameter, with less than 10% at 30 inches or more in diameter. The largest pipe in the Concord system is 48 inches.

In determining future service needs, collection system performance was simulated for years 2000, 2020 and 2050. Pipe performance was based on the utilization of existing pipe capacity. Greater than 100% utilization of pipe capacity under projected wastewater flow is described as surcharge. As shown in Table V-F-4, nearly 19% of system pipes were operating at overload in 2000. By 2010, more than 30% of wastewater pipes are projected to reach overload and by 2050, more than half of the pipes in the system are expected to be overloaded. WSACC construction plans for paralleling Cold Water Creek and Coddle Creek and the new Lower Rocky River Pump Station are expected to relieve the majority of the overload identified in capacity deficient interceptors for 2000. For future planning years, relief sewer improvements to

existing facilities to convey additional wastewater flow resulting from growth of the service area is recommended if existing pipe is surcharged under a peak wastewater design flow.

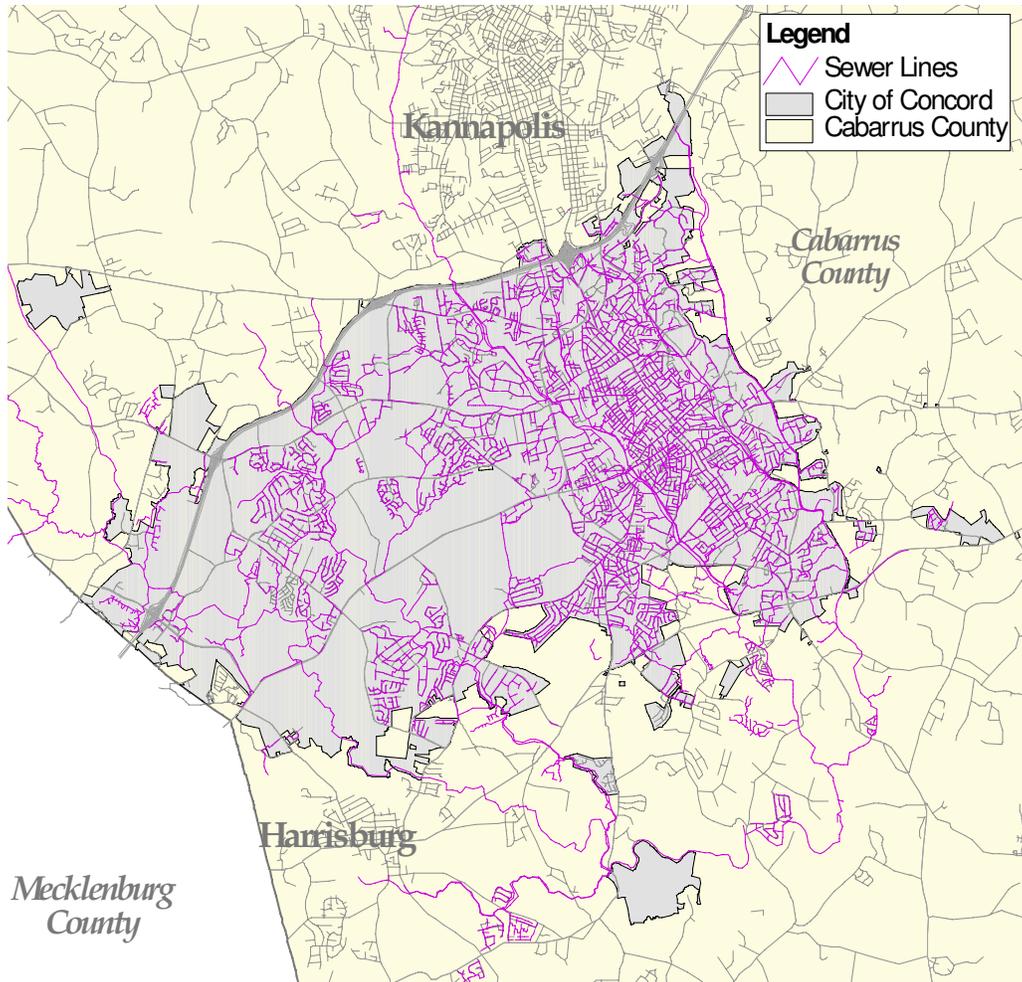
**Table V-F-4  
Pipe Surge and Overloading Summary**

<b>Year</b>	<b>Sewer Pipes Modeled</b>	<b>Length (feet)</b>	<b>Number of Pipes Overloaded</b>	<b>Overloaded Pipe Length (feet)</b>	<b>Percent Overloaded (%)</b>
2000	3,269	1,131,479	618	205,405	18.9%
2005	3,674	1,323,562	901	353,600	24.5%
2010	3,748	1,371,833	1,128	432,244	30.1%
2020	3,780	1,411,499	1,467	551,994	38.8%
2050	3,788	1,422,513	1,912	741,870	50.5%

*(Source: 2002 WSACC Water and Wastewater System Master Plan NOTE: This information is for all of the modeled sewer lines in Cabarrus County, 12-inch or greater in size.)*

Recommendations to alleviate predicted wastewater surcharges are provided in the Plan and include: improvements to existing pipes and facilities; extension of sewer lines; and upgrades to existing pump stations and force mains. Projected capital costs for needed system improvements to meet projected demand exceed \$127 million for relief sewer, approach nearly \$63 million for trunk extensions, surpass \$99,000 for parallel interceptor interconnects, and cost nearly \$19 million for new and upgraded pump stations. In addition, based on the 2002 WASACC Water and Wastewater System Master Plan, the Rocky River Regional Wastewater Treatment Plant is projected to require expansion over its current capacity of 24 MGD. *Phase I* of planned improvements includes an expansion to 34 MGD for completion in the 2008 to 2010 time frame at a cost of \$41 million. *Phase II*, an expansion to 46 MGD, is projected to be completed in 2016 at a cost of \$82.5 million. *Phase III*, an expansion of the facility to 59 MGD, is projected to be completed in 2031 at a cost of \$90 million.

Figure V-F-2  
City of Concord Wastewater Treatment System



Source: City of Concord, 2002

## **2. Solid Waste and Recycling**

The City of Concord utilizes a contract with Browning Ferris Industries (BFI) for collection of household waste and recyclables. The BFI landfill receives all garbage from Concord and Cabarrus County. The Environmental Services Division of the City's Infrastructure Department provides collection for appliances, bulk metal items, such as old bicycles and swing sets, yard wastes, used tires, and building materials. A 95-gallon roll-out cart and a recycling container are provided at no charge to Concord residents. These containers remain City property and garbage and recycling collection is provided once per week. The City of Concord strongly encourages its residents to recycle newsprint (newspaper), glass food and beverage containers, steel, tin or aluminum foil and beverage containers, and plastic food and beverage containers. The Cabarrus County landfill is located to the east of Concord on Irish Potato Road. The landfill accepts yard waste and building materials and has a convenience center for recyclables. Yard waste is also converted into mulch and made available to residents. White goods are accepted at the Household Hazardous Waste Site that also accepts recyclables. The privately owned C&D landfill located on Highway 49 in Harrisburg will provide recycling opportunities for building materials as well as yard waste.

## **3. Utilities**

### **A. Electric**

Concord Electric supplies electricity to the majority of residential, commercial and industrial consumers throughout the City of Concord. Concord Electric has been publicly-owned and operated by the City of Concord since 1904 with more than 25,000 customers. Concord Electric provides service to customers both inside and outside of the corporate City limits, while Duke Power Company, headquartered in Charlotte, and Union Power Cooperative, based in Monroe, also provide electricity in areas surrounding the City. When new areas are annexed into the City, residents are not required to change electric providers. As a result, both Duke Power and Union Power now have a significant number of customers within the City of Concord.

### **B. Natural Gas**

PSNC Energy, a division of the SCANA Corporation, is the natural gas provider for all of Cabarrus County.

### **C. Telecommunications**

Telecommunication services to Concord are provided by CT Communications, which began operations in 1897 as The Concord Telephone Company. CTC has over 120,000 access lines in the territory, which covers Cabarrus, Stanly, and Rowan Counties. CTC provides local, long distance, wireless, internet, and business telecommunication services to residents and businesses in Concord.

## **4. Government Facilities**

### **A. Municipal Government**

In keeping with the Center City area's history as the focal point of business and service activity in Concord and the surrounding region, most government facilities for the City of Concord and Cabarrus County remain concentrated in this area. The offices of the City of Concord Municipal Building, City of Concord Annex and City of Concord Code Enforcement Division are located on Union Street in the heart of Center City. The City Parks and Recreation Department is located nearby on Academy Avenue and the Police Department is on Market Street. The Fire and Life Safety Department is located on Warren C. Coleman Boulevard. The City's Electric Systems, Fleet Services, Transportation, Warehouse, Engineering, Environmental Services, Building and Grounds, Water Resources and Wastewater Departments are all located in the Alfred M. Brown Operations Center on Warren C. Coleman Boulevard, just outside the southwestern border of the Center City area.

### **B. County Government**

The Cabarrus County Governmental Center, located in the heart of Center City on Church Street, houses a host of County services including, among other services, the County Manager, Commerce Department (Community and Economic Development and Planning Divisions), Tax Administration and Information Technology Department. The Cabarrus County Courthouse is also located in the downtown on Union Street. The Cabarrus County Board of Elections and the Cabarrus County Sheriff Headquarters are both on Corban Avenue, and are also in the Center City. The Cabarrus County Department of Aging is also on Corban Avenue but is located just outside of the Center City area. The Cabarrus County Recreation Department and Cabarrus Economic Development are located on Concord Lake Drive, in the northeast portion of the City and north of I-85.

### **C. State Government**

Several North Carolina state government facilities are located within Concord. The North Carolina State Patrol (a division of the NC Department of Crime Control and Public Safety) has a patrol office on SR 1008, near the northern border of the City and just north of I-85. The Stonewall Jackson Training School, located on Old Charlotte Road near its intersection with NC Highway 49, is a Youth Development Center operated by the North Carolina Department of Juvenile Justice and Delinquency Prevention. The Stonewall Jackson Training School was built in 1909 and is North Carolina's first Youth Development Center. The Training School is sited on an 800-acre tract, with 60 acres enclosed by fence. The campus includes 60 buildings of which 23 are currently in use. The Stonewall Jackson Training School provides custody and treatment to adjudicated males ranging in age from 10 to 18 with an emphasis on helping youth prepare for the transition back into their community.

**D. Federal**

The Federal Government has four Post Office facilities in Concord, including the main office in downtown on McCachern Boulevard. The Small Business Administration and the U.S. Department of Agriculture also have offices in Concord.

## **5. Public Safety**

### **A. Fire and Life Safety**

The Concord Fire & Life Safety Department responds to all types of fire and life threatening emergencies in Concord. The Department consists of 132 paid and certified personnel and provides an extensive array of community service and customer relation programs. Divisions of the Fire and Life Safety Department include Administration, Emergency Management, Life Safety Education, Personnel Development (training), Fire Prevention and Operations. The Operations Division provides an array of fire and life safety services, including response to: fire emergencies, specialized rescues, hazardous materials incidents, medical emergencies, vehicle lock-outs and citizen assistance calls. In 2000, the Operations Division responded to 7,000 calls for service.

There are 8 fire stations located throughout the City. As shown in Figure V-F-3, most of the fire stations are located within the more populated eastern half of the City, with western Concord served by a combination fire/EMS station on Pitts School Road and fire stations on Aviation Boulevard, International Drive, Poplar Tent Road and Old Charlotte Road. The stations on International Drive, Warren C. Coleman Boulevard and Old Charlotte Road share facilities with the Concord Police Department.

### **B. Law Enforcement**

Local crime rates indicate that Concord is comparable to other North Carolina cities of similar size. The largest number of calls to local law enforcement is for disorder issues, such as noise and for traffic concerns. The Concord Police Department answered 80,637 calls in 2002. Department personnel include 128 sworn employees and 18 civilian positions.

The Concord Police Department operates under a Community Policing philosophy with the City broken down into four districts as well as operating a Traffic Safety Unit; Special Victims Unit; Vice and Narcotics Unit; K-9 Unit; Dive Team; and Bicycle Unit. The Department also provides Parking Enforcement, Internal Training, Patrol, Criminal Investigations, and Resource and DARE Officers in area high schools and middle schools. The Department also recently launched a Citizen's Police Academy that was well-received by the participants.

The Department has one main headquarters, four substations and several auxiliary facilities located throughout the City. The Concord Police Department Headquarters is located within the Center City area on Market Street. There are police substations at both the Concord Mills Mall and the Carolina Mall, and co-locations with the Fire and Life Safety Department on International Drive and Old Charlotte Road. In addition, the Police Department has a DARE office and training center in the Glenn Center on Marsh Avenue, a substation and a Housing Officer located in the Logan Resource Center on Lincoln Street, and the Vice and Narcotics Division is housed in the Fire Station facility on US Highway 601. Figure 14 details police station locations. As with fire, the police station presence is heaviest in the more populated eastern half of the City, with western Concord served by stations at the Concord Mills Mall, International Drive, and Old Charlotte Road. The headquarters for the Cabarrus County Sheriff is also located in Corban Avenue in the Center City area.

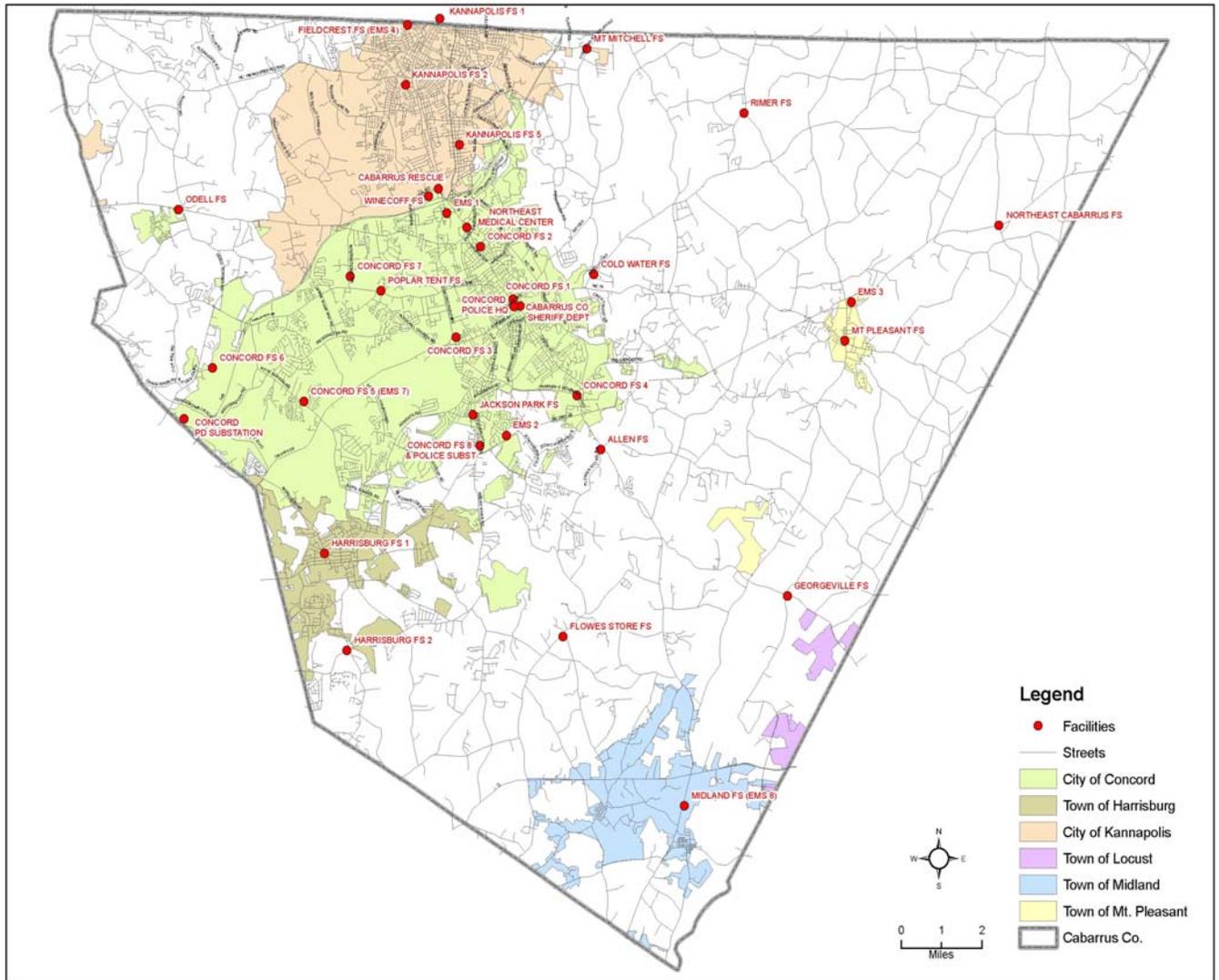
### C. Emergency Medical Services

Cabarrus County Emergency Medical Service (EMS) provides paramedic-level care to the citizens of Cabarrus County and responds to an average annual call volume of 12,000 calls. Non-emergency calls are contracted to a convalescent service. The County EMS employs 56 full-time paramedics and 33 part-time employees (EMT thru EMT-P). Currently, Cabarrus EMS operates 8 twenty-four hour ambulances and 1 supervisor in a quick response vehicle. The Service boasts one of the best response times in the State with an average response of only 6 minutes. Cabarrus County EMS remains on the cutting edge of technology with state-of-the-art equipment such as 12 Lead EKG, pulse oximetry, and advanced units. The EMS operates under an aggressive set of patient care protocols sponsored by the NorthEast Medical Center.

Cabarrus County EMS fields several specialized teams. The *Special Tactical Operations Response Medics* (STORM) Team is made up of 16 highly trained paramedics with a variety of experience and specialties. The Team's primary response mission includes disaster response, tactical medical support, mass casualty incident management, and spectator event coverage. The STORM Team also provides regional and local disaster response available through mutual aid or FEMA request. The *Bicycle Response Team* covers spectator events and community gatherings, and consists of 6 mountain bikes equipped with Basic Life Support (BLS) and Advanced Life Support (ALS) equipment. The Bike Teams allow more efficient response in crowded areas and quicker provision of advanced care. The *Track Crew* provides primary paramedic coverage for events at Lowe's Motor Speedway. On average, Cabarrus EMS fields 7 two-man response teams with full paramedic equipment, in addition to the track crews (5 medics), for speedway coverage. Six Cabarrus EMS paramedics are assigned to *Tactical Police Teams* (SRT/SWAT) in the surrounding areas. The paramedics function as members of the tactical team and provide early advanced care/support to the team members, civilians, and suspects. Each tactical paramedic receives training from the Counter Terrorism Operations Medical Support (CONTOMS) or the Tactical Emergency Medicine Course (TEMS) program. Paramedics are assigned to the Cabarrus County Sheriffs Department, the City of Concord Police, the City of Kannapolis Police, and the Stanly County Sheriffs Department. Cabarrus EMS also has 7 paramedics assigned to the local *Hazardous Materials Team* and *Special Hazards Response Team*. Members have the responsibility of responding to hazmat, terrorist, and explosive events.

There are 3 EMS stations located within the City of Concord. As shown in Figure 14, these stations are located in the northeast area of Concord on Willowbrook Drive near the I-85 interchange, in southern Concord on NC Highway 49, and at the combined fire/EMS station on Pitts School Road in the western portion of the City. The NorthEast Medical Center is located at the northern end of the Center City area on Church Street.

Figure V-F-3  
 City of Concord Fire Station and Emergency Response Locations



## 6. Health Care and Medical Facilities

Concord residents benefit from excellent health care facilities within the City and the surrounding region. In 2000, there were 274 (Table V-F-5) physicians in Cabarrus County, with most of these practicing in Concord within close proximity of the NorthEast Medical Center.

**Table V-F-5  
Cabarrus County Healthcare Professionals, 2000**

<b>Healthcare Profession</b>	<b>Number</b>
Number of Physicians	274
Population/Physician Ratio	478:1
Population/RN Ratio	106:1
Population/LPN Ratio	720:1
Population/Dentist Ratio	3,855:1

*(Source: NC Department of Commerce).*

The NorthEast Medical Center is a regional, private, non-profit medical center with a reputation for excellence. NorthEast Medical Center is designated a Magnet Hospital for the region. Located in the Center City area of Concord off of the Concord Parkway (US 29/601), the hospital is rated as the best facility in the Charlotte region for cardiac surgery, interventional procedures and vascular care. The Center is affiliated with the Duke University School of Medicine and Johns Hopkins University. With its College of Allied Health Services, Family Medicine, Residency Program, and medical research activities, NorthEast Medical Center is one of only two true medical centers in the Charlotte region.

Created in 1937 as a hospital for textile workers, the Center has grown to a 457-bed facility with more than 3,000 employees. The staff, including 275 physicians, performs more than 14,000 surgeries, delivers 2,400 infants, and treats more than 80,000 emergency room visits a year. The service area for the NorthEast Medical Center includes Cabarrus County and extends into Rowan, Stanly, northern Mecklenburg and southwestern Iredell Counties.

Services provided by the Center include trauma and emergency care, comprehensive cardiology services (including open-heart surgery) in the Cannon Heart Center, cancer treatment at the Batte Cancer Center (the only accredited community cancer center in the north Charlotte region), pediatric intensive care services in the Hayes Family Center, and a surgery center rated as a “Best Practice Site” by two national healthcare organizations.

The NorthEast Medical Center is located primarily on its 60-acre Concord campus, with a total of 1.4 million square feet of building space available both on and off campus. Expansion projects under construction and slated for completion in 2003 include an Outpatient Surgery Center, an Outpatient Imaging Center, and a Clinical Laboratory.

Concord residents also have access to health care services through the Cabarrus Health Alliance. The Cabarrus Health Alliance, formerly the Cabarrus County Health Department, is a public health authority created by the Cabarrus County Board of Commissioners in 1997. The Alliance is governed by a seven-member board, with representation from the Cabarrus County Board of Commissioners, the Cabarrus County Medical Society, the Cabarrus Physicians' Organization,

the Cabarrus County Board of Health, the NorthEast Medical Center Board of Trustees, and two citizens-at-large. The mission of the Alliance program is to promote and maintain health, assess for illness and provide treatment or referral for illnesses. Specific services and programs include: Cardiovascular health; clinical services; communicable diseases; day care monitoring and training; environmental health; family care coordination; health promotion; the Health Cabarrus initiative; home health care; school nurse program; dental clinics; and the Women, Infants and Children (WIC) program.

Although the Alliance's main facility is located in Kannapolis, the Logan Community Family Resource Center serves as a satellite clinic providing public health services, prenatal care, family planning, TB skin testing, child health, STD, WIC, lab services and childhood immunizations. All ages are served in a family practice setting.

In addition to facility-based health care, area residents have access to Cabarrus County Home Health. As an outreach service of the Cabarrus Health Alliance, the Home Health program provides skilled nursing care, physical therapy, speech therapy, occupational therapy, medical social services, nursing assistant care, and nutritional counseling in the home setting to serve the homebound patient. Home Health services can prevent or delay nursing home placement, as well as offer a more affordable and cost-effective alternative to hospitalization. These services are also effective in teaching and supporting residents with chronic illness to care for themselves.

Additional community health services are provided through the Alliance's School Nurse program. Cabarrus County is the only county in the State to have employed a public-private partnership to achieve a comprehensive school nurse program and the assignment of a registered nurse for every school in the County. Under the partnership, the school nurses are employed by the CHA and have access to the extensive resources of the NorthEast Medical Center.

## **7. Parks and Recreation**

*"Recreation is not an amenity to be afforded only by the affluent, but is a basic necessity that benefits individuals, their community, the environment and economy. Recreation must not be viewed as an optional expense, but as a necessary investment in the future viability of Cabarrus County."* Livable Community Blueprint, 2002

The provision of quality recreational activities and facilities is vital to the well-being of a community. Recreational issues have emerged to the forefront in recent years as communities, non-profits, the private sector, and individuals recognize the growing importance of recreational opportunity to overall quality of life and community sustainability. Although Americans spend most of their waking hours at work, they value their leisure time and have very specific preferences on how to spend it.

A survey conducted in 2000 in conjunction with the Cabarrus County Livable Community Blueprint initiative revealed that Cabarrus County citizens rank jogging/walking trails as the most important type of recreational facility needed in the County, with biking trails a close second. Picnic areas, playgrounds, and ball and soccer fields were also top priorities. Additionally, participants from Concord indicated a need for bicycle lanes along routes to

primary destinations such as schools, churches, restaurants, and shopping. When asked to rank the types of parks that should be developed, County residents listed neighborhood parks as the most important, followed by community parks (25 to 70-acre parks with a range of facilities and activities) and civic parks (passive parks that focus on an unusual land feature such as a river). More than 80% of residents surveyed indicated that they would use a park or recreation facility more frequently if it were closer to their home or work. Ninety percent (90%) responded that they and their children would walk or bike to a park or recreation facility if a safe route were provided. Forty-five percent (45%) were willing to walk or bike two miles to a park or recreation facility. However, 47% were willing to walk or bike only one mile or less for recreation. A summary of the survey is include in Table V-F-6

**Table V-F-6**  
**Cabarrus County 2000 Recreation Survey Findings**

- Residents are concerned about rapid rate of growth in the County and feel that land acquisition for parkland is critical.
- Residents are very interested in visiting passive parks and participating in nature-based activities.
- Access to safe bicycle and pedestrian transportation routes are a high priority for residents.
- There are currently few safe routes for bicyclists and pedestrians on which to travel to schools, parks or work.
- Residents would like increased opportunities for cultural arts including special events, concerts and festivals.
- Residents feel that the community should provide access to recreation programs and parks.
- A majority of residents would support a property tax increase to fund public recreation.

(Source: *Livable Community Blueprint for Cabarrus County, 2002*)

Recognizing the importance of providing access to quality parks and recreation facilities to all citizens of Cabarrus County, a coalition composed of Cabarrus County, the Cities of Concord and Kannapolis, the Cabarrus County School District, the Cabarrus County Health Alliance, and the Cabarrus Rowan Metropolitan Planning Organization joined together to develop a 20-year, multi-jurisdictional parks and recreation plan for Cabarrus County. The plan ultimately became known as the *Livable Community Blueprint for Cabarrus County* and was prepared as a guide to assist Cabarrus County and its municipalities in developing parks and recreation facilities and to identify bicycle and pedestrian routes on which they will focus over the next decade. The *Blueprint* includes an inventory of all parks, schools and facilities in the county and municipalities as well as a prioritized action plan and a statement of capital improvement costs.

For the purpose of the plan, park models were developed to reflect the unique characteristics of Cabarrus County. These park models include four parks in the “close-to-home” category, two regional parks and one special purpose facility. Appendix F summarizes park area geographic and size requirements.

**A. Recreation Facilities**

Concord has nearly 139 acres of parks and recreation facilities within its borders, with an additional 261 acres just outside of the City. Additional playgrounds and ball fields are located at public schools throughout the City. The City of Concord’s Parks and Recreation Department is a well-established agency that has expanded over the years to meet the needs of the growing population. Because of its longevity, coupled with recent construction and renovation projects, the City has more existing public park acreage than the remainder of Cabarrus County. Consequently, City parks draw many participants from outside the City limits. Most of Concord’s parks are concentrated in the traditional downtown neighborhoods, with two large parks located just outside of the City and within close proximity. Figure V-F-4 shows the park locations throughout the City.

The Concord Parks and Recreation Department also operates three recreation centers that provide a variety of opportunities to Concord residents. The centers are equipped with game rooms offering billiards, foosball, bumper pool, air hockey, shuffleboard and table tennis. All of the centers have weight rooms available for men and women that are equipped with machines, free weights and cardiovascular equipment. The recreation centers offer a variety of special programs for all ages, from preschool to older adults. Activities include free play in the gymnasiums (includes basketball and volleyball) and meeting rooms for rental. Table V-F-7 the size activities available within each public park in Concord.

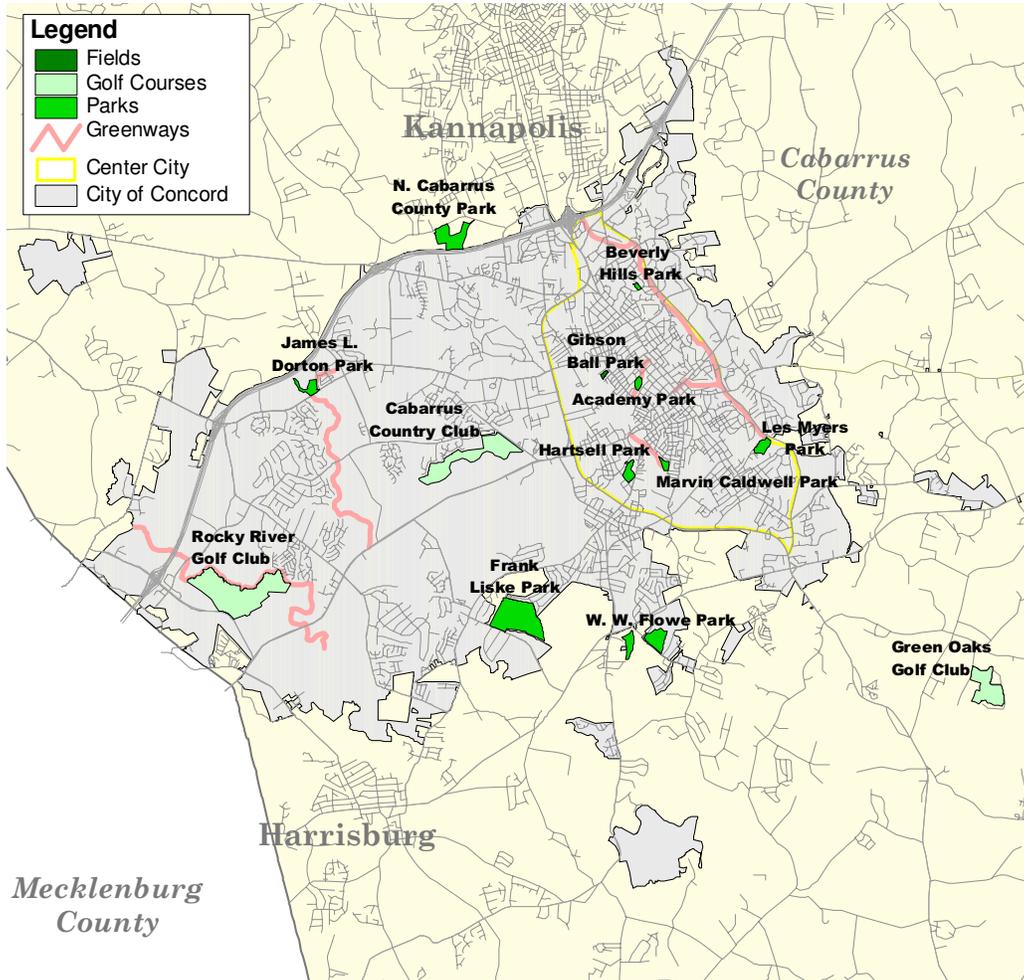
**Table V-F-7  
Existing Public Parks and Facilities within Concord**

<i>Park/Facility Type</i>	<i>Size (Acres)</i>	<i>Activities Available</i>
<b><i>Mini Parks (.25 to 3 Acres)</i></b>		
Academy Park	4.0	Basketball Court
Beverly Hills Park	3.5	Tennis courts, picnic shelter, playground
<b><i>Neighborhood Parks (3 to 25 Acres)</i></b>		
Hartsell Park	21.0	Picnic shelter, playground, volleyball court, skating pad
James L. Dorton Park	23.0	Tennis courts, playground, soccer fields, Frisbee golf, walking trails, picnic shelters, restrooms & concession stand
<b><i>Community Parks (25 to 70 Acres)</i></b>		
Les Myers Park	22.0	Picnic shelters, community building w/kitchen, softball field, basketball & tennis courts, playgrounds, amphitheater, horseshoe pit & skating pad
Marvin Caldwell Park	22.0	Picnic shelters, service building w/kitchen, basketball & tennis courts, playground, baseball & softball fields
WW Flowe Park, Ph I (County facility just outside)	44.0	Four-field baseball/softball complex, concessions, restrooms, playground, picnic shelters, walking trails

City)		
<b>District Park (100 to 300 Acres)</b>		
Frank Liske (County facility just outside City)	217.0	Fishing lake, paddleboats, miniature golf, playgrounds, horseshoes, volleyball & tennis courts, nature & fitness trails, meeting facility, picnic shelters, 11-field soccer complex
<b>Special Purpose Parks &amp; Facilities (Specialized or Single Purpose Recreation Activities)</b>		
Academy Recreation Center	3.0	16,000 sq. ft. building with full gym, weight room, meeting room, arts & crafts room
Cabarrus Senior Center (County)	25.0	Community center with a multi-use trail
Gibson Ball Park	4.0	Ball field
Hartsell Recreation Center	-	12,000 sq ft building with full gym and weight room
J.F. McInnis Aquatic Center	0.25	Outdoor pool (open June-August)
Logan Recreation Center	4.0	16,000 sq ft building with full gym, weight room, meeting rooms, 2 lounge & TV rooms, arts & crafts room
McAllister Field	3.5	Ball field
Webb Field (School District)	5.0	Ball/soccer/football field
<b>Total Developed Park Acreage</b>	<b>400.8</b>	
<b>Total Undeveloped Park Land</b>	25.0	WW Flowe Park (County facility just outside City)

(Source: *Livable Community Blueprint for Cabarrus County, February 2002.*)

Figure V-F-4  
 City of Concord Park Facilities



Source: City of Concord, 2002

The *Livable Community Blueprint, 2002* provides the following parks and recreation recommendations specifically for the City of Concord:

### **Park and Recreation Planning Guidelines for City of Concord**

- ❑ Focus on the acquisition of land to ensure that recreation parks and facilities serve all areas of the City of Concord
- ❑ Anticipate growth patterns to acquire land prior to escalating land prices.
- ❑ Develop mini parks, neighborhood parks and civic parks recommended in this plan.
- ❑ Develop passive parks including opportunities for trails, picnicking, camping and nature study. Acquire land that has an environmental quality that lends itself to preservation and nature-based activities.
- ❑ Preserve environmentally sensitive areas such as the Rocky River Corridor.
- ❑ Continue efforts to improve and expand existing parks and facilities.
- ❑ Work with the County in the development of Community Parks in the City of Concord.
- ❑ Designate the routes identified in the *Livable Community Blueprint* as routes to pursue the development of safe and friendly pedestrian and bicycle corridors.
- ❑ Continue the momentum begun by citizen groups by supporting their efforts to promote and establish greenways that can be used for bicycle and pedestrian corridors.
- ❑ Identify an agency and an individual responsible for coordinating and promoting bicycle and pedestrian routes.
- ❑ Continue the efforts by the many City agencies that have identified bike and pedestrian corridors.
- ❑ Encourage new developments to incorporate sidewalks and off-road facilities for bicycles and pedestrians.
- ❑ Encourage all new utility and street projects to incorporate a bike and pedestrian element.
- ❑ Ensure all future NCDOT road projects and improvements provide for bike lanes, and that road conditions better facilitate bicycle transportation.
- ❑ Continue to partner with schools for the development of school parks.

The *Livable Community Blueprint* includes specific recommendations to meet the recreational goals of Cabarrus County and prioritizes these needs. The document also provides recommendations for each municipality. The *Livable Community Blueprint* indicates that to meet the current recreation needs of its citizens, Concord should add a mini-park, a neighborhood park, a civic park and a community park. The planned civic park is ranked 5<sup>th</sup> among the top recreation priorities countywide and will be located on a 14-acre property along Three Mile Branch River. The mini-park ranks 16<sup>th</sup> in priority, with a location yet to be determined. The community park ranks 29<sup>th</sup> in priority countywide and will be located in the northeast area of the City, while the neighborhood park ranks 30<sup>th</sup> and is proposed for the southwest Concord area. The *Blueprint* also indicates an intermediate need for 2 additional neighborhood parks, one in the north Concord area and one in the central Concord area. It also indicates a long-term need for 2 additional neighborhood parks in the southeastern and southern

areas of the City. Table V-F-8 lists needs, characteristics and priority rankings for the new public parks proposed for Concord under the *Livable Community Blueprint*.

**Table V-F-8  
Proposed Public Parks for Concord**

<b>Current Need</b>	<b>Size (each)</b>	<b>Location</b>	<b>Countywide Priority</b>
Mini Park (1)	.25 to 3 acres	To be determined	#16
Neighborhood Park (1)	3 to 25 acres	Southwest Concord	#30
Civic Park (1)	varies <sup>1</sup>	14 acre City property along Three Mile Branch River	#5
Community Park (1)	25 to 70 acres	Northeast Concord	#29
<b>Intermediate Need</b>			
Neighborhood Parks (2)	25 to 70 acres	North Concord Central Concord	#34 #48
<b>Long Term</b>			
Neighborhood Parks (2)	25 to 70 acres	Southeast Concord South Concord	no ranking listed

(Source: *Livable Community Blueprint for Cabarrus County, February 2002.*)

## **B. Bicycle and Pedestrian Systems**

A major component of the *Livable Community Blueprint* is the identification of bicycle and pedestrian routes throughout the City and County. The guiding goal is to connect the community with safe routes for residents to access community resources via walking or biking. Not only will these routes serve a recreational purpose, they will help meet the needs of a large segment of the local population who do not have access to an automobile. Bicycling and walking are low cost transportation modes available to nearly all residents. The successful promotion of these alternative modes of travel will ultimately result in reduced traffic congestion, improved air quality, energy savings, and a healthier community.

### ***Countywide Recommendations***

The first focus of the *Blueprint* is to maximize the use of existing transportation routes by pedestrians and cyclists. The plan recommends that transportation engineers and planners investigate opportunities to incorporate safe bicycle and pedestrian facilities into local and regional transportation plans with the premise that good design on appropriate roads should accommodate all users.

The second component of the plan identifies alternative routes (predominantly off-road) to reach major destinations. Because a primary goal of the *Blueprint* is to provide linkages between residences, major destinations, and outdoor resources, it was necessary to evaluate an extensive list of potential destinations. In preliminary linkage studies, it was concluded that connecting each and every destination with an alternative route is not feasible. Analysis of user constraints such as distance, environment, physical conditions, traffic patterns and other factors revealed that linking the majority of destinations to form major “spines” that traverse the County offered the

best solution. These spines form the primary network of bike and pedestrian corridors, to which other destinations and facilities can easily be linked via shorter spur routes.

The *Blueprint* identified eighteen major connector bicycle/pedestrian corridors for the Cabarrus Rowan Metropolitan Planning Organization (MPO). The predominant topography of the region is comprised of north-south ridges and creeks and the preservation of these drainage ways, associated floodplains and floodways from ecological, flood management and engineering standpoints is vital. Because the proposed corridors connect major destinations, additional property should be preserved for public access, recreation and for non-motorized transportation purposes within these corridors. Most of these drainage ways already serve as utility corridors for sanitary sewer and when combined with overland routes, they become suitable routes to link major destinations. Table V-F-9 describes the proposed regional bicycle/pedestrian corridors that will traverse through the City of Concord.

**Table V-F-9  
Proposed Regional Bicycle/Pedestrian Corridors**

<i>Corridor Name</i>	<i>Length</i>	<i>Characteristics</i>
Rocky River Corridor	49 miles	<ul style="list-style-type: none"> <li>➤ A major north/south and east/west connector</li> <li>➤ Route follows the river</li> <li>➤ Connects Cabarrus County to 4 adjacent counties (Iredell, Mecklenburg, Union and Stanly)</li> <li>➤ Winds through rapidly developing areas of the county (Cox Mill, Kings Grant and Harrisburg)</li> <li>➤ Major destinations include: future middle/elementary school site on Harris Rd, future middle school on Rocky River Rd, Lowe’s Motor Speedway, Concord Mills Mall</li> </ul>
Afton Run/Coddle Creek	18.3 miles	<ul style="list-style-type: none"> <li>➤ A major north/south connector</li> <li>➤ Route connects Kannapolis at Mooresville Road to Frank Liske Park and the Rocky River</li> <li>➤ Connects thru major residential districts</li> <li>➤ Major destinations include: James Dorton Park, YMCA, Cannon School, Frank Liske Park</li> <li>➤ Short spur connections link to 9 schools</li> </ul>
Irish Buffalo Creek Corridor	19.5 miles	<ul style="list-style-type: none"> <li>➤ A major north/south connector</li> <li>➤ Route generally follows creek, with some overland routes</li> <li>➤ Urban and rural connector</li> <li>➤ Connects Kannapolis and Concord</li> <li>➤ Connects to existing Bakers Creek Greenway</li> <li>➤ Winds thru developed areas</li> <li>➤ Major destinations include: Fred L. Wilson Elementary, Camp Cabarrus Boy Scout Camp, North Cabarrus Park, Bakers Creek Park, Irish Buffalo Creek Park, Caldwell Park, Cabarrus and Concord Operations Center</li> <li>➤ Connects to Rocky River near Concord Motor Speedway</li> <li>➤ Short spur connections link to 12 schools</li> </ul>
Three Mile Branch Corridor	7.4 miles	<ul style="list-style-type: none"> <li>➤ Major north/south connector</li> <li>➤ Connects Kannapolis and Concord</li> <li>➤ Urban connector</li> </ul>

		<ul style="list-style-type: none"> <li>➤ Generally follows creek, utilizing some roadways</li> <li>➤ Winds thru developed areas</li> <li>➤ Major destinations include: Royal Oaks Elementary, Cloverleaf Plaza, The Sports Center, Carolina Mall, NorthEast Medical Center, and Les Myers Park</li> <li>➤ Short spur connections link to 7 schools</li> </ul>
Dutch Buffalo Creek	12.3 miles	<ul style="list-style-type: none"> <li>➤ North/south rural connector</li> <li>➤ Winds thru rural parts of County, linking the eastern part of the County</li> <li>➤ Major destinations include: Mt. Pleasant Reservoir</li> <li>➤ Connects to Rocky River Corridor</li> </ul>
Concord Routes	10.2 miles	<ul style="list-style-type: none"> <li>➤ Intercity routes connecting major destinations</li> <li>➤ Connects to Irish Buffalo Creek and Three Mile Branch Corridors</li> <li>➤ Major destinations include: NorthEast Medical Center, Beverly Hills Elementary, Beverly Hills Park, Concord High, Caldwell Park, Barber Scotia College, Union St., Coltrane Webb, Glenn Center, Academy Center, Boys and Girls Club, R. Brown McAllister Elementary</li> <li>➤ Primarily along roadways</li> </ul>
Rocky River Spurs		<ul style="list-style-type: none"> <li>➤ Clark Creek (2.7 miles)</li> <li>➤ Connects Rocky River to northern Mecklenburg County</li> <li>➤ Harris Rd School Site to Odell Elementary to Coddle Creek (5.6 miles)</li> <li>➤ Mallard Creek (2 miles)</li> <li>➤ Connects to UNCC in Mecklenburg County</li> <li>➤ Back Creek (4.6 miles)</li> <li>➤ Connects Rocky River Corridor thru Harrisburg to a major park in Mecklenburg County</li> <li>➤ Reedy Creek (6.7 miles)</li> <li>➤ Connects Rocky River Corridor and future Middle School site thru developing residential districts to Reedy Creek Park - a major destination park in Mecklenburg County</li> </ul>
Weddington Hills Connector	5.3 miles	<ul style="list-style-type: none"> <li>➤ East/west connector</li> <li>➤ Routes along drainage ways and roadways</li> <li>➤ Connects Cannon School to Weddington Hills Elementary, to Hwy. 29 and to Irish Buffalo Creek</li> </ul>
WW Flowe Park Connector	4.2 miles	<ul style="list-style-type: none"> <li>➤ East/west connector</li> <li>➤ Primarily along creeks and drainage ways</li> <li>➤ Connects Rocky River Corridor to Rocky River Elementary to WW Flowe Park to Central Cabarrus High and to Irish Buffalo Creek Corridor</li> </ul>

(Source: *Livable Community Blueprint for Cabarrus County, 2002*)

Because Irish Buffalo Creek bisects a large area of Cabarrus County, it is an important corridor for regional connectivity. Given this, Concord is currently working on several projects within the Irish Buffalo Creek Corridor. Marvin Caldwell Park, adjoining Irish Buffalo Creek, is currently undergoing renovations, while several projects in the Logan Community are in the planning stages to correct storm-water drainage concerns. These projects should include a public access

element to provide pedestrian and bicycle connections through the community, connecting Caldwell Park to Barber Scotia College, the Cabarrus Avenue Gateway, and the Boys and Girls Club. A proposed Brownfield Pilot Project also incorporates a greenway between the Old Electric Depot, near Irish Buffalo Creek, to the Boys and Girls Club.

Three Mile Branch is another major corridor, and offers significant potential to connect a major shopping district, major health care facilities, and the NorthEast Medical Center, along with several schools, parks, and major residential areas. Three Mile Branch generally follows Branchview Drive and one of Water and Sewer Authority of Cabarrus County (WSACC) trunk sewer lines follows the creek. Given the road right-of-way, the adjacent sewer right-of-way and the nearby floodplain, very little developable land remains. Remaining land in this corridor should be preserved for public access, making a route of approximately 5.6 miles easily connectable from Interstate 85 through Carolina Mall, the NorthEast Medical Center, Beverly Hills, and Camilla Hills to Les Myers Park. Spur routes off Three Mile Branch could connect to the Downtown area, Beverly Hills Elementary, Concord High School, Cabarrus County Senior Center, R. Brown McAllister Elementary, and several other key destinations.

Afton Run/Coddle Creek has developed into a major residential area and plans are underway to develop additional subdivisions along this corridor. The community should preserve a public access way along the Creek. The Coddle Creek Corridor connects James Dorton Park, Cannon School, residential neighborhoods, Frank Liske Park, Rocky River Elementary and links with the Rocky River Corridor.

The Weddington Hills Connector runs east west and connects Coddle Creek to Irish Buffalo Creek. The Weddington Hills area of Concord is rapidly developing. As this area develops primarily as residential, efforts need to be made to preserve off-road public access routes through the neighborhoods to Weddington Hills Elementary School.

Rocky River is the major drainage basin for Cabarrus County. This river corridor has been identified as a major bicycle/pedestrian route. Several tributary creeks also drain from Mecklenburg County to Rocky River, with many of these designated as bike and pedestrian corridors. The Southwest Cabarrus Rotary Club has begun to pursue establishment of the Rocky River Corridor as a greenway. Floodways and associated floodplains must be preserved from encroachment not only for ecological purposes, but additional land adjacent to these areas should be preserved for public access. The Rocky River Corridor connects the Concord Mills Mall area, the Convention Center site, the Rocky River Golf Club, Lowe's Motor Speedway, residential neighborhoods, Harrisburg and southeastward. This Corridor will provide alternative routes to access these major destinations.

### ***Recommendations for Concord***

The proposed bicycle and pedestrian system identified by the Livable Community Blueprint is extensive and connects through the many residential areas to the schools and parks in the community. The Bicycle and Pedestrian Transportation Plan was developed to designate corridors for public access. These corridors provide routes for alternative modes of transportation to reach varying types of destinations. The Plan was developed as a vision and a

master plan without a designated time period for development. Unlike the City’s park and recreation facility projections, the bicycle and pedestrian corridors were not based on demand projections over a particular time period. The proposed routes were established based on existing destination locations, with primary emphasis on connecting residential areas to schools and parks.

The top 5 priorities for establishing major bicycle and pedestrian routes in Concord are listed in Table V-F-10. The main intent for listing priorities is to establish public access in these corridors by 2010. The major north-south connectors are designated routes that generally run along the creeks and river. Other routes connect east-west along roads or off-road through undeveloped land. Priority should be placed on establishing public access (acquiring easements for public use, primarily in the form of earthen or dirt trails) along these major bicycle/pedestrian routes within the next ten years.

**Table V-F-10  
Ten-Year Bicycle/Pedestrian Corridor Development Priorities**

<i>Priority</i>	<i>Corridor/Segment</i>	<i>Length</i>
1	Three Mile Branch Corridor– from Country Club Drive to Les Myers Park	4.5 miles
2	Concord Route– downtown spur from Three Mile Branch through stormwater management property to Union Street	0.8 miles
3	Afton Run/Coddle Creek – from J. Dorton Park to Hwy. 29	3.2 miles
4	Weddington Hills connection – from Weddington Hills Elementary north to Coddle Creek	1.4 miles
5	Concord Route– Irish Buffalo Creek spur – from Corban Avenue to McGill Street connecting the Boys and Girls Club and the Academy Center	1.1 miles

(Source: *Livable Community Blueprint for Cabarrus County, 2002*)

The City has begun to work with community groups through its Recreation Department to establish bicycle and pedestrian routes. Projects underway include a 1.5 mile greenway along Three Mile Branch near Les Myers Park, a Brownfield Pilot Project that incorporates a greenway component to connect the Old Electric Depot near the Irish Buffalo Creek to the Boys and Girls Club, and bicycle and pedestrian enhancements along the planned improvements for the Cabarrus Avenue Gateway. The City Engineering Department is also developing a stormwater management facility at the proposed civic park site that will serve as a focal point along the Three Mile Branch bicycle and pedestrian route.

Two citizens groups have worked for years to foster public support for greenways. The Cabarrus Community Greenways organization has been working to identify routes that run primarily along Coddle Creek through numerous subdivisions. Another group, the Southwest Cabarrus Rotary Club, has been working to identify routes along the Rocky River from the Concord Mills Malls area to Harrisburg.

## 8. Schools and Education

From its close proximity to several renowned institutions of higher learning to its location within a school district recognized for excellence, the residents of Concord enjoy access to quality, lifelong educational opportunities at all levels (Figure V-F-5).

### A. K-12 Schools

More than 14,000 Concord residents over the age of three are enrolled in school, representing more than 25% of the City's total population. Of those enrolled in school, 73% are K-12 students. Nearly 18% of Concord residents in school (4.5% of residents citywide) are attending college or graduate school. More than 1,200 children over age 3 are enrolled in preschool, comprising 9% of the total school enrollment. Table V-F-11 shows school enrollment for 2000 in Concord and Cabarrus County.

**Table V-F-11  
School Enrollment, 2000  
Concord and Cabarrus County**

School Type	Cabarrus County		Concord	
	Number	Percent	Number	Percent
<b>Population 3+ Years Enrolled in School</b>	<b>32,182</b>	<b>100.0%</b>	<b>14,138</b>	<b>100.0%</b>
Nursery School, Preschool	2,261	7.0%	1,290	9.1%
Kindergarten	1,734	5.4%	697	4.9%
Elementary School (Grades 1-8)	15,952	49.6%	6,810	48.2%
High School (Grades 9-12)	7,207	22.4%	2,812	19.9%
College or Graduate School	5,028	15.6%	2,529	17.9%

*(Source: US Census Bureau, 2000 Census)*

Students in public grades K-12 are served by the Cabarrus County School District. The District operates a total of 29 schools, including 15 elementary, 6 middle, and 5 high schools. A list of public schools and enrollment by school are listed in Table V-F-12. Total District enrollment for the 2002-03 school year was 20,722 students. The County District employs 2,476 staff, of which slightly more than half (1,368) are certified teachers.

Scholastic Aptitude Test (SAT) scores for Cabarrus County students are a sample indicator of the educational quality of District schools. In 2002, Cabarrus County students had an average combined SAT score of 1,019 – only one point behind the National average score of 1,020 and significantly higher than the statewide average score of 998 in North Carolina.

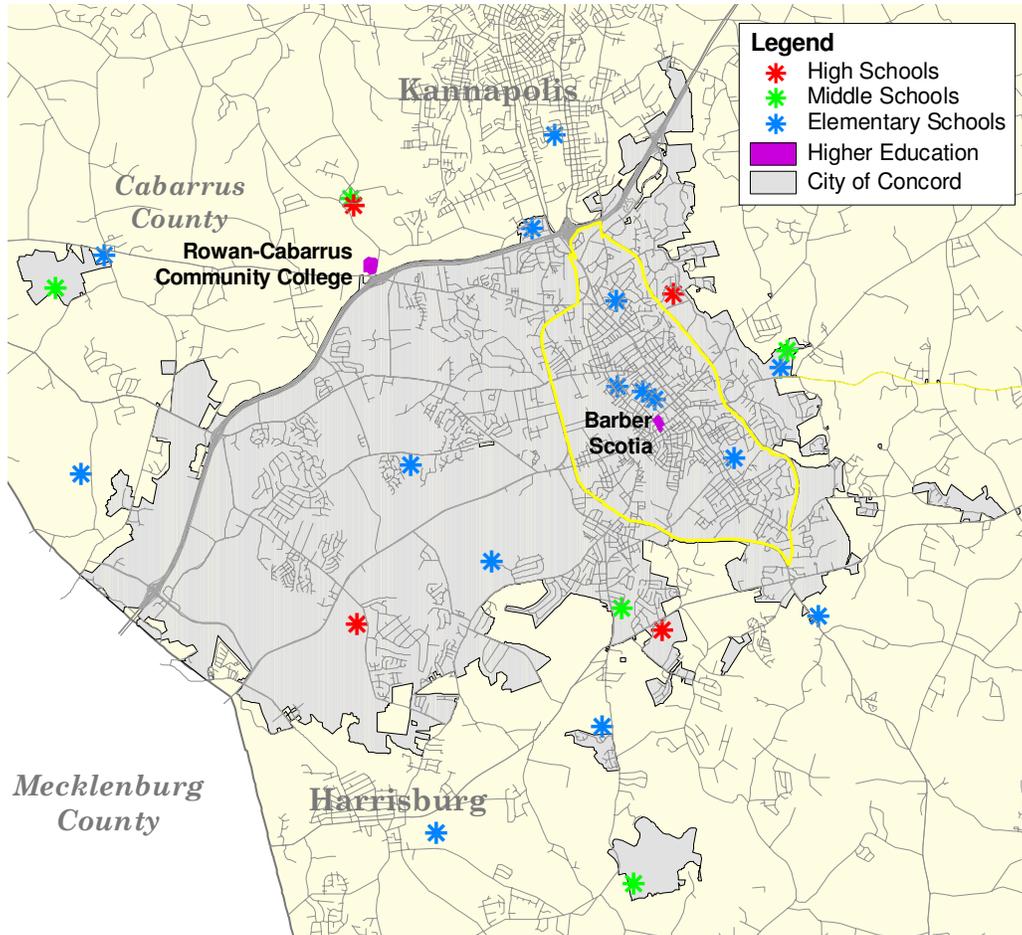
**Table V-F-12  
Enrollment for Schools Serving Concord Students, 2002**

<i>School</i>	<i>Total Students</i>
School for Environmental Studies (Grades 4 through 8)	102
<b>Elementary Schools (grades K-5)</b>	
A.T. Allen Elementary	433
Beverly Hills Elementary	384
Coltrane-Webb Elementary	361
Cox Mill Elementary	847
Harrisburg	963
R. Brown McAlister Elementary	297
Rocky River Elementary	1,102
Royal Oaks Elementary	329
W.M. Irvin Elementary	747
W.R. Odell Elementary	584
Weddington Hills Elementary	840
Winecoff Elementary	934
Wolf Meadow Elementary	770
<b>Middle Schools (grades 6-8)</b>	
C.C. Griffin Middle School	1,030
Concord Middle School	968
Harris Road Middle School	783
J.N. Fries Middle School	770
Northwest Cabarrus Middle School	708
<b>High Schools (grades 9-12)</b>	
Central Cabarrus High School	1,226
Concord High School	1,091
Jay M. Robinson High School	1,393
Mt. Pleasant High School	848
Northwest Cabarrus High School	1,090

*(Source: Cabarrus County School System, September 2002)*

Population projections estimate that Concord will grow by 11,486 persons from 2000 to 2007, representing an additional 4,400 households. Cabarrus County officials estimate that each new single-family home in the County results in the addition of 0.2988 elementary students, 0.1195 middle school students, and 0.1395 high school students. Using these figures, the Cabarrus County School District and the City of Concord should plan for the addition of more than 1,300 elementary students, 526 middle school students, and 614 high school students by 2007. Such an increase could require up to two new elementary schools, one new middle school, and one new high school to accommodate student growth.

Figure V-F-5  
City of Concord K-12 Higher Education  
Locations



Source: Cabarrus County School District, 2002  
City of Concord, 2002

## **B. Private and Independent K-12 Schools**

In addition to an excellent public school system, Concord students also have the option of attending several private institutions offering instruction in grades K-12. Additional highly respected private schools are located nearby in the Charlotte area as well.

- ***Cannon School*** – The Cannon School, established in 1969 as Cabarrus Academy and renamed in 1998, originally occupied the Historic Concord residence of textile entrepreneur J.W. Cannon. The Cannon School is one of the largest independent schools in the Charlotte area, serving nearly 700 students from pre-kindergarten to 12<sup>th</sup> grade. Of the more than 50 full time faculty members, 46% have advanced degrees. The School serves Cabarrus County and surrounding areas, drawing students primarily from the Concord, Charlotte, Salisbury and Lake Norman areas. The Cannon School is accredited by the North Carolina State Department of Education and the Southern Association of Colleges and Schools (SACS). SACS recently cited Cannon School as an exemplary school. Future plans include expansion of the School's 9-12<sup>th</sup> grade program to accommodate 300 additional students.
- ***Covenant Classical School*** – Covenant Classical School is an independent, church-affiliated school with an enrollment of 145 K-12 students. The School serves Cabarrus County and surrounding areas. The 19-member faculty (5 with advanced degrees) provides an educational environment that encourages spiritual and moral growth within a religious setting.
- ***First Assembly Christian School*** – The First Assembly Christian School was founded in 1976 for the purpose of providing a Christian educational alternative for students in Cabarrus County and surrounding areas. The School has an enrollment of 1,230 students in grades K4 through 12 and a 79-member faculty.

## **C. Colleges and Universities**

Concord residents have numerous options for their pursuit of higher education. While Barber-Scotia College and the Cabarrus College of Health Sciences are both located within the City, Rowan-Cabarrus Community College is just outside of Concord to the north and the University of North Carolina at Charlotte is just minutes away on NC Highway 49.

- ***Barber-Scotia College*** – Barber-Scotia College is a four-year, fully accredited, liberal arts college located in the heart of Concord. The College was founded in 1867 and is affiliated with the Presbyterian Church (USA). The 40-acre campus includes 25 buildings. Eighty-five percent of the more than 550 students enrolled live on campus. The academic program of Barber-Scotia College adheres to the liberal arts tradition, offering degrees in the major areas of Humanities, Natural Sciences, and Education. The College

confers the Bachelor of Arts (BA) in Sociology and the Bachelor of Science (BS) degree in biology, mathematics with an optional concentration in computer science, business administration with concentrations available in accounting, marketing and hospitality management, recreation administration, education with concentrations available in elementary, mathematics and physical education, and medical technology.

- ***Cabarrus College of Health Sciences*** – With the founding of the Louise Harkey School of Nursing more than 50 years ago, the NorthEast Medical Center provides education for residents seeking training and careers in the health professions. Today, the School is part of the Cabarrus College of Health Sciences – an independent, post-secondary educational institution affiliated with the NorthEast Medical Center in Concord. The Cabarrus College of Health Sciences is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS). The Louise Harkey School of Nursing and individual health care programs also hold accreditations from their respective accrediting organizations. The College provides undergraduate health sciences education to more than 330 qualified students from Cabarrus and surrounding counties. The Cabarrus College of Health Sciences offers Bachelor of Science degrees in Nursing and Health Services Management and 2-year Associate degrees in five allied health programs – Nursing, Healthcare Technology, Occupational Therapy Assistant, Surgical Technology, and Medical Assistant.
  
- ***Rowan-Cabarrus Community College*** – As one of 59 two-year institutions that comprise the North Carolina Community College system, Rowan-Cabarrus Community College (RCCC) is an open-door, comprehensive, community-based institution serving the citizens of Rowan and Cabarrus Counties. Of the 18,664 students enrolled in 2000-01, one-third (6,135) were curriculum students and more than two-thirds (13,188) were enrolled in continuing education programs. The College has a staff of 221, of which 99 are faculty.

The College offers affordable occupational education programs leading to the Associate in Applied Science Degree and an Arts and Sciences Program leading to the Associate in Arts Degree. Diplomas and certificates are awarded for other occupational, adult, and continuing education programs. The focus of the College's offerings is on meeting the educational needs of the individual and meeting the changing training requirements of business and industry, as well as other employers in the service area. RCCC is the only community college to twice receive the American Association of Community Colleges *Keeping American Working Award* for exemplary business/industry training partnerships. The College is located just outside the Concord city limits, at the Davidson Highway (NC 73) interchange at Interstate 85.

- University of North Carolina Charlotte** – University of North Carolina Charlotte (UNCC) is the fourth largest of the 16 institutions within the University of North Carolina system. UNCC serves the residents of North Carolina with a special emphasis on the Charlotte metropolitan region. The campus is located thirteen miles and less than 30 minutes from Concord on NC Highway 49. Enrollment at the University exceeds 18,000 students, including 3,100 graduate students as shown in Table V-F-13. As the largest institution of higher education in the Charlotte region, UNCC enrollment is projected to increase annually through the year 2010, bringing the University’s student body to more than 25,000. More than 1,160 students – approximately 7% of the total institutional enrollment – are from Cabarrus County.

The University attracts students and faculty from a wide range of cultures and backgrounds to the Charlotte region, with students from all 100 counties in North Carolina, each of the 50 United States, and nearly 80 foreign countries represented. A doctoral and research intensive university, UNCC is composed of seven colleges – the College of Arts and Sciences and six professional colleges (Architecture, Business Administration, Education, Engineering, Information Technology, and Nursing and Health Professions). The University offers 80 programs leading to bachelors degrees, 51 masters degree programs, and nine doctoral programs. The faculty includes 680 full-time members, with more than 530 holding doctoral degrees. UNC Charlotte confers approximately 3,500 degrees a year.

The University’s 1,000-acre campus houses 51 buildings, including the J. Murrey Atkins Library, which contains more than 875,000 bound volumes, state-of-the art computer labs, and various special collections. The University is host to public and community service initiatives such as the Urban Institute, the CC Cameron Center for Applied Research, the Ben Craig Center (a business incubator), the Center for International Studies, the Center for Applied and Professional Ethics, the Center for Engineering Research & Industrial Development, and the 3,200-acre University Research Park, which employs more than 25,000 workers.

**Table V-F-13  
UNC-Charlotte Enrollment, 1998-2001**

<i>Student Type</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>
New Freshman	3,545	2,122	2,203	2,351
Undergraduate	14,083	14,156	14,283	15,135
Graduate	2,587	2,688	2,712	3,173
<b>Total</b>	<b>16,670</b>	<b>16,844</b>	<b>16,995</b>	<b>18,308</b>
<i>2001 Students: Male-45% (8,205) Female-55% (10,103)</i> <i>2001 Students from Cabarrus County - 1,161 (7% of the total)</i>				

## **9. Social Services**

Primarily the Cabarrus County Department of Social Services (DSS), located nearby in the City of Kannapolis, provides social services for the residents of the City of Concord. The mission of the Cabarrus County DSS is to “help individuals and families to have economic self-sufficiency and to avoid welfare dependency; to help people to achieve self-sufficiency in caring for themselves and in meeting their responsibilities to their families and community; to prevent or correct abuse, neglect, and exploitation of children and disabled adults; to prevent the need for out-of-home care for adults and children wherever possible; to secure safe and appropriate out-of-home care for adults or children where necessary; and, to provide help with subsistence needs under public assistance programs to qualifying low-income individuals and families.”

The Cabarrus County DSS administers 38 different public assistance and service programs. Nearly 95% of the Department's total funding is devoted to programs, the operation of which are strictly mandated by Federal regulations and State laws. The remaining non-mandated programs, such as in-home care for the elderly, were developed in response to pressing community needs and are supported almost exclusively by funds other than local tax dollars.

Cabarrus County DSS programs and services are organized into five divisions:

- (1) Adult Services such as case management services for guardianship and adults. Medicaid for both long term care and for the disabled, Medicare-Aid, foster care services for adults, adult protective services, special assistance for the disabled, and food stamps;
- (2) Family Services such as subsidized child care, at-risk case management, food stamps, general assistance, Medicaid for families and children, and transportation services;
- (3) Child Support Services including child support enforcement services;
- (4) Child Welfare Services such as adoption, foster care and home licensing, investigations, case planning and management and intensive family preservation.
- (5) Administrative Support including program integrity/fraud prevention program, voter registration program, and youth employment certificates.

Coordination of several human service programs funded by the Older Americans Act is the responsibility of the Cabarrus County Department of Aging. They are located on Corban Avenue in the City of Concord. All of these services are targeted toward service as a wellness program and promotion of health while preventing deterioration. The Department encourages an active, healthy lifestyle for older adults that promote total wellness. It allows participants to remain independent and to continue to be productive in their chosen environment while serving as a vital resource to the community. The Department also coordinates efforts with any and all agencies that provide services to older adults in an effort to maximize quality service delivery by minimizing overlap and duplication of services by combining all available resources.