

North Carolina Rail Plan 2001

North Carolina Department of Transportation

January 2001

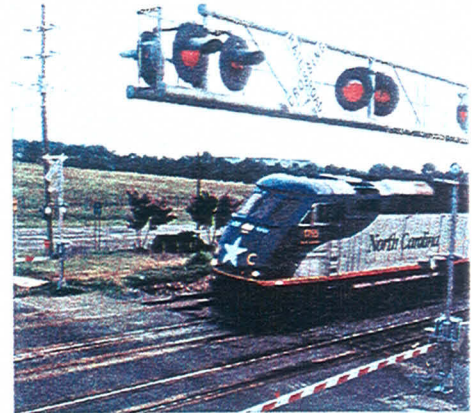
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INTRODUCTION

As North Carolina's population continues rising and highway and air traffic continue growing, development of rail transportation becomes increasingly important as an alternative to auto and air transport for both freight and passengers. It is North Carolina Department of Transportation policy to actively support development of freight and passenger railroads and to use state funds to leverage federal and private dollars to help meet our state's economic development and transportation goals.

Dramatic changes in passenger and freight rail services are expected in North Carolina during the coming decade. Significant mergers in the private freight industry have taken place in recent years and will impact future freight travel. The North Carolina Department of Transportation is working to improve and expand passenger and freight rail services to meet anticipated needs. Also, the department is working with communities to improve safety at railroad-highway crossings and to make incremental improvements that will reduce rail travel time between Charlotte and Raleigh, making it more competitive with auto and air service. In partnership with neighboring states, North Carolina is working to extend high-speed passenger trains south from Washington, D.C. to Richmond, Raleigh, and Charlotte and eventually to other Southeastern cities.



The 2000 North Carolina Rail Plan examines the need for assistance for shortline railroads and describes the railroad industry in North Carolina. It also provides a description of and information about current programs operated by the Rail Division, as well as plans for the future. In addition, the Rail Plan serves as a guide for programming and funding priorities for rail activities in the state. It also provides a guideline for local communities in developing short and long-term plans and policies that affect railroads in North Carolina.

ENABLING LEGISLATION

Since the 1970s, the federal government has encouraged states to establish their own rail plans and to become more informed and involved in state rail planning and revitalization. The North Carolina Department of Transportation (NCDOT) began work in 1977 to promote, preserve and develop the state's railroads as part of an efficient multi-modal transportation network. That year the General Assembly passed General Statute 136-44 authorizing the department to adopt and implement a State Rail Plan. Subsequent 1979 legislation authorized the NCDOT to use state and federal funds to administer the various rail projects that were included in the rail plan.

The legislation authorized the transportation department to:

- rehabilitate and improve railroads to permit safe, adequate and efficient rail service;
- construct rail or related facilities to improve the quality, efficiency and safety of rail service;
- purchase railroads to maintain existing service or preserve corridors for future rail service and interim compatible uses;
- inspect each railroad's equipment and facilities to ensure safe, adequate and efficient service; and
- conduct accident prevention and public safety programs and investigate the cause of any railroad accident.

The first North Carolina Rail Plan, prepared in 1979, examined and analyzed in detail the state's rail system including: its financial health, the economic viability of branch lines and shortline railroads, trends and issues, as well as the impact of abandonment on several light density branch lines. Updates to the 1979 Rail Plan were subsequently done in 1981, 1983, 1985 and 1990. The 1990 Rail Plan Update was broader because the scope of the rail program itself was expanding and the rail industry was resurging.

NCDOT ORGANIZATION AND GOVERNING BOARDS

The North Carolina Department of Transportation is responsible for planning, providing and maintaining a thorough, safe and efficient transportation system. This comprehensive transportation system includes: an extensive highway network, dedicated bicycle routes, railroads, airports, two state owned ports, ferries, city buses and rural transit. The Secretary of Transportation, who is appointed by the governor, leads the department.

The **Rail Division** was created to help develop and maintain a safe and effective rail system and to enhance local and statewide economic development. Top priorities include: improving safety at railroad-highway crossings, preserving and modernizing railroad tracks, purchasing inactive railroad corridors, and providing, marketing and improving state-sponsored intercity passenger rail service. The Rail Division operates through three branches: Engineering and Safety, Planning and Operations.

The **Engineering and Safety Branch** develops, funds, implements and maintains a statewide grade crossing protection program. Efforts to improve grade crossing safety include, but are not limited to, preparing crossing safety improvement studies, developing and implementing new technologies at crossings, reviewing designs for rail transit systems and reviewing highway project for impacts on rail facilities. This branch also develops and maintains a database of railroad crossings, recommends designs and reviews railroad improvement projects. Engineering and Safety staff also inspects railroad tracks, motive power and rolling stock, as well as crossing and train control signals. In addition, this unit is responsible for managing and maintaining rail corridors needed for future transportation.

The **Planning Branch** provides technical assistance to communities and businesses to help preserve and improve railroad service and acquires rail corridors as needed for future transportation. Staff members also participate in regional and statewide planning with Metropolitan Planning Organizations. The Planning Branch prepares plans and studies required to support interstate, state and local rail passenger service improvements and provides environmental study support for the division. In addition, staff manages the industrial access and freight improvement programs that help fund track rehabilitation, capital improvements and new track construction.

The **Operations Branch** plans, finances, markets and promotes North Carolina's rail passenger services. To support this service, staff contracts for maintenance of the state-owned trains and facilities. In addition, Operations Branch staff works with local communities to plan and finance the rehabilitation of historic train stations or construction of new multi-modal stations. The group also works with regional transportation agencies to help plan commuter rail service.

Rail Division programs and policies are governed and directed by the General Assembly and North Carolina Board of Transportation with direct oversight by the Board of Transportation's Rail Sub-committee.

The 26-member North Carolina **Board of Transportation** develops policies, establishes priorities and approves funding for all modes of transportation under the department. The board also promulgates rules, regulations and ordinances concerning all transportation functions assigned to the department. In addition, the Board helps develop and approve the department's seven-year planning document, known as the Transportation Improvement Program. Members are appointed by the governor, president of the N.C. Senate and speaker of the N.C. House of Representatives.

The Board of Transportation is comprised of several committees and subcommittees. The Transit, Rail and Ferry Committee recommends policies related to the various non-highway transportation modes including aviation, ferries, public transit, rail, bicycle and pedestrian. The Rail Subcommittee develops policy for rail freight and passenger services and plans for rail improvements.

The **Rail Council** was created by the General Assembly in 1994 to serve as the advisory board to the governor, secretary of Transportation, Board of Transportation and General Assembly on policies concerning preservation and enhancement of North Carolina's rail system. The governor appoints the 17 members including one Board of Transportation member as Rail Council Chairman. The council has been inactive since November 1996 in light of the acquisition of the North Carolina Railroad Company and enhanced oversight of railroads by the General Assembly and the Board of Transportation's Rail Sub-committee.

The **Governor's Rail Passenger Task Force**, established in 1988 by Executive Order of Governor James Martin, preceded the Rail Council by providing policy direction, studying rail transit needs and planning for future passenger rail service in the state. The Task Force worked with Amtrak to plan and implement the Charlotte to New York *Carolinian* service and identified the need for a second Charlotte to Raleigh service that later became the *Piedmont*. The group also identified direct benefits of faster passenger train service and recommended using conventional equipment, constructing tracks in new locations where warranted and possibly establishing a nonstop service between Raleigh and Charlotte. In addition, they recommended train station improvements and supported developing intermodal stations. During latter years the Task Force supported an aggressive program to signalize, grade-separate or close crossings on passenger train routes. The group also emphasized the need to preserve rail corridors needed for future transportation and recommended that the state's growing shortline industry be fostered as an alternative to abandonment.

Governor Hunt established the **Transit 2001 Commission** in 1995 to study public transportation needs in the state and make recommendations regarding future services. The 26-member commission – composed of government, business and community leaders – examined key issues such as rural transportation, urban and regional transit, passenger rail services, land use and development.

In their February 1997 report, the commission concluded that highways alone cannot accommodate North Carolina's anticipated growth and failing to address the growing transportation demand "could jeopardize economic growth and opportunity in the state." The commission recommended that the state increase its investments in and emphasis on public transportation and transit-friendly development. The Transit 2001 action agenda included a number of specific recommendations.

- Introduce two-hour rail passenger service between Charlotte and Raleigh and work toward subsequent connection to the Northeast Corridor.
- Seek federal funding for high-speed rail passenger service in the Southeast.
- Restore western North Carolina rail passenger service with daily round trips between Asheville, Hickory, Salisbury, Greensboro and Raleigh.
- Study the potential for rail passenger service in eastern North Carolina.
- Provide a funding source to preserve endangered rail corridors for future freight, commuter and high-speed rail lines.

The General Assembly appropriated \$36 million in FY 1998 to help implement recommendations of the Transit 2001 Commission (including \$18 million for passenger rail improvements and corridor preservation). An additional \$18 million was appropriated in FY 1999 and \$20 million was allocated in FY 2000 for rail passenger service improvements.

The **North Carolina Railroad**, founded in 1849, is a private corporation owned by the State of North Carolina. The railroad initially was built to provide farmers a better way to ship their goods to markets across the state; it now serves the busy Piedmont area of the state and the state port at Morehead City. In 1998, the General Assembly paid \$71 million to buy out the private shareholders, who previously had owned about 25 percent of the railroad. The 317-mile railroad, which stretches from Charlotte to Morehead City, includes the most active rail corridor in the state between Raleigh and Charlotte. The railroad is leased to Norfolk Southern. Dividends from the lease are used to improve the infrastructure and support railroad improvements in the state.

FUNDING

Funding for Rail Division programs comes primarily from state appropriations from the Highway Fund and the Highway Trust Fund. Other funds come from federal grants through the Transportation Efficiency Act for the 21st century (TEA-21).

State Funding

Highway Fund

Annual appropriations received from the Highway Fund are used to implement recommendations made by the Transit 2001 Commission. About \$2.7 million annually supports passenger train operations, while \$1.75 million pays for environmental studies, \$1.75 million funds grade crossing improvements and \$10 million pays for infrastructure improvements. Money from the Highway Fund also is used to fund the Rail Industrial Access and Rail Safety Inspection Programs.

Highway Trust Fund

According to North Carolina legislation, up to \$5 million dollars of Highway Trust Fund money can be used annually for “economic alternatives to highway construction.” This money is used to fund a portion of the capital, operating and marketing expenses for the *Carolinian* and *Piedmont*.

North Carolina Railroad Lease Revenue

The state-owned North Carolina Railroad (NCR) extends 317 miles from Charlotte to Morehead City. Norfolk Southern Railway leases the tracks and pays the North Carolina Railroad annual trackage rights fees exceeding \$11 million. Most of this revenue is distributed to the state as a dividend payment. The Board of Transportation reviews and approves investments in the NCR according to a plan approved by the NCR Board.

Federal Funding

North Carolina receives grants through several federal programs to help fund various projects to improve rail safety, improve passenger rail service and develop high-speed rail service.

As the name implies, money from the Next Generation High-speed Rail Fund is used to develop high-speed rail service in North Carolina and through the Southeast. Funds have been used to develop a master plan that estimates revenues, benefits and costs and identifies track improvements necessary for high-speed passenger rail service. Money also was used to complete the first part of an Environmental Impact Statement for the Charlotte to Washington D.C. portion of the Southeast High-speed Rail Corridor.

Additional discretionary funds are used to implement crossing safety improvements through the Sealed Corridor Program – an aggressive safety initiative that uses various protective devices such as median barriers and four-quadrant gates to “seal” the heavily traveled Raleigh to Charlotte rail corridor.

More than \$1.5 million in ISTEA Section 1010 funds was used between FY 1993 - 1996 to develop a statewide inventory of at-grade crossings and to make needed crossing improvements. Many of the crossing improvements also will support implementation of higher -speed rail service in North Carolina. A successor program to ISTEA Section 1010, TEA-21 1103 (c), provides annual funds to eliminate hazards at rail highway crossings.

Federal Transportation Enhancement funds are designated for various projects such as renovating historic train stations. These funds have been used to renovate train stations in Salisbury, Wilson and Rocky Mount. Four others restoration projects – Greensboro, Hamlet, High Point and Selma – are planned or underway. Rail Division staff have programmed Transportation Enhancement funds to renovate several stations in western North Carolina in preparation for extending passenger rail service to Asheville.

FREIGHT RAIL SERVICE

Railroads provide a vital freight service, transporting a large and varied assortment of commodities. One in four of the state's top 200 manufacturers (*ranked by employment*) ship materials by rail.

Twenty-five freight railroad companies operate North Carolina's 3,379-mile rail system serving 90 of the state's 100 counties. Two of the railroad companies – CSX Transportation (CSXT) and Norfolk Southern Railway (NS) – operate the majority of the state's rail system (2,597 miles). Both companies are considered Class I railroads, earning revenues of at least \$259 million annually. Twenty-three smaller railroads, called "shortlines," operate the remaining 782 rail miles. These railroads each operate less than 350 miles of track and earn revenues less than \$20 million per year.

In 1999, almost 136 million tons of freight were shipped or received by North Carolina railroads – a 31% increase over 1989 traffic levels. Norfolk Southern and CSX Transportation carried the bulk of materials, hauling 63 million and 72 million tons respectively.

The larger, or Class I, railroads transport freight long distances usually between cities or states. Shortlines, most often classified as Class II or III railroads, perform essential switching operations, hauling freight cars between the shipper and an interchange point with a Class I carrier. Shortlines operate 23% of the rail miles in the state.

CSX Transportation

Headquartered in Richmond VA, CSX Corporation is a Fortune 500 freight transportation company providing rail, intermodal, container-shipping and contract logistics services. CSX Transportation (CSXT), a unit of CSX Corporation, is headquartered in Jacksonville, Florida and is the largest rail company in the eastern United States operating 23,000 route miles in 23 states, D.C. and Canada.

In North Carolina, CSXT operates 1,142 miles, or 34 percent of the state system. Its operations are concentrated over three major and two minor freight routes (see Figure 1 - North Carolina Freight Railroads). One north-south CSXT mainline connects the Northeast to Jacksonville, Florida via Rocky Mount, Wilson, Fayetteville and Pembroke. An east-west mainline connects Wilmington and Charlotte to Atlanta and New Orleans. A second north-south mainline (previously the Clinchfield Railroad) connects Detroit to Atlanta via Marion, North Carolina. One of CSXT's smaller routes runs east of Rocky Mount serving Greenville and Plymouth. The second line operates as a local service route between Norlina and Hamlet. Hamlet remains CSXT's principal junction point and classification yard.

Norfolk Southern Railway

Norfolk Southern Corporation, a Virginia based holding company headquartered in Norfolk, Virginia, owns and operates Norfolk Southern Railway and a natural resource company, Pocahontas Land Corporation. The railroad system extends over 21,600 miles in 22 states, D.C. and Canada.

Norfolk Southern operates 1,453 miles, or 43 percent of North Carolina's rail system. Its operations are concentrated over three major and seven minor freight routes (see Figure 1 - North Carolina Freight Railroads).



One of Norfolk Southern's north-south mainlines connects the Northeast and Midwest to Atlanta via Danville, Virginia, Greensboro and Charlotte. This line includes a key classification yard in Linwood, North Carolina. A second north-south mainline connects Tennessee to Spartanburg, South Carolina through Asheville, while an east-west mainline connects Salisbury and Asheville. Two minor routes serve eastern North Carolina. The line serving Goldsboro, Kinston, New Bern and Morehead City (including service to the State Port) is owned by NCR and leased to NS. Norfolk Southern owns the other line which serves Wilson, Greenville, Plymouth and Chocowinity (NS's eastern base of operations). Five minor routes serve central North Carolina. Norfolk Southern leases from North Carolina Railroad the line that serves Durham, Greensboro High Point and Charlotte. A second route connects Greensboro to Raleigh via Sanford. A major portion of the third route, from Raleigh to Charlotte via Sanford, is leased to the Aberdeen Carolina and Western Railroad. A fourth route connects Winston-Salem with Roanoke to the north and Greensboro to the east. The fifth route connects Charlotte and Greensboro via Mooresville and Winston-Salem.

Shortline Railroads

Twenty-three shortline railroad companies supplement CSXT and Norfolk Southern's extensive freight operations in the state. While shortlines operate in every geographic region of the state, they primarily serve rural counties and communities routes (see Figure 1 – North Carolina Freight Railroads). These smaller companies, identified as Class III railroads, generally operate less than 350 miles of track and have annual revenues of less than \$20 million. The NCDOT has supported the development of the state's shortline industry by funding rehabilitation and capital improvements on 13 shortline railroads and helping public entities purchase four shortlines that were in danger of abandonment.

Appendix A includes a brief history and operating statistics for each shortline operating in North Carolina.



Freight Traffic

Commodities such as coal, chemicals, farm products, pulp, paper, lumber, wood products, stone, clay, glass and food accounted for 84% of the rail shipments in North Carolina in 1998. The remaining 16% of freight rail traffic included an assortment of commodities such as petroleum, metal products and waste and scrap materials (see chart below).

Tonnage (in millions) shipped by Rail in 1999

Product	CSXT	NS	Total	% of Total
Coal	33.9	27.4	61.3	45%
Chemicals	8.8	5.4	14.2	10%
Farm products	4.4	5.3	9.7	7%
Lumber	3.0	3.9	6.9	5%
Stone, clay, glass	2.6	5.0	7.6	6%
Pulp, paper & allied	4.3	3.1	7.4	5%
Non-metallic minerals	5.0	2.0	7.0	5%
Other	10.2	11.6	21.8	16%
TOTAL	72.2	63.7	135.9	100%

Coal –the largest volume commodity transported by railroads in North Carolina is used mainly by utility companies and other manufacturers to produce electricity.

Chemicals – a wide variety of manufacturers ship and receive basic and intermediate chemicals.

Farm Products – most of the grain products are shipped to mills to use as feed for hogs, chickens and turkeys. Some grains are shipped to grain mills to convert to flour and other mill products. Corn is the largest grain crop shipped by rail in the state.

Lumber and wood products – including millwork, veneer and plywood are used by construction and manufacturing industries.

Pulp, paper and allied – pulpwood logs, wood chips and related paper products are used to make pulp, paper, paperboard, fiberboard and corrugated paper.

Stone, clay, glass – bulk raw materials such as crushed stone and sand are used by the construction and manufacturing industries.

Food and Kindred – beverages, canned fruits and vegetables are transported to wholesalers.

Freight Traffic Flow

Of the total freight rail traffic shipped in 1999 about 47% of the products was shipped to or from North Carolina businesses; the remaining 53% was shipped through the state.

Roughly 33% of CSXT freight traffic was shipped to or from state businesses in 1999; the remaining 67% was through traffic. Commodities shipped to North Carolina companies by CSXT increased 17% from 1990 to 1999 – with shipments of coal up 50%, farm products up 78% and non-metallic minerals more than doubling. During that same time, CSXT lumber shipments to North Carolina decreased by 57%; pulp and paper shipments decreased by 34% and chemical shipments to state companies dropped 34%.

While total CSXT freight originating in North Carolina remained stable between 1990 and 1999, non-metallic mineral traffic doubled and lumber, pulp and paper, stone, clay and glass shipments decreased. Lumber, chemicals, non-metallic minerals, pulp, paper and food comprised 92% of CSXT shipments in 1999 that originated in North Carolina.

About 63% percent of Norfolk Southern freight shipments are to or from North Carolina companies; the remaining 37% is through traffic. Commodities shipped to North Carolina companies by NS increased 13% from 1990 to 1999. During that time chemical traffic increased 25%; farm product traffic increased 68%; lumber traffic increased 56%; stone, clay and glass increased 13%; non-metallic minerals increased 65%; pulp and paper increased 26% and food shipments increased 30%.

Freight tonnage shipped by NS from North Carolina business increased eight percent in the past decade. During that time, shipments of lumber doubled; shipments of non-metallic minerals grew 30% and coal traffic increased 23%. Farm products, chemicals, stone, clay and glass traffic shipped by North Carolina businesses decreased. Waste and scrap, stone, clay, glass, farm products, food, lumber, wood products, chemicals, non-metallic minerals and coal comprised 77% of Norfolk Southern shipments in 1999 that originated in the state.

Freight Assistance

Industrial Access Program

Freight rail traffic also is increasing to several rural and small urban areas due to the Rail Industrial Access Program that encourages industrial development in remote areas.

The General Assembly authorized the program in 1994 to help new companies finance construction of railroad sidetracks needed to transport freight and materials. The program uses state funds to help encourage economic development by constructing or refurbishing rail spurs when an industry wants to relocate or expand. Grants are provided as an incentive for new companies to locate or expand in North Carolina versus out of state. Local governments, economic development agencies, railroad companies and industries are eligible to apply for funds to improve rail access.

Funding for industrial access projects is contingent upon private and local government sources providing matching funds. The state will provide up to 50 percent of the funds needed to construct a rail spur, the company must contribute the remaining 50 percent. Local governments also may chip in to cover part of the costs, depending on the project. Grants can be used to pay for the costs of grading and installing track and switches.



Projects are evaluated on potential economic benefit by weighing criteria such as the number of potential new jobs to be created, the amount of capital investment from the company, rail use, local government support and the area's economic conditions. Grant recipients (or the industry) are responsible for owning and maintaining project tracks.

The department monitors the company's rail use for five years and employment for two years to verify that industry commitments are met. More than 45 companies have received funds through the Rail Industrial Access Program since

it began. They have invested a total of nearly \$900 million to develop and expand new plants; created more than 5,600 new jobs in 36 communities and built nearly 19 new miles of railroad with a state investment of \$4 million (see Appendix B). The extra 29,000 rail carloads shipped during the past six years translates into more than 116,000 truckloads of materials that otherwise would have been transported by highway.

Transportation Infrastructure Finance and Innovation Act

The Transportation Infrastructure and Finance Act (TIFIA) provides Federal credit assistance to help fund major transportation investments of national importance. This credit program is designed to fill market gaps and to leverage substantial private co-investment by providing supplemental and subordinate capital. Investment funds may be provided by a government, corporation, joint venture or partnership. The amount of Federal credit assistance may not exceed 33% of the total project costs.

Three types of financial assistance are available through the TIFIA credit program. Secured loans provide combined construction and permanent financing of capital costs at flexible repayment terms. Loan guarantees ensure a Federal government credit guarantee to institutional investors making a loan to a project. Standby lines of credit represent secondary sources of funding through contingent Federal loans that may be drawn upon to supplement project resources if needed during the first ten years of project operations.

Railroad Rehabilitation and Improvement Financing Program

A new federal loan program, the Railroad Rehabilitation and Improvement Financing Program (RRIF), that began in Fall 2000 provides funding assistance to local governments, Class I railroads and shortlines for rail infrastructure improvements.

Administered by the Federal Railroad Administration (FRA), the \$3 billion dollar, low-interest loan program provides direct loans and loan guarantees to state and local governments, government sponsored authorities and corporations, railroads and joint ventures that include at least one railroad. At least \$1 billion must be used for projects benefiting shortlines or other smaller freight railroads. Funds may be used to: acquire, improve or rehabilitate intermodal or rail equipment or facilities; refinance outstanding debt incurred for these purposes; or develop new intermodal or railroad facilities. Loans and loan guarantees cannot be used for railroad operating expenses.

To qualify for RRIF funding, the applicant must submit evidence that a commercial lender has refused to provide financing. In addition, in order to receive a RRIF loan, the applicant must pay a portion of the total subsidy cost to the government as determined by a financial analysis.

To request RRIF funds, applicants must submit a description of the technical aspects of the project (including map), a description of the project's economic impact and any related feasibility or market studies and information regarding potential environmental impacts of the project. In addition, information should be provided describing how the project will enhance safety and the environment, how it will preserve rail or enhance intermodal service to small communities and rural areas, and whether it is included in the state transportation plan. Also, information about the amount of the request and the amount and type of collateral to be offered as security, as well as current financial statements and projected revenues must be provided.

The NCDOT surveyed in November 2000 shortline railroads to determine interest in the RRIF program including projects requiring funding and estimated cost. Five railroads (Aberdeen Carolina and Western Railway, Carolina Southern Railroad, Caldwell County Railroad, Great Smoky Mountains Railroad and Thermal Belt Railway) indicating interest in financial assistance through the RRIF program. They identified a total need of \$36,630,666 to upgrade rail (\$11,718,000), rehabilitate track (\$5,612,666) and bridges (\$2.4 million), purchase and repair equipment (\$2.1 million), refinance existing loans (\$12.2 million) and make other repairs (\$2.6 million). The needs are great and will likely exceed the amount of state or federal funds available. Expenditures to upgrade rail and bridges to handle 286,000-pound cars and rehabilitate track and bridges to ensure safe and efficient operations will be a top priority for available state and federal funding. Other projects, such as refinancing, may be considered when there are public benefits and funding is available.

Low-interest/ interest-free loans through the RRIF Program provides an important funding alternative for major and shortline freight railroads that need to improve their infrastructure and equipment. Details of the NCDOT's role in the RRIF Program are still being finalized, but possibilities include helping with credit risk premium payments and helping with preparation of necessary financial and environmental documents.

Freight Trends and Issues

Rail Line Revitalization

More than 700 miles of track have been abandoned in North Carolina since 1971. During the past decade, 57 railroad miles were abandoned in the state.

While the rate of abandonment has slowed considerably in the last decade, the Rail Division is concerned about potential rail abandonment and monitors freight traffic density and the status of light density lines that may be abandoned. In recent years, Norfolk Southern and CSX have notified the state of potential abandonments and cooperated with local efforts to preserve freight rail service. Rail Division staff review each case to determine the railroad's impact on communities and shippers, then works with local communities to develop potential alternatives to taking the railroad out of service.

Traffic Density

While traffic on most NS and CSXT main lines has increased since 1990, traffic on other corridors has decreased. Many of these lines are classified as light density lines and carry less than three million gross ton miles per mile per year. These lines often are targeted for sale or abandoned because profits earned on operations are marginal (see Figure 2, 1999 Freight Rail Traffic Density).

Figure 3 shows changes in traffic densities for CSXT and NS between 1990 and 1999. The comparison provides information on lines experiencing traffic growth and those showing traffic losses.

CSXT routes that grew significantly during the past 10 years include: the mainline route from the North Carolina - Virginia border through Rocky Mount, Fayetteville, Pembroke and Hamlet; the secondary route from Wilson to Wallace; and the mainline route from the Tennessee border through Bostic /Marion to South Carolina.

During that same time, traffic declined along the CSX's route between Greenville, Parmelle and Plymouth, along the former "S" Line from Norlina through Raleigh and Hamlet, and between Mount Holly and Terrell.

Norfolk Southern freight traffic densities have generally shown an increase system-wide. The following routes have shown a significant increase since 1990: Chocowinity to Morehead City, Raleigh and Goldsboro, Raleigh to Chocowinity and Lee Creek, Durham to Oxford, and Greensboro to Raleigh. Traffic also has increased from Fuquay-Varina to Winston-Salem; Winston-Salem to the Virginia border, Winston-Salem to Rural Hall, and between High Point and Asheboro. In western North Carolina, traffic increased along the mainline from the South Carolina border through Charlotte to Linwood, from Burlington to Danville, Virginia, from Charlotte to Salisbury, Salisbury to Statesville and between Hickory and Asheville.

Meanwhile, Norfolk Southern traffic since 1990 declined along the segments from Fuquay-Varina to Fayetteville, Goldsboro to New Bern, Statesville to Winston-Salem, Shelby to Blacksburg, Henderson to Brevard, Canton to Waynesville and Kannapolis to Albemarle/Badin.

Shortlines

One well-proven alternative to abandonment is creation of a shortline railroad. The rail line is purchased or leased from the railroad owner, then operated independently – usually as a switching railroad that picks up and delivers freight to the larger railroads that transport long distances. This national trend of turning unprofitable branch lines into shortlines helps preserve railroads.

Shortlines offer several advantages to shippers including reduced costs, quick response to customer needs and personal sales attention. Crews are typically smaller, paid competitive local wages rather than national union rates and locally based allowing them to respond promptly to customers. Long-term success often is determined by how well the railroads market their services and recruit rail-dependent businesses. The shortline's ability to partner with local communities to maintain and grow the freight rail traffic also determines their success since shortlines rely on a small pool of customers to provide enough business to sustain operations.



The Caldwell County Railroad serves industries between Hickory and Lenoir.

While the shortline trend has been positive, the industry faces challenges that will impact their long-term success. These small companies often inherit tracks with deferred maintenance that require significant investment to improve the rail and ensure safe and efficient operations. Many shortlines will need to upgrade their tracks to handle the increasing number of heavier rail cars used by the major railroads. Currently, about 30 percent of North Carolina's shortlines can accommodate the 286,000-pound heavy rail cars. A national survey by the Standing Committee on Rail Transportation indicated track rehabilitation and construction costs averaged about \$92,000 per mile; bridge rehabilitation costs averaged about \$2.8 million per railroad. Given those estimates, rehabilitation costs to improve and upgrade

North Carolina's shortline railroads total about \$60.7 million, while bridge rehabilitation costs total about \$58.7 million. While the improvements may seem expensive, maintaining and upgrading the tracks are critical to the long-term success of North Carolina's shortlines (see Appendix A- Shortline Facilities).

Rail Banking

Rail banking is another alternative to abandoning a rail line and is used when rail services are no longer financially viable but there is a high likelihood the tracks will be needed in the future. A state or a public agency acquires the track and it remains inactive until it is needed for future rail freight or passenger use (see Corridor Preservation). The NCDOT has purchased 139.5 miles since 1990 and has identified 40.5 miles of corridors that may be acquired and preserved for future use.

Intermodal Traffic Growth

One of the most significant trends in the freight rail industry is growth of intermodal traffic. Intermodal traffic uses standardized freight containers, or trailers, allowing easy transfer of freight between railroads, ships and tractor-trailers. Intermodal traffic across the country has grown from 3.1 million containers transported in 1980 to 8.8 million in 1998 and accounts for about 17% of rail revenues.

CSX and Norfolk Southern, in cooperation with other major freight rail companies, operate a national network of intermodal trains transporting containers between trains and ships at port facilities or between tractor-trailers and trains at inland terminals. Considerable container and bulk traffic is loaded between freight trains and ships at North Carolina's two state ports in Wilmington and Morehead City. Additional freight is transferred at the state's inland terminals, which serve as staging areas for both truck and rail traffic, in Charlotte and Greensboro. CSX serves about 33 intermodal terminals nationwide; Norfolk Southern serves about 35 intermodal terminals.

A primary advantage of moving freight intermodally is reduction of long-distance truck traffic over already crowded highways and interstates. Norfolk Southern and CSX plan to greatly increase their share of rail freight traffic along the I-81, I-85 and I-95 corridors. Increasing intermodal freight traffic should reduce long distance truck traffic over those busy corridors. Already, Virginia is evaluating improving a rail line between Harrisburg, Pennsylvania and Atlanta as one alternative to widening Interstate 81. North Carolina and several other states are observing Virginia's progress to see if they might also gain advantages from similar freight railroad investments.

Perhaps the best example of a planned comprehensive intermodal freight facility is the North Carolina Global TransPark. Located in Kinston, plans call for development of a large business park offering integrated air, rail, highway and ocean transportation – 15,700 acres of development including two parallel runways of 11,500 feet and 13,000 feet. The plan also identifies the highway and rail network that would serve the Global TransPark and distribution links to deep-water ports. A variety of industry groups are targeted for occupancy including manufacturing, distribution, agribusiness and transportation-related companies.

In planning for future growth and expansion of intermodal traffic, the NCDOT Rail Division and freight railroads will need to look at the impacts on flow and capacity of both freight traffic and passenger traffic.

Mergers and Acquisitions

Twenty-five years ago about 30 major freight railroads shipped products to industries across the country. Various mergers and acquisitions have reduced that number to seven major freight railroad companies. The most significant railroad acquisition in recent history took place in 1998 as Conrail was divided between CSX and Norfolk Southern who acquired 48% and 52%, respectively, of the former Conrail system.

The federal government created Conrail in 1976 to preserve several large railroad companies who declared bankruptcy and prevent widespread financial distress in the railroad industry. The government assumed

ownership of the railroads and implemented a reorganization plan until the company was sold in a public stock offering in 1987. Conrail assets were split and sold in 1998 to CSX and Norfolk Southern who acquired about 4,400 miles and 6,000 miles respectively. CSX acquired the Conrail lines between: Boston and Cleveland; New York and New Jersey; Cleveland and St. Louis; New York and Philadelphia; Toledo and Columbus. Norfolk Southern will operate most former Conrail lines in Michigan, Maryland, Delaware and Pennsylvania. It will also operate the routes between Toledo and Detroit, Columbus and Cincinnati and between Columbus and Charleston, W.Va.

In congested urban areas NS and CSX have set up shared asset areas – in New Jersey, Pennsylvania and at certain midwestern cities – operated jointly under the Conrail name.

Both CSX and NS cite major benefits of the acquisition as: single-line service to/from Northeast and Midwest locations, more cost effective service, improved transit times and service reliability due to more efficient routing, expanded intermodal service and reduced congestion and pollution by diverting truck traffic to rail.

However, just as with other major railroad acquisitions, there have been problems integrating the Conrail system with CSX and NS systems. Shippers in North Carolina and throughout the NS and CSX systems have reported widespread bottlenecks and delays due to difficulties in combining various railroad computer systems and the need for expanding track capacity at critical junction points. Both railroad companies have recognized that the transition has been troubled and both railroads have responded by making strategic capital investments to improve capacity at rail yards and terminals.

The disruptive impact of several recent railroad mergers (Union Pacific and Southern Pacific, Chicago Northwestern and Illinois Central, and the Conrail acquisition) has concerned industries, governments and railroads and resulted in more cautious consideration of railroad consolidations. For instance, there was widespread protest among shippers and other interested parties when the Surface Transportation Board solicited input about the proposed merger of Canadian National and Burlington Northern Santa Fe in 1999. Based on this input, the board decided to delay consideration of the merger, and as a result the railroads cancelled their merger plans.

In October 2000, the Surface Transportation Board announced a Noticed of Proposed Rulemaking regarding new guidelines for major railroad mergers and consolidations. The new rules will significantly increase the burden on applicants to demonstrate that a proposed merger is in the public interest. In particular, the new rules would require applicants to show that the transaction would enhance competition, and they would require much more accountability with respect to claimed merger benefits and service. The board will issue its final rules on railroad mergers and consolidations in June 2001.

Plans for Freight Rail Service

The North Carolina Department of Transportation works with the various host railroads to continuously maximize operating efficiency for both freight and passenger trains that operate in the state. Because any improvements that benefit freight rail service also will improve passenger service, the NCDOT Rail Division is working with the North Carolina Railroad and Norfolk Southern to improve the busy Raleigh to Charlotte rail corridor to reduce travel time for both freight and passenger trains. The state plans to invest \$400 million (by 2003) to improve the North Carolina Railroad corridor by adding passing sidings between Raleigh and Greensboro, adding double tracks between Greensboro and Charlotte, installing a train traffic control system, super-elevating some portions of track and straightening several curves.

In addition, the NCDOT will need to identify and make necessary improvements to provide adequate capacity for freight and passenger service between Salisbury and Asheville.

In 1999, the Rural Prosperity Task Force analyzed the means for sustained prosperity in rural and small urban areas of the state. The Task Force recommended the state invest in upgrading shortline railroads to ensure the shortline railroad's capability of handling 286,000-pound freight cars. The group also recommended that rail passenger service be extended to western North Carolina.

To generate public support and secure public funding assistance for North Carolina's shortline and regional freight railroads, the department will need to develop and implement an information and education campaign about the railroads and the service they provide. Additionally, the NCDOT should formulate and recommend a legislative initiative for the 2001 General Assembly to help North Carolina's shortline and regional railroads upgrade their tracks to accommodate 286,000-pound freight cars.

Finally, to continue and build upon the success of the Rail Industrial Access Program, the NCDOT should work to increase funding for the program.

RAIL SAFETY

Several hundred people are killed each year in collisions at highway/railroad crossings nationwide. In 1999, North Carolina had 109 railway-highway grade crossing collisions— resulting in 99 collisions, three deaths and 30 injuries – ranking it 18th in the nation for such incidents.

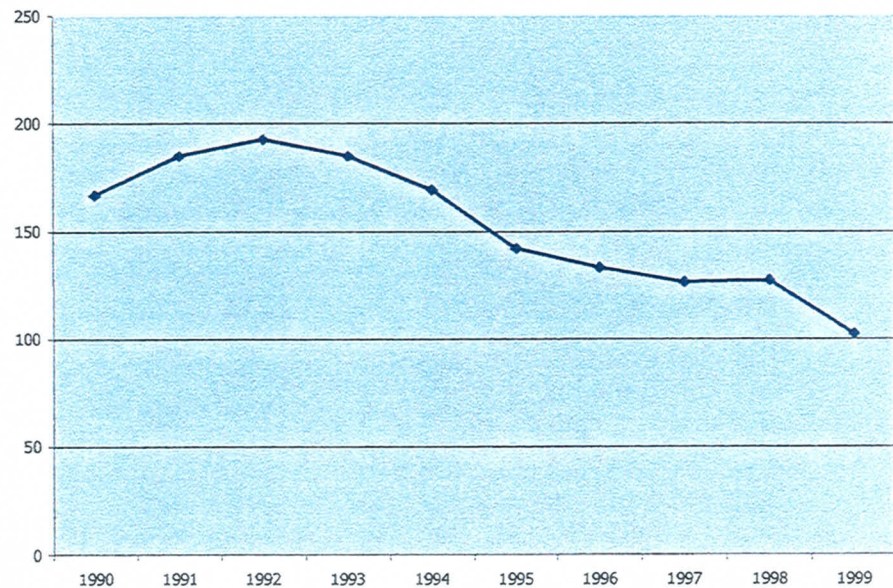
Anywhere there is a grade crossing, the potential for a train/vehicle collision exists. With 4,432 public railroad-highway crossings plus 3,370 private railroad-highway crossings, North Carolina is one of the leading states nationally in the average number of crossings per mile.

The NCDOT Rail Division works with communities and private railroads to maintain and improve safety for rail passengers, train crews and motorists. The division has an active program to identify redundant and unsafe crossings and to work with local communities to eliminate or consolidate them. Additional programs and initiatives include installing conventional and enhanced traffic control devices and inspecting rail cars and tracks.

Crash statistics show the safety improvements are effective. The number of crossing collisions decreased by about one third between 1990 and 1999.

However, as the number of freight and passenger trains increases and highway traffic grows, the need for crossing safety improvements will become even more critical.

Crashes at North Carolina Rail-Highway Crossings with Traffic Control Devices



Crossing Improvements

Traffic Separation Studies

Working together with the communities involved, the NCDOT conducts a comprehensive traffic study of an entire municipality or region to determine how best to improve or eliminate railroad-highway crossings. As a prerequisite to conducting the study, the Rail Division and the municipalities involved agree to make a “best faith” effort to approve and implement the identified needs.

Several criteria are examined for each crossing including: accident history, current and projected vehicle and train traffic, school bus and emergency routes, type of warning devices and economic impact of closing the crossing. Near-term, mid-term or long-term improvements may be recommended based on study results.

Near-term recommendations (within two years) may include: installing flashing lights, gates, four-quadrant gates or longer gate arms; installing concrete crossing surfaces or median barriers; modifying the roadway approach; and realigning or closing the crossing. Mid-term recommendations (two to five years) may include: building connector roads; realigning roadways, closing crossings, or relocating crossings to safer locations. Long-term recommendations (five to ten years) may include: building bridges, underpasses or connector roads or closing the crossing.

The Traffic Separation Study approach is a statewide initiative. Studies already have been completed in Salisbury, Stanley and Benson. Additional Traffic Separation Study improvements are in the implementation phase in Greensboro, six communities northeast of Charlotte and six communities in the Western Piedmont. Studies are in progress in Wake Forest, Clayton and Raleigh and future studies are planned for Rocky Mount, Morehead City, High Point, east Greensboro and Fayetteville.

Closing Crossings

North Carolina Department of Transportation policy encourages communities to consolidate or close railroad-highway crossings where possible. It also encourages bridging any new railroad-highway intersections along the North Carolina Railroad corridor between Raleigh and Charlotte.

Specifically, the NCDOT works to consolidate or close crossings where:

- additional crossings or bridges/underpasses exist nearby
- vehicle traffic can be safely and efficiently redirected to an adjacent crossing
- numerous collisions have occurred
- the road crosses the tracks diagonally or there is limited sight distance
- adjacent crossings are being upgraded or grade-separated
- the private crossings' owner can not be identified.
- the owner of a private crossing is unable or unwilling to fund improvements and alternate access to the other side of the track is available
- it is difficult to provide adequate warning devices or which have severe operating problems (such as multiple tracks, extensive switching operations or long periods of blocked crossings).

When the crossing involves a municipal road, the NCDOT can offer cash or other incentives to a city or town to encourage the recommended closure. In addition, the NCDOT may package a crossing closing with improvements at nearby crossings. Other methods used to eliminate grade crossings include creating a connector road, dead-ending affected streets and re-routing traffic, creating cul-de-sacs rather than intersections or bridging the intersection. Federal-aid and/or state funds may be used for these projects.

Sealed Corridor Initiative

The Sealed Corridor program, a public-private partnership between NCDOT and Norfolk Southern, uses existing technology in new ways to prevent people from driving around crossing gates on the Raleigh - Charlotte rail corridor. One of the busiest portions of railroad in the state, the corridor is part of the Southeast High-speed Rail corridor and has an average of 1.59 crossings per mile.

Using “off the shelf” technologies applied in a new way, the NCDOT plans to protect every crossing with median separators, long gate arms, four-quadrant gates and other innovative traffic-control devices to separate all vehicle and rail traffic, thus “sealing” the corridor. Since 1994 the NCDOT and Norfolk Southern have been testing the effectiveness of these treatments. In one study, video cameras were installed at selected crossing to gather data regarding the effectiveness of median barriers, four-quadrant gates and long gate arms. Study results determined that such treatments are up to 99% more effective than traditional means.

So far, 30 crossings have received protective devices and 26 additional crossings have been closed between Raleigh and Charlotte. More than \$1.1 million has been allocated for “Sealed Corridor” projects.



Installing median barriers

Signalization Program

About half of North Carolina's more than 4,400 public railroad-highway crossings are unsignalized. The Rail Division's goal is to signalize all public rail crossings to improve safety for motorists as well as rail passengers and crews.

Each crossing is prioritized using train volume, train speed, school bus and vehicle traffic, existing protection, number of tracks, hazardous cargo and accident history. Approximately 300 crossings are selected each year as possible candidates for improvement. A field investigation is made for each candidate crossing and funding decisions are made based on recommendations by field investigators.

A combination of federal, state and local money is used to pay for signalizing (an average \$100,000 per installation) the rail crossings. Municipalities are required to pay 10% of the installation cost and 50%

of the maintenance costs if the signals are located on a municipal street. About \$750,000 in federal funds are used annually to update or install crossing signals on shortline railroads throughout North Carolina.

The "Safe Roads for Safe Schools" program combines several initiatives to help keep children safe in school zones and at railroad crossings. In addition to making road improvements, the program uses funds to install signals, flashing lights and gates at railroad-highway crossings that carry significant amounts of school related traffic. Funds are earmarked to improve safety at 60 railroad-highway crossings throughout the state



Signals, lights, gates and median barriers are some of the treatments used to improve safety at rail-highway crossings.

Inspection Program

To help enforce federal railroad safety regulations at the state level, the NCDOT employs staff to inspect railroads and conduct railroad accident investigations in accordance with federal law. Working with the FRA, NCDOT Rail Safety Inspectors are responsible for inspecting more than 3,500 miles of railroad track and signal systems and thousands of railroad cars and locomotives in North Carolina annually in order to promote safety



and to determine carrier compliance. It is then up to the carrier or host railroad to correct any problems and maintain the equipment. While state and federal inspectors often work as a team during accident investigations, it is the Federal Railroad Administration's responsibility to train and certify the inspectors and process inspection and violation reports.

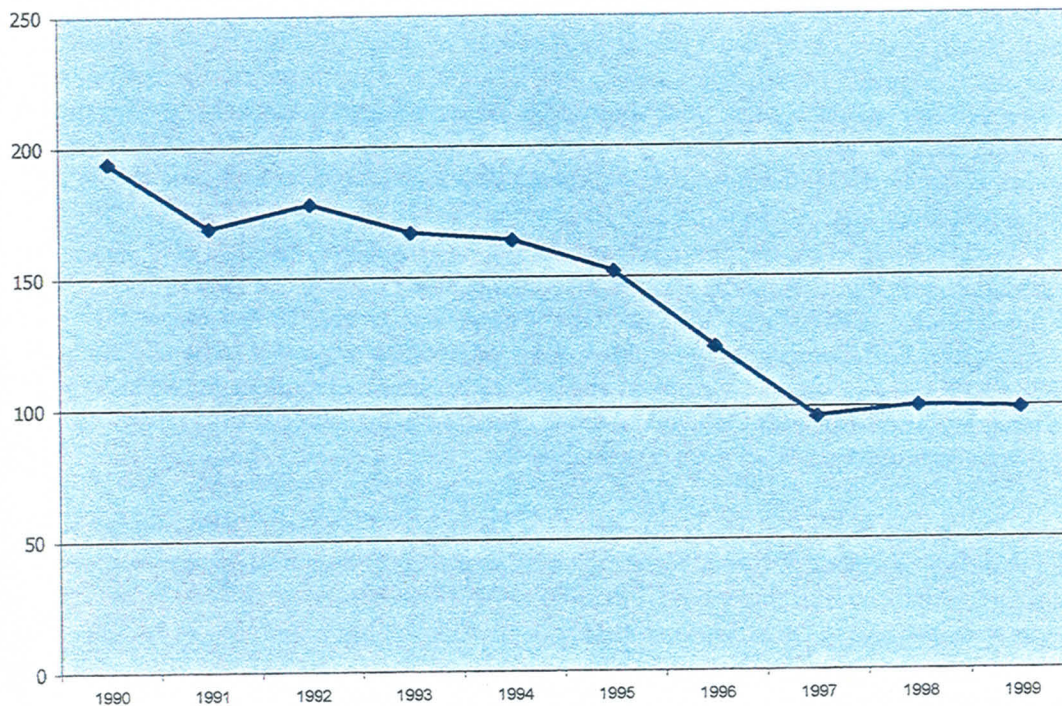
North Carolina has four certified state inspectors. Two are responsible for track inspections, one for inspecting crossing signal and train control systems, and another for inspecting motive power and equipment. The state inspectors work with FRA offices in Atlanta and Charlotte.

Rail Safety Trends and Issues

Improved rail crossing technology and increased education about hazards at railroad-highway crossings has helped to reduce the total number of crashes at railroad crossings by 50 percent during the past decade (see chart below). Not surprisingly, the most significant reduction in rail crossing crashes came between 1995 and 1997 as Sealed Corridor Program improvements were implemented and additional crossings were signalized.

However, rail is experiencing a renaissance in North Carolina, as well as nationwide. The number of freight and passenger trains is expected to grow as the interstates and airports become more crowded. Increasing rail traffic, combined with growth in our urban areas, and more vehicle traffic crossing the rail lines, will necessitate continued aggressive efforts in the area of crossing safety. The Rail Division will continue to work to close crossings, signalize crossings or grade separate railroads and highways to improve capacity, efficiency and safety for both railroad and highways.

Total Crashes at North Carolina Rail- Highway Crossings



Rail Safety Plans

The North Carolina Department of Transportation's goal is to reduce the number of railroad-highway crossings by 25% and improve safety at the remaining crossings in order to decrease the number of vehicle crashes and fatalities at these intersections.

Crossing safety will continue to be stressed as part of transportation planning activities statewide. Working with communities and the host railroads, the department will use comprehensive Traffic Separation Studies to guide local decision-makers in which crossings to improve and which ones to close. Crossing safety funds also will be directed towards long-range improvements, such as grade separations. In addition, during the coming year, the NCDOT plans to implement safety projects to improve the visibility of crossbucks at crossings and eliminate humped and/or narrow crossing surfaces.

The NCDOT will complete "Sealed Corridor" improvements between Charlotte and Raleigh by 2002 then expand the program to include additional corridors as funding becomes available, giving priority to railroads carrying regularly scheduled passenger trains.

As these efforts continue, the department will look for ways to further improve crossing safety by developing new technologies and approaches to safety.

Intelligent transportation systems will play a role in future crossing safety efforts. Crossings along the Sealed Corridor currently include health monitoring devices, which can be tied into local transportation operation centers or variable message matrix boards. With future high-speed rail improvements and train speeds over 90 mile per hour, the department will examine using crossing vehicle detection systems to alert trains of blocked crossings. In addition, the NCDOT will continue to research alternative or lower cost devices that will provide active protection at crossings.

Safety improvements at private rail crossings continue to be a challenge due to the lack of state authority to improve, close or protect those crossings. However, federal funds designated for crossing improvements along the Southeast High-speed Rail Corridor, may be able to be used to close or protect some of these private crossings. The NCDOT plans to conduct a study in late 2001 of the private crossings between Raleigh and Charlotte. This study will inventory each private crossing, specify the person or entity responsible for the crossing, and propose improvement or closure (if possible).

The Rail Division also is developing an electronic database inventory of statewide railroad-highway crossings using Global Positioning Satellite (GPS) and Geographic Information System (GIS) technology (the database should be completed within the next five years). The GPS and GIS technologies will allow the department to identify and better monitor railroad crossings and the types of improvements that may be needed.

Also, the department will continue partnering with the Federal Railroad Administration to inspect railroad equipment, tracks, signals and operating practices and enforcing federal safety standards. As funding and staff become available, the Rail Division plans to add inspectors to monitor hazardous materials and operating practices, to supervise development of rail transit system safety plans and to extend rail safety inspections to local rail transit operations.

PASSENGER RAIL SERVICE

Six passenger trains provide service to North Carolina including two state-sponsored trains, the *Piedmont* and *Carolinian* and four Amtrak national system trains. The North Carolina Department of Transportation supports these passenger rail services through marketing, track maintenance, equipment refurbishment, and station rehabilitation and construction.

Existing Service

The National Railroad Passenger Corporation (Amtrak), a private corporation created by Congress in 1972, operates a 22,000-mile passenger rail system, serving more than 500 communities in 45 states. The railroad owns 730 miles of track – primarily in the Northeast – and has operating rights over freight railroads throughout the country.

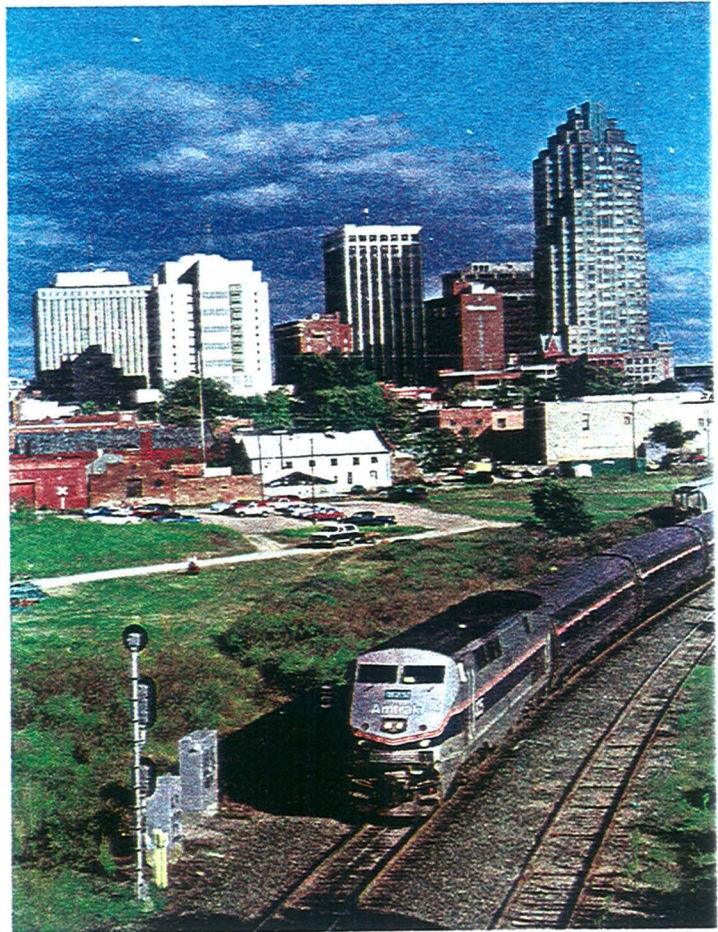
North Carolina is one of 13 states (along with California, Maine, Michigan, Missouri, New York, New Jersey, Oklahoma, Oregon, Pennsylvania, Vermont, Washington and Wisconsin) which provides operating and capital support needed to operate Amtrak service in each state.

The *Carolinian* provides daily service from Charlotte to Rocky Mount continuing north into Virginia, Washington, D.C., and the Northeast before terminating in New York. The northbound *Carolinian* departs Charlotte in the morning while the southbound *Carolinian* departs New York City each morning, thus providing same-day round trip service to Raleigh and the central Piedmont area. Amtrak provides both equipment and staff to operate the *Carolinian*, which began in May 1990.

The *Piedmont* provides daily round-trip service between Raleigh and Charlotte with stops in Cary, Durham, Burlington, Greensboro, High Point, Salisbury and Kannapolis. While the service is operated and staffed by Amtrak, all the equipment is state-owned and designed. Service began in May 1995.

North Carolina supports both of these trains by reimbursing Amtrak for the in-state portion of Amtrak administrative, operating, station and other costs. The Rail Division also markets and promotes these passenger rail services through advertising, special events and focused campaigns and by working with North Carolina's Volunteer Train Host Association. Train hosts ride the state-sponsored trains between Charlotte and Rocky Mount to assist passengers and train crews and serve as North Carolina's goodwill ambassadors.

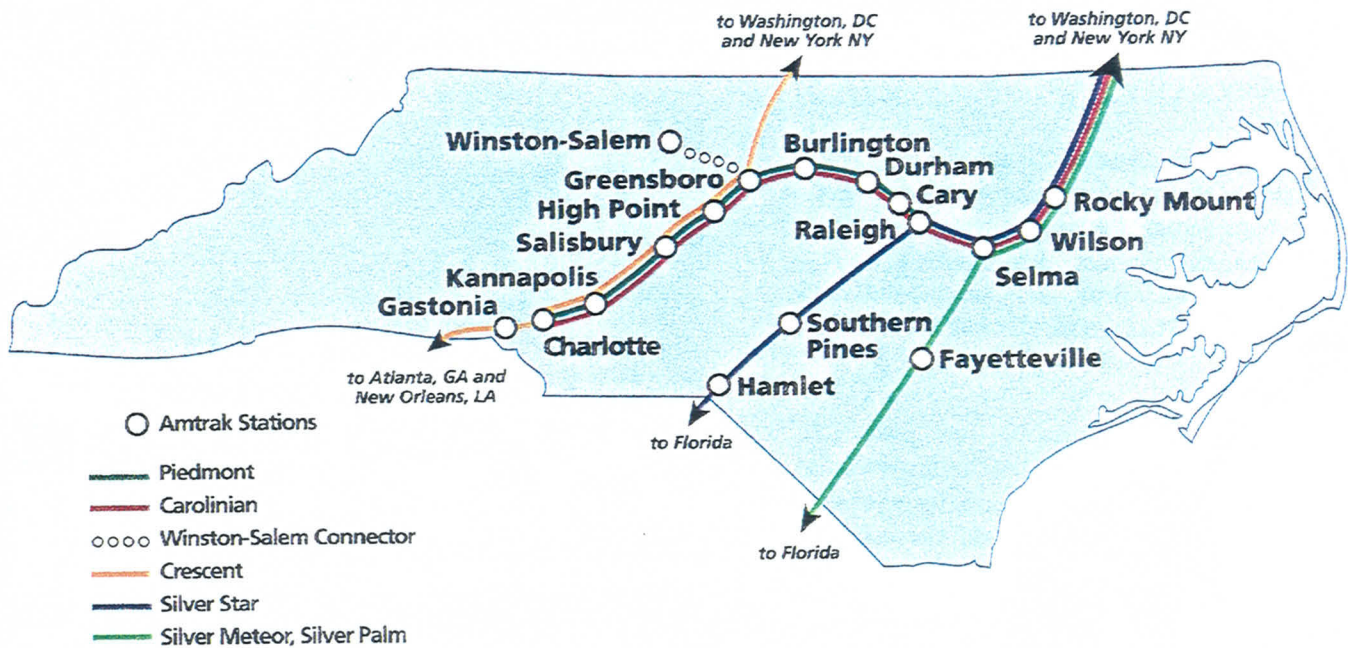
Other Amtrak routes in North Carolina are part of the national service and are solely operated and paid for by Amtrak. The *Crescent* provides daily service between New York and New Orleans making stops in Greensboro, High Point, Salisbury, Charlotte and Gastonia. The *Silver Star* runs between New York and Miami with stops in



Carolinian running through downtown Raleigh

Rocky Mount, Raleigh, Southern Pines and Hamlet. The *Silver Meteor* provides service between New York and Miami with stops in Rocky Mount and Fayetteville. The *Silver Palm* also provides service between New York and Miami with stops in Rocky Mount, Wilson and Fayetteville.

Thruway buses connect with several of the trains providing service to additional areas of the state. A daily shuttle, which operates between Winston-Salem and the Greensboro Amtrak station, connects to the *Carolinian*. Amtrak also offers thruway bus service to the *Silver Star* and *Silver Meteor* between the Rocky Mount and Wilson stations and Wilmington.



Ongoing Improvements

Because passenger rail transportation will become increasingly important, the NCDOT is investing in rail infrastructure improvements such as rail cars, track structures and stations. In many cases, the state is partnering with local governments and railroads in order to make the needed improvements.

Equipment

The NCDOT built a maintenance facility in downtown Raleigh in 1995 to support the daily operations of the state-owned *Piedmont*. The facility is used daily to clean and perform routine maintenance on the passenger cars and locomotives used on the *Piedmont* route and the business cars on the *Carolinian*.

The state currently owns three locomotives – one older, refurbished GP40 model and two new F59-PHI models – eight 66-seat passenger coaches, two 50 foot baggage cars, three food service cars, two sleeper cars, a dining car, a dome car, a caboose and a power car. Five of the coaches, two food service cars and the dome car have been refurbished and are used in *Piedmont* service. The remaining used cars will be refurbished and used in service to western North Carolina.

State-owned rail cars are named for cities and state symbols. Locomotives are named for North Carolina cities and their numbers represent the cities' incorporation dates (City of Salisbury -1755, City of Asheville -1757 and City of Raleigh - 1792). Coaches are named for symbols such as Cardinal, Dogwood, Long Leaf Pine, Scotch Bonnet and Honey Bee, while the food service cars are named for bodies of water – the Pamlico Sound and Albemarle Sound. The dome car is named Mt. Mitchell after the state's highest mountain.

Track

The existing North Carolina Railroad corridor between Raleigh and Charlotte is Norfolk Southern's busiest main line through the state. While double track sections exist between Greensboro and Charlotte, the Greensboro to Raleigh portion is single-track and unsignalized with few, short sidings to allow trains to pass each other. Improvements are needed along this congested corridor in order to reduce trip times, improve on-time service and increase capacity for both freight and passenger trains between Raleigh and Charlotte.

Using existing rights-of-way, the NCDOT Rail Division has planned a series of cost-effective improvements including: adding double track, extending passing sidings, straightening selected curves, increasing track elevation (banking some portions of track), adding modern railroad traffic control signals, and further improving crossing safety. Improvements are under design with construction scheduled to begin by 2001-2002. Track and signal work is expected to be completed two years after construction begins.

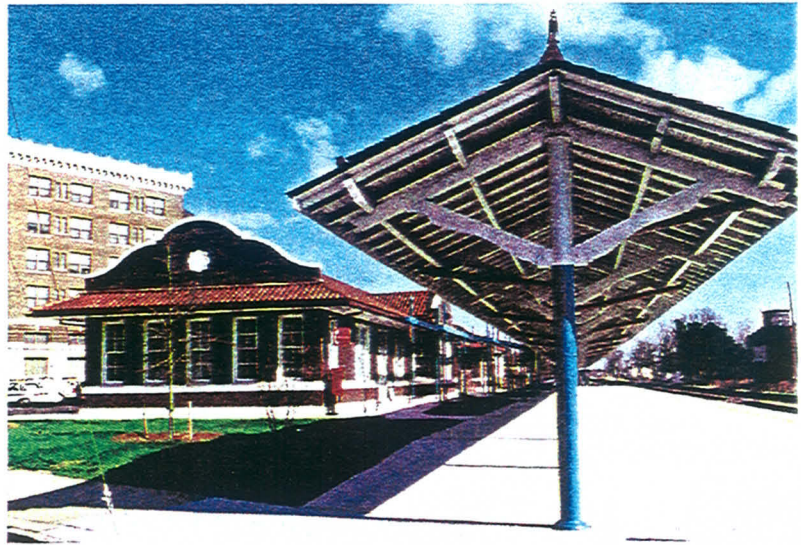
Stations

Most of North Carolina's rail stations are inadequate to serve the growing passenger needs stemming from existing and planned rail passenger service in the state. State transportation officials are working with local communities to improve stations across the state to meet these passenger needs. The NCDOT has taken an active role in station improvement by providing funding and technical assistance to rehabilitate historic stations and construct new intermodal facilities. Projects are underway at a number of sites to rehabilitate historic rail station and develop new ones (see Appendix C).

Funding for station improvements primarily comes from federal Transportation Enhancement funds, which requires costs to be split 80 percent from federal and 20 percent from state or local sources. Passenger train stations serve as a catalyst for development and re-development in center cities.

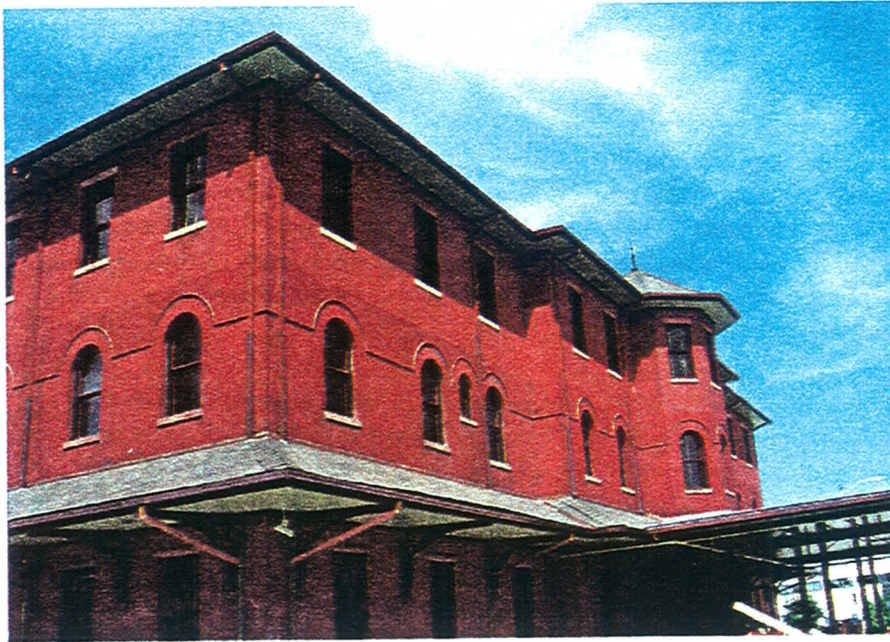
Already passenger train stations have been renovated in Salisbury, Wilson and Rocky Mount. A major rehabilitation of the 1908 Mission-style station in Salisbury—completed in 1997 – was financed by \$3 million in private donations and a \$1 million grant from the NCDOT. The station now houses a private corporation, a community meeting/banquet room, and waiting room for train passengers. The NCDOT enlarged the waiting room in 2000 to accommodate the growing number of passengers.

Wilson's 1924 Flemish-style station also was completely renovated. Ticket and checked baggage service were added when the refurbished station opened in 1998. Work will begin in summer 2001 to add a new parking lot, landscaping and other site improvements. Rocky Mount's Romanesque station originally was built in three stages between 1893 – 1916. The renovated building – opened in fall 2000—now houses a full-service Amtrak office, the Chamber of Commerce and several private businesses. The renovated Railway Express Agency (REA) building next door contains a restaurant and transit center for Rocky Mount Transit and Trailways.



Wilson Train Station

Additional historic renovations are planned for Greensboro, Hamlet and High Point. Greensboro's 1927 historic station will be rehabilitated into a full-service intermodal transportation center with provisions for Amtrak, intercity buses and city transit buses. The upper level will house a railroad club, a daycare center and a waiting area for city buses. The nearby former REA building will house intercity bus service and city office space. The 1900 Victorian Queen Anne station in Hamlet will be relocated off of railroad-owned right-of-way and renovated. In its new location the building will serve as an anchor and catalyst for the continued redevelopment of the Hamlet Historic District. High Point's 1907 Richardson Romanesque station also will be completely renovated. In addition, the canopy over the platform and the pedestrian bridge – connecting the station to city transit center – will be replaced.



Rocky Mount Train Station

In addition to restoring stations, the NCDOT also is working with several communities to develop new intermodal facilities. New construction is planned for Charlotte and Raleigh. With increasing ridership, the Charlotte station's small size and location (two miles from city center) is a hindrance. The state is working with private partners to plan, design and construct a new station in uptown Charlotte that would incorporate intercity buses and rail. This new facility is expected to be completed around 2006-2007 and handle about 500,000 rail passengers annually by 2015. Traffic also is increasing at Raleigh's passenger train station. In 2000 Amtrak spent \$400,000 to

make interim improvements to the Raleigh station including expanding the waiting room and adding a First Class passenger lounge. A new station will be needed in the next decade that would allow all existing and proposed intercity and commuter trains to use a single facility. While the NCDOT and City of Durham opened a full-service passenger train station in 1996, the facility was designed as an interim station. A new multi-modal center is planned for Durham reusing Liggett & Myers Tobacco Company's Walker Warehouse. Design work and negotiations on the property are underway with the projected opening of the new station in 2002.

In the past several years station improvements also have been made in Cary and Burlington. The NCDOT, Town of Cary and Triangle Transit Authority partnered to open the Cary Depot in 1996 which houses a Division of Motor Vehicles Drivers License Office in addition to a waiting area for rail and bus passengers. The Burlington station opened in 1999 and includes an Amtrak waiting room, vending machines, paved parking and boarding platform.

Plans also are underway to replace the Kannapolis passenger train station with a facility that is more convenient to shops and businesses. A small interim station will be located adjacent to the new permanent station platform until funding is obtained to construct a new station building. Construction of the interim facility is scheduled to begin in late 2000.

Passenger Rail Service Trends and Issues

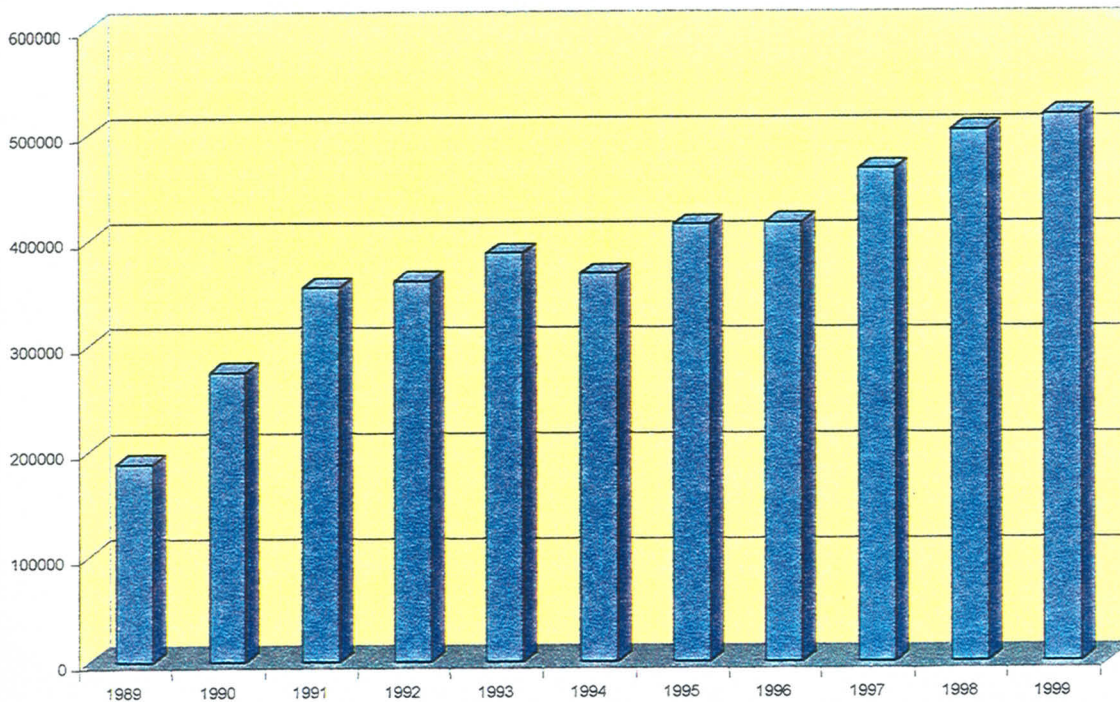
Increasing Ridership

Ridership on Amtrak trains nationwide has been increasing steadily between two and four percent during the past several years. Most of the growth in passenger rail has been along the West Coast and Pacific Northwest.

The number of passengers riding trains to and from North Carolina has nearly doubled during the past decade – from 273,832 in FFY 1990 to 516,976 in FFY 1999. Ridership on the state-sponsored *Carolinian* has increased steadily since service began in 1990 with more than 180,000 passengers using the train to travel to or from North Carolina each year. For the past several years, the *Carolinian* has been one of Amtrak's top performing trains in terms of cost recovery. Passenger revenues recover about 60% percent of the cost of the train's operation. Long distance service to popular destinations in the Northeast generates much of the revenue for this train.

Numbers of passengers on the state-sponsored *Piedmont* also have risen steadily since service began in 1995 – from nearly 26,000 passengers in its first year of operation to more than 55,000 during FFY 1999. Because of the shorter segment served, the *Piedmont* recuperates a lower percentage of its operating cost – about 18% annually. During its first three years of service, the *Piedmont* ranked first or second in customer service among all Amtrak operated trains in the nation.

Annual Ridership in North Carolina



Plans for Passenger Rail Service

The North Carolina Department of Transportation works with the various host railroads to continuously maximize operating efficiency for both freight and passenger trains operating in the state. In 1999, nearly 500 transportation planners, elected officials and business leaders attended the Passenger Rail and Transit Summit to discuss North Carolina's transportation needs and how to develop a comprehensive transportation system that would integrate rail, transit, highways and aviation. During the summit, the NCDOT outlined draft improvements for rail and transit services including developing a high-speed rail service through the southeastern states and commuter rail and/or bus services in the state's major metropolitan areas (see Appendix E- North Carolina Passenger Rail Plan).

The NCDOT Rail Division, in conjunction with the North Carolina Railroad and Norfolk Southern, plans to improve the busy Raleigh to Charlotte rail corridor to reduce travel time for both freight and passenger trains. The goal is two-hour passenger service between the two cities by 2010.



In addition, the Rail Division is studying the feasibility of extending conventional intercity passenger rail service to Western North Carolina and Eastern North Carolina. North Carolina also is working with neighboring states to develop high-speed rail service that will connect the Southeast to the Northeast Corridor. At the local level, the department of transportation is working with area transit authorities to plan commuter rail services for the greater Charlotte, Triangle and Triad regions.

In planning new passenger rail services, the NCDOT works to

achieve a balance between maximizing the number of passengers served and maximizing revenue return against operating cost. In the case of competing passenger service proposals, the greatest number of citizens should be offered the rail passenger service alternative by implementing new service proposals with the highest revenue return. In the case of new services being proposed as part of the Department's transportation policy with projected revenue returns below 15% of operating cost, local government funding support will be requested in order to attain that minimum level of revenue return.

Western North Carolina Passenger Service

The North Carolina Department of Transportation in 1997 reported on five alternatives for extending passenger rail service to Asheville and Western North Carolina. Based on an evaluation of each alternative's projected ridership, revenue production and costs, that study identified service from Raleigh to Asheville via Salisbury as the preferred route. The 2000 session of the North Carolina General Assembly directed the NCDOT to re-evaluate Western North Carolina service based on current conditions and develop more detailed cost estimates and conceptual plans. The updated study, to be submitted to the General Assembly in March 2001, will provide projections for ridership, revenue, and costs for equipment, operations, track improvements and stations between Salisbury and Asheville. In the meantime, the NCDOT is working with communities along the route to improve safety at railroad-highway crossings.

Eastern North Carolina Passenger Service

In early 2000, the Rail Division began studying travel patterns between the Triangle, Triad, Charlotte and Wilmington in planning for possible passenger rail service to Eastern North Carolina. Since operating and capital costs are high for any new intercity passenger rail service, the Wilmington area was chosen as the market in coastal North Carolina most likely to be successful. Three scenarios are being evaluated: Charlotte to Wilmington, Raleigh to Wilmington via Goldsboro, and Raleigh to Wilmington via Fayetteville.

High-Speed Passenger Service

The U.S. Department of Transportation in 1992 designated five national high-speed rail corridors; including the Southeast High-speed Rail (SEHSR) corridor that stretches from Washington, DC to Richmond, Raleigh and Charlotte. The corridor was later extended from Richmond to Hampton Roads, Charlotte to Atlanta and from Raleigh to Columbia, South Carolina and Jacksonville, Florida. Initial USDOT reports identified the Southeast as the most economically viable high-speed rail corridor in the country. Furthermore, the *Southeast High-Speed Rail Market and Demand Study* of August 1997 forecasted that the number of travelers using improved intercity and high-speed rail service in the Southeast would be comparable to ridership in the Northeast Corridor.

High-speed rail for the Southeast corridor is defined as service that is time-competitive with travel by automobile or airline for door-to-door trips. While the speeds vary somewhat from region to region, top speed will be 110 mph with an average speed of 87 mph.

Environmental Studies

The North Carolina Department of Transportation Rail Division and the Virginia Department of Rail and Public Transportation in 1999 began engineering and environmental studies for the Washington, DC to Charlotte portion of the Southeast High-Speed Rail Corridor. The states are studying the possible environmental impacts of high-speed rail in two phases and determining what type of signal controls should be used for the high-speed rail corridor.

The first phase, referred to as Tier I Environmental Impact Statement, will examine the need for the project and will concentrate on regional effects of high-speed rail in the corridor including implications for both natural and man-made environments. During this phase, the project team will meet with the public, political leaders, planners, resource agencies, freight railroads, commuter railroads and other interested parties to obtain input on high-speed rail in the Southeast.

The project team will consider public input, analyses of natural and man-made environmental impacts and feasibility studies.

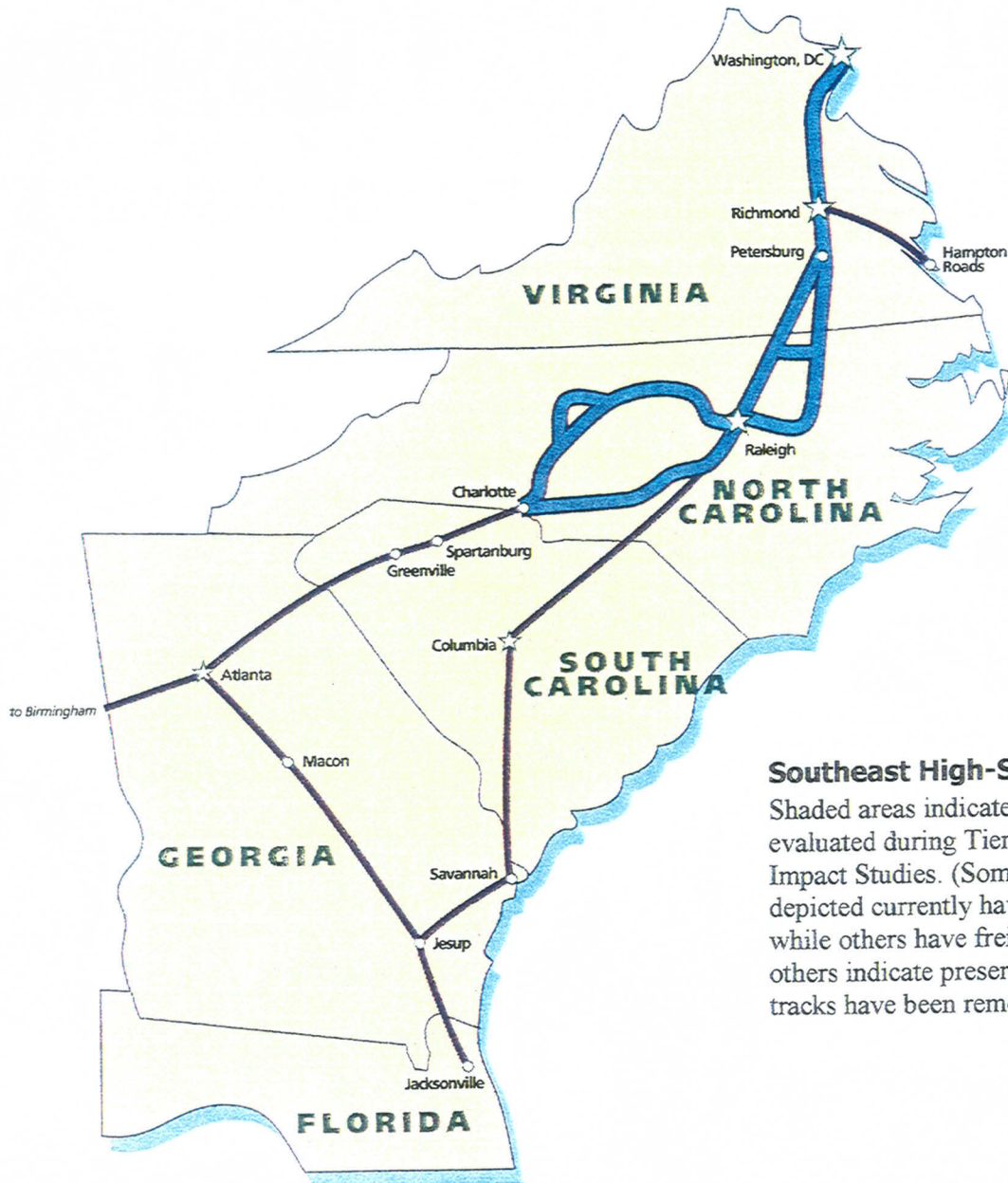
High-Speed Rail Corridor Timeline

Tier I	
Environmental Impact Statement	
<ul style="list-style-type: none"> • Prepare Draft Environmental Impact Statement • Hold public hearings and meet with regulatory agencies • Designate preferred route 	August 2000- September 2001
<ul style="list-style-type: none"> • Publish Final Environmental Impact Statement and Record of Decision 	Summer – Fall 2002
Tier II	
Environmental Studies	
<ul style="list-style-type: none"> • Determine specific alignments • Evaluate site-specific impacts 	2003-2007
Construction	
<ul style="list-style-type: none"> • Rehabilitate portions of the railroad, purchase equipment and enhance stations 	2007-2010
Implementation	
<ul style="list-style-type: none"> • Begin running high speed trains (110 mph max) along the Washington – Charlotte corridor 	2010
<i>Timeline subject to change</i>	

A draft report, which will summarize and present this information, will be circulated to the public and other parties for additional comment and input. The final report will address issues and concerns raised during this comment period. The Federal Highway Administration and the Federal Railroad Administration will then issue a Record of Decision for the project. The Tier I Environmental Impact Statement process should take two to three years to complete.

The NCDOT plans to obtain from the USDOT a Record of Decision for the first phase of the Southeast High-speed Rail Corridor Environmental Impact Statement before the end of FY 2002. After the Record of Decision has been issued, second tier environmental studies will examine specific corridor alignments and associated impacts, costs and mitigation measures of actual construction based on engineering designs. The Tier II studies will address specific impacts within the context created by the Tier I Record of Decision.

Once the corridor has been selected, the department should work to acquire access to the Southeast High-speed Rail corridor and make any necessary improvements to the rail line to accommodate freight rail service and 110 mph passenger rail service by 2010.



Southeast High-Speed Rail Corridor

Shaded areas indicate possible alignments evaluated during Tier 1 Environmental Impact Studies. (Some of the shaded routes depicted currently have Amtrak service, while others have freight service only and others indicate preserved corridors where tracks have been removed.)

Commuter Service

The NCDOT Rail Division works with local governments to plan and develop commuter rail service in the state's major urban areas. The Triangle Transit Authority is planning a 37-mile commuter rail system that stretches from north Raleigh to downtown, through Cary, Morrisville, Research Triangle Park and into Durham. The Metropolitan Transit Commission is taking the lead for planning and implementing various forms of bus and rail transit in Charlotte and the Mecklenburg County area. The Piedmont Authority for Regional Transportation has begun the study of transit, commuter and intercity rail options for the Greensboro, Burlington, High Point and Winston-Salem region.

Development of each system will require close coordination and planning between the local transit authority, the NCDOT and freight railroads.

The NCDOT also should study the needs and requirements for possible commuter rail routes (not already under way) which parallel both an existing railroad and a highway that carries more than its design capacity during rush hours.

CORRIDOR PRESERVATION

Since the 1920s, many miles of valuable rail corridors have been lost in North Carolina. The state also has lost the ability to return them to the productive freight and passenger uses for which they were originally built. This loss not only impacts economic development, but also affects the state's ability to meet future transportation needs. The North Carolina Department of Transportation is committed to preserving and revitalizing existing rail lines as an efficient and cost-effective way to develop and/or expand future freight, passenger, commuter and high-speed rail services.

The Rail Corridor Preservation Act, passed by the General Assembly in 1988, gives the department the power to become directly involved in preserving inactive railroads for "future rail use and interim compatible uses." Amendments to the Act passed during the 1989 session also declared it a public purpose for the NCDOT to reassemble critically important lost portions of rail corridors by condemnation. Funding for rail corridor acquisition is provided by an annual allocation of up to \$5 million authorized by the Highway Trust Fund. These funds may be used for economic rail route alternatives to highway construction.

Corridor Acquisition

The NCDOT has identified strategic rail corridors (see Figure 4 - Strategic Rail Corridors) for future use in freight, passenger or commuter train service. Most of these corridors are operated by freight railroads, while some are currently inactive. If any of these corridors were to be offered for sale or considered for abandonment, the state should make every effort to preserve them.

Railroads or corridors that normally are preserved include those that connect major metro areas that may be used for conventional freight or passenger service, high-speed trains or commuter rail. Other rail corridors that may be preserved include those which: have an economic importance due to their location near rail freight-dependent activities; may be developed as a shortline; or may be used for future pipeline or communications routes. Rail lines also may be preserved to insure rail freight service to a city, port or other center of economic activity.

State acquisition of a rail corridor is justified when it is the most efficient and cost-effective means of preserving the rail corridor and there are no complications that would prevent return to active rail use. Acquisition is not warranted when there is little potential for future rail service, the purchase price is unreasonable, preservation is not necessarily dependent on the NCDOT's involvement, development has taken place or there are other physical characteristics that raise significant questions about the economical return to rail use.

State-owned Rail Corridors

The department, in 1988, purchased its first railroad – the 67-mile Murphy Branch setting the precedent for other similar acquisitions. Since then, NCDOT has acquired 79.23 miles of rail to be preserved for future use (see Appendix D – Rail Corridors Owned by the NCDOT).

The most important rail corridor owned by the state is the North Carolina Railroad (NCR). Unlike the other rail corridors that are owned by the NCDOT, the North Carolina Railroad is owned by a private corporation, the North Carolina Railroad Company, which is governed by a Board of Directors appointed by the Governor and the General Assembly leadership. Originally built in the 19th century with most of the financing provided by the State of North Carolina, the 317-mile corridor runs from Charlotte through the Triad and Triangle areas and eastern North Carolina terminating at the Morehead City port.

Since 1895, the North Carolina Railroad has been leased to Norfolk Southern for freight operations (the Greensboro to Charlotte portion is part of NS's mainline). In 1998 the General Assembly bought out private shareholders of the NCR for \$71 million and the railroad became solely state-owned. In 1999, NCR and Norfolk Southern renegotiated a 15-year operating lease that grants NS freight operating rights for \$11 million annually.

Encroachments

To help preserve state-owned railroads and rail corridors, the NCDOT has established guidelines for interim use of rail rights-of-way. In general, the department allows adjacent property owners to use and maintain the corridor for private, noncommercial use until the line is returned to active rail use. If the track is in place, the adjacent property owner may use and maintain the corridor to a point not more than 15 feet from the centerline of the track. A formal interim use – or “encroachment” – agreement is required.

State owned rail corridors or encroachment of corridors may not be sold or leased to private, for-profit entities for less than fair market value. When state corridor property is being used for commercial purposes, an agreement based on current fair market value is required. Rates are based on comparable industry standards and adjoining land values.

The NCDOT allows organizations to establish interim trails on state-owned corridors if they meet statutory requirements. In order to lease a state-owned railroad corridor for interim public recreational (including trail) use, groups must:

- have a sponsoring unit of local government hold a public hearing notifying adjacent property owners
- have a unit of local government assume development costs as well as management, security and liability responsibilities for the trail
- offer adjacent property owners voting representation in the organization
- verify with the NCDOT that corridor will not have active rail service for 10 years



Bicyclists and walkers enjoy the American Tobacco Trail: an interim recreational trail on one of the state-owned rail corridors.

Plans for Corridor Preservation

Currently, the NCDOT is negotiating with CSX to purchase 3.28 miles from Norlina to Ridgeway and seven miles from Norlina to the Virginia State Line for future economic development, intermodal rail freight and possible high-speed rail use. In addition, the state is planning to purchase 29 miles of abandoned rail corridor between Norlina and Roanoke Rapids to provide better passenger and freight rail access from Raleigh north to CSXT’s main line. Future passenger service to Hampton Roads also is a possibility in the long term. Also, the state is examining 1.25 miles near Wilmington as a component of potential passenger rail service between Raleigh and Wilmington.

The North Carolina Department of Transportation should work to earmark state funds as needed to acquire rail corridors in jeopardy of abandonment and/or disposition. Once the corridor or rail line has been acquired, the department should work with adjacent property owners and communities and local governments along the route to use preserved corridors for interim rail-trails, maintain track and crossing surfaces and control vegetation along the corridor.

In addition, the NCDOT should evaluate all state-owned rail corridors for maintenance needs and develop a comprehensive capital improvement and maintenance plan to maintain the viability of acquired rail corridors in order to resume or inaugurate new freight, inter-city passenger trains and/or commuter-passenger trains.

Appendix A

Shortline Facilities

Track Class (miles) Rail Wgt. (mi.) Handle
 Excpt. I II III <90# >90# 286k cars? 34 mi. Yes
 70 68 40 98 104 mi. No

Railroad Name	Miles	History	1998 Cars	Commodities	Excpt. I	II	III	<90#	>90#	Handle
Aberdeen Carolina & Western Rwy (ACWR) Star-Aberdeen Charlotte-Gulf	138	The former NS line from Star to Aberdeen was converted to a shortline in 1983. Charlotte to Gulf is owned by Norfolk Southern and leased to ACW (since 1989)	16,000	Forest products grain and plastic	70	68	40	98	34 mi. Yes 104 mi. No	
Aberdeen & Rockfish RR (AR) River Terminal - Aberdeen	47	The shortline was incorporated in 1892. They lease the Pee Dee River Rwy in SC. The Dunn-Erwin RR, a subsidiary was abandoned in 1999 and converted to a rail-trail.	4,500	Chemicals, scrap metal, steel and plastic	47		45	2	No	
Alexander RR (ARC) Statesville - Taylorsville	18	Purchased in 1945 from NS; currently locally owned and operated.	2,560	Grain, pulpboard sand, waste paper cement, chemicals	18		16	2	Yes	
Atlantic and Western Rwy. (ATW) Sanford to Cummock	10	Formed in 1896. Tracks in Sanford (3.5 miles) were purchased in 1988 by Earl Durden and the Green Bay Packaging Co. In 1996, ATW purchased 6.5 miles from Sanford to Cummock from NS.	938	Scrap metal, paper and food products	4	6	4	6	No	
Beaufort & Morehead Rwy. (BMH) Beaufort - Radio Island	1	Began operations in 2000 as the Beaufort Morehead Rwy.	n/a	Fertilizer, fish meal wood products	1			1	Yes With permit	
Caldwell County RR (CWCY) Lenoir - Hickory	23	Caldwell County purchased the line from NS in 1995. It is leased to Southeast Shortlines.	377	Scrap metal, plastic and wood products	23		18	5	No	
Cape Fear Railways (CFR) Ft. Bragg AFB	16	The shortline was established in 1926 to switch Ft. Bragg military traffic.	3,000	Aviation fuel and military supplies	10			10	Yes	
Carolina Coastal Rwy. (CLNA) Pinetown-Belhaven	17	The track is owned by Norfolk Southern Rwy and leased to Rail Link since 1989.	1,500	Grain, lime and other agricultural products	17			17	No	
Carolina Southern RR (CALA) Mullins SC - Conway SC	39 in NC 76 total	This former CSX line was converted to a shortline in 1987.	17,000	Coal, wood products, chemicals, and stone	39				No	
Carolina Rail Service Inc. (CRLJ) Morehead City State Port	3	Owned by the NC State Port Railway Commiss., leased to Carolina Rail Services	9,352	Woodchips, borate	3			3	Yes	
Chesapeake & Albemarle (CA) RR, Edenton to Fentris, VA	54 in NC 82 total	The track is owned by Norfolk Southern Rwy. and has been leased since 1990 to RailTex (now Rail America)	8,000	Stone, forest products grain, coal, fertilizer scrap iron	54			54	No	

Appendix A

Shortline Facilities

Railroad Name	Miles	History	1998 Cars		Track Class (miles)			Handle 286k cars?		
			Commodities	700	Rail Wgt. (mi.)					
					Excpt.	I	II		III	<90#
Clinton Terminal (CTR) Clinton	3	This railroad was acquired from CSXT in 1994 and is operated as a shortline.	Steel		1	2	1	3	1	No
Great Smoky Mountain Railroad (GSMR) Dillsboro-Andrews	53.1	The railroad was purchased by the state in 1988 and leased to a private operator (66 mi). The state sold 53.1 miles to the line's operator in 1996. It was later sold to American Heritage Railways, Inc.. It is primarily a passenger (tourist	Forest products, and grain.	215 (in 1996)			53.1	47	6.1	No
Laurinburg & Southern Co. (LRS) Johns-Rae ford	28	The shortline was established in 1909. It was sold in 1998 to the Gulf & Ohio Railway.	Grain, fertilizer soda ash, coal, lime	5,500			30			No
North Carolina & Virginia RR (NCVA) Boykins VA - Tunis NC	53	RailTex (now Rail America) purchased the line from CSX in 1987.	Lumber and wood chips, particle board peanuts, chemicals and grain.	2,800			53	20	33	No
Nash County RR (NCYR) Rocky Mt-Spring Hope	19	Laurinburg & Southern RR purchased the line from CSX in 1985. It was sold in March 1994 to the Gulf & Ohio Rwy.	Cement, scrap, grain, steel, insulat.	6,000			20			No
Red Springs & Northern RR (RSNR) Red Springs to Parkton	12.5	The line was purchased in 1985 (from CSXT) by Advancement Inc. and a shortline was established. Service was terminated in 1998.	n/a	n/a			12			No
Thermal Belt Rwy. (TBRY) Gilkey-Forest City Forest City to Bostic	16.5	The Rutherford RR Development Corp. acquired two lines now operated as a single shortline. The railroad is leased to Southeast Shortlines. The segment north of Spindale (8 mi.) will be converted to a rail-trail.	Plastic, pulpwood, building materials, and sand.	240			16			No
Virginia Southern RR (VS) Oxford-Burkesville	10 in NC 75 total	Since 1998, RailTex (Rail America) has leased from NS. Operated as division of North Carolina & Virginia RR. NC portion is inactive.	Forest products, coal, fructose	5,200			10			No
Wilmington Terminal RR (WTRY) Wilmington Port	8	Owned by NC Ports Railway Commission. Leased to Wilmington Terminal RR since 1986.	Steel, chemicals and paper products	10,000			8	1	7	Yes
Yadkin Valley RR (YVRR) Mt. Airy-Wilkesboro	93	The line is owned by Norfolk Southern Rwy and leased to the Laurinburg & Southern in 1989. The Gulf & Ohio Railway took over the lease in	Forest products, coal, grain, and fiberboard.	15,500			30	63	63	Yes

Appendix B

Rail Industrial Access Program Summary

Through the Rail Industrial Access Program, the Rail Division helps new companies finance construction of rail spurs required to serve new or expanding businesses as part of a statewide effort to attract industry to North Carolina. Since the program began in 1994, the division has funded 45 projects and built a total of 18.6 miles of track.

PROJECTS/FUNDING			ECONOMIC BENEFITS				COMMUNITIES AFFECTED				
FY	# of Projects	State Funding	Employ.	Capital Invest.	Rail Cars	Truck Equiv.	West	Pied.	East	Rural	Small/Urban
1994	3	\$206,131	630	\$42,000,000	230	920	0	1	2	2	1
1995	7	\$584,234	843	\$128,000,000	4,542	18,168	2	4	1	2	5
1996	4	\$511,992	736	\$74,000,000	1,710	6,840	2	1	1	1	3
1997	9	\$654,299	481	\$128,000,000	6,511	26,044	3	2	4	6	3
1998	9	\$741,239	494	\$181,000,000	7,112	28,448	2	1	6	6	3
1999	7	\$706,750	1164	\$152,000,000	5,417	21,668	0	5	2	6	1
2000	6	\$647,775	1272	\$188,000,000	3,588	14,352	2	2	2	4	2
Total	45	\$4,052,420	5,620	\$892,000,000	29,110	116,440	11	16	18	27	18

INDUSTRY/LOCATION	BUSINESS/PRODUCT	INDUSTRY/LOCATION	BUSINESS/PRODUCT
Advanced Drainage Systems, Bessemer City	Pipe Manufacturer	Imperial Freezer, Sanford	Public Freezer
AlSCO-Amerimark, Fair Bluff	Vinyl Siding	Interstate Bakeries, Rocky Mount	Bakery Goods
Atlantic Structures, Everetts	Building Products	MasterBrand Cabinets, Kinston	Wood Cabinets
Brigadier Homes of NC, Nashville	Manufactured Homes	Midstate Mills, Wilson Mills	Flour Milling
Brown's of Carolina, Bladenboro	Feed Mill/Swine	Mountaire Farms, Candor	Feed Mill/Poultry
Buckeye Technologies, Mt. Holly	Airlaid Nonwovens	Patrick Industries, Richfield	Building Products
Builders Supply and Lumber, Harrisburg	Wood Products	PCH, LLC, Landis	Corrugated Paper Sheets
Builders Supply and Lumber, Hillsborough	Wood Products	Polar Plastic, Mooresville	Disposal Cutlery, Cups, Plates
Cardinal FG, Mooresville	Glass Manufacturing	Real Homes, Candor	Modular Homes
Case Farms, Morganton	Feed Mill/Poultry	Release International, Eden	Release Paper
Coastal Cottonseed, Kinston	Cottonseed Merchandiser	Resinal Corp, Severn	Resins
Coastal Carolina Cotton Gin, Tierra Ceia	Cotton Gin	Sara Lee Bakery, Tarboro	Bakery Goods
Cott Corporated, Leland	Beverage Bottling	Shurtape Technology, Hickory	Masking Tape
Dopaco, Kinston	Paperboard Packaging	Shurtape Technology, Hudson	Carton Sealing Tape
Easco Aluminum, Winton	Aluminum Recycling/Manufact.	Southern Container, Mooresville	Corrugated Containers
Eclipse Packaging, Statesville	Packaging	Southeastern Packaging, Harrisburg	Corrugated Sheets
Empire Industries, Tarboro	Consumer Goods	Steel Technologies, Clinton	Rolled Steel
Eritech, Aberdeen	Grounding Rods	Stockhausen, Greensboro	Specialty Chemicals
FNA Polymer, Mooresville	Spunbond Roll Goods	Tidewater Transit, Fayetteville	Chemical/Plastic distribution
FMC - Lithium Division, Bessemer City	Pharmaceutical Products	Tolaram Polymer, Asheboro	Polyester Chips
Gulf States Paper, Mooresville	Paperboard Packaging	Unifi, Mocksville	Nonwoven synthetic fabric
Homanit GmbH, Mt. Gilead	Fiberboard	Weyerhaeuser, Hanrahan	Sawmill
		Wolverine Tube, Roxboro	Copper Tubing

Appendix C

North Carolina Passenger Train Station Improvements

The chart depicts recent and planned passenger rail facility improvement projects which have received funding and assistance from the NCDOT.

City	Built	Description	Status
Burlington	1999	Temporary modular station	Completed
Cary	1996	New Station – includes DMV Driver License Office and waiting room for train/bus passengers	Completed
Charlotte (existing)	1968	Passenger & Amtrak employee facilities to be expanded in 2000	Construction to begin in winter 2001
Charlotte (new)	Proposed	New multi-modal transportation center to be completed in 2006; planning and site acquisition underway	Design work to be completed in summer 2002; construction to begin in winter 2003
Durham	Proposed	Historic Walker warehouse to be converted to multi-modal transportation center; design work underway	Design work to be completed in summer 2001; construction to begin in winter 2002
Greensboro	1927	Historic station to be converted to new Multi-Modal Transportation Center; to begin in 2001	Design work to be completed in 2000; construction to begin in spring 2001
Hamlet	1900	Relocation & Renovation to begin in 2001	Design work to be completed in spring 2001; construction to begin in winter 2002
High Point	1907	Renovation to begin in 2001	Design work to be completed in 2000; construction to begin in winter 2001
Kannapolis	Proposed	New station to open in 2003	Design work to be completed in summer 2001; construction to begin in fall 2001
Raleigh (new)	Proposed	New multi-modal transportation center; planning underway	Design work to be completed in 2001; construction to begin in spring 2002
Raleigh (existing)	1950	Expansion completed in 2000	Completed
Rocky Mount	1893-1916	Expansion & Rehabilitation completed in 2000	Underway
Salisbury	1908	Expansion & Rehabilitation completed in 1999	Completed
Selma	1924	Rehabilitation to begin in 2001; temporary station to be installed in late 2000	Design work completed in 2000; construction to begin in spring 2001
Wilson	1924	Add long-term parking and renovate passenger waiting room	Design work completed; construction to begin in winter 2001

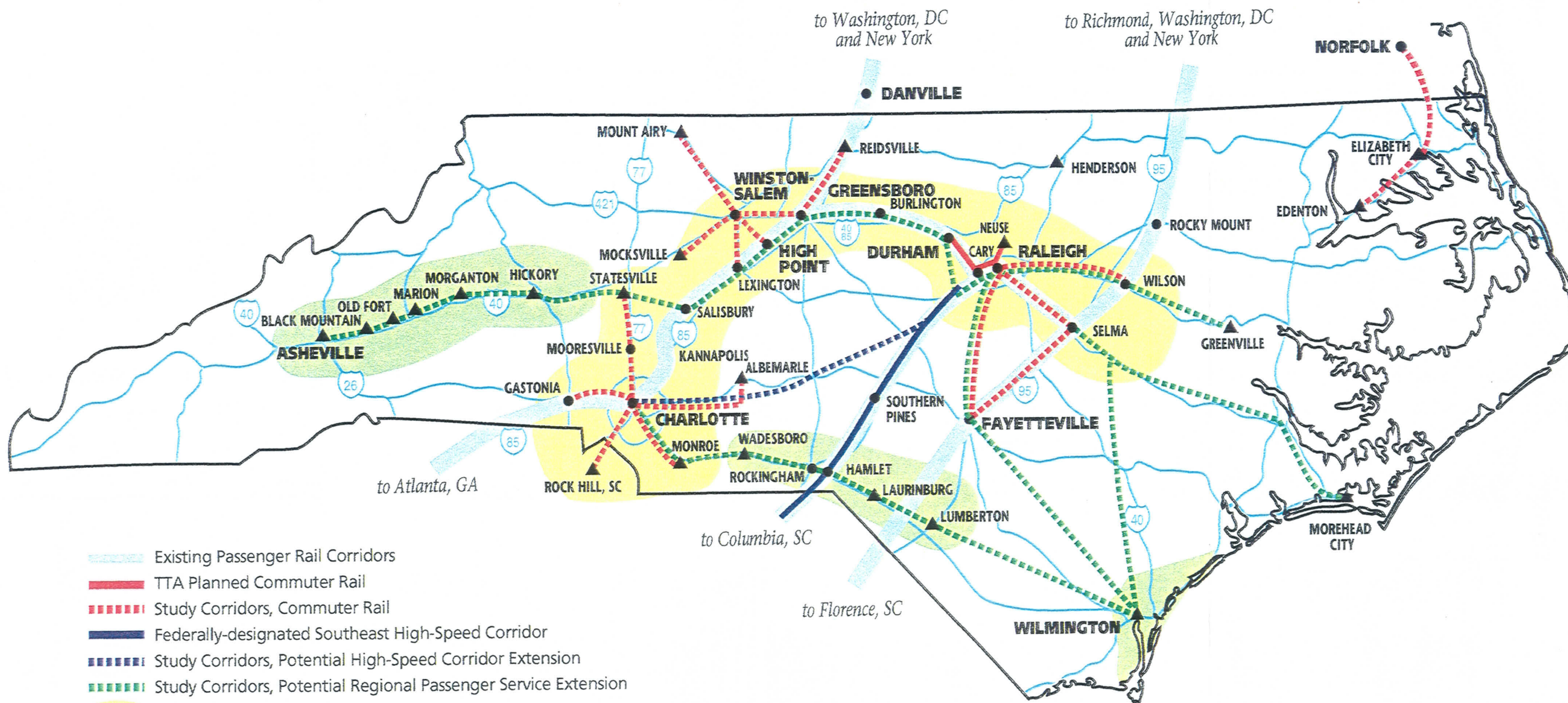
Appendix D

**Rail Corridors Owned by the
North Carolina Department of Transportation**

Corridor	Location	Date Acquired	Mileage (length)	Milepost
Piedmont & Northern (Charlotte)	Charlotte	11-27-91	0.77 miles	SFC 0.75 to SFC 1.52
Piedmont & Northern (Mt. Holly)	Mt. Holly to Gastonia & Belmont	12-5-91	10.64 miles - Main Line 2.98 miles - Spur Line	SFC 11.39 to SFC 22.05 to SFF 0.15 to SFF 3.13
Maiden Branch	South Newton to Lincoln Co. Line	4-13-93	6.3 miles	HG 70.07 to HG 77.00
Franklin County	Franklinton to Louisburg	11-2-90	9.6 miles	SC 130.20 to SC 139.84
Wilmington & Weldon	Wallace to Castle Hayne	8-4-94	26.3 miles	C208.7 to C235
Durham & South Carolina	Durham tol-40 & Wake Co. Line to New Hill	8-15-95	15.5 miles	DD 38.0 to DD 33.7 (Durham portion)
Murphy Branch	Andrews to Murphy	7-18-88	14.23 miles	T100.1 to T114.1

North Carolina Passenger Rail Plan

Appendix E



- Existing Passenger Rail Corridors
- TTA Planned Commuter Rail
- Study Corridors, Commuter Rail
- Federally-designated Southeast High-Speed Corridor
- Study Corridors, Potential High-Speed Corridor Extension
- Study Corridors, Potential Regional Passenger Service Extension
- Urban Service Areas
- Regional Service Areas
- Existing Passenger Rail Station
- Potential Future Passenger Rail Station
- Highway Network

North Carolina Freight Railroads

Figure 1



Twenty-five freight railroad companies operate 3,379 miles of railroads in the state. CSX Transportation and Norfolk Southern Railway operate three-fourths of North Carolina's rail system, 23 shortlines operate the remaining portion.

1999 Freight Rail Traffic Density Map

Figure 2



The map highlights the amount of rail freight (millions of tons) shipped in 1999 and indicates rail traffic patterns.

Changes in Freight Rail Traffic Density

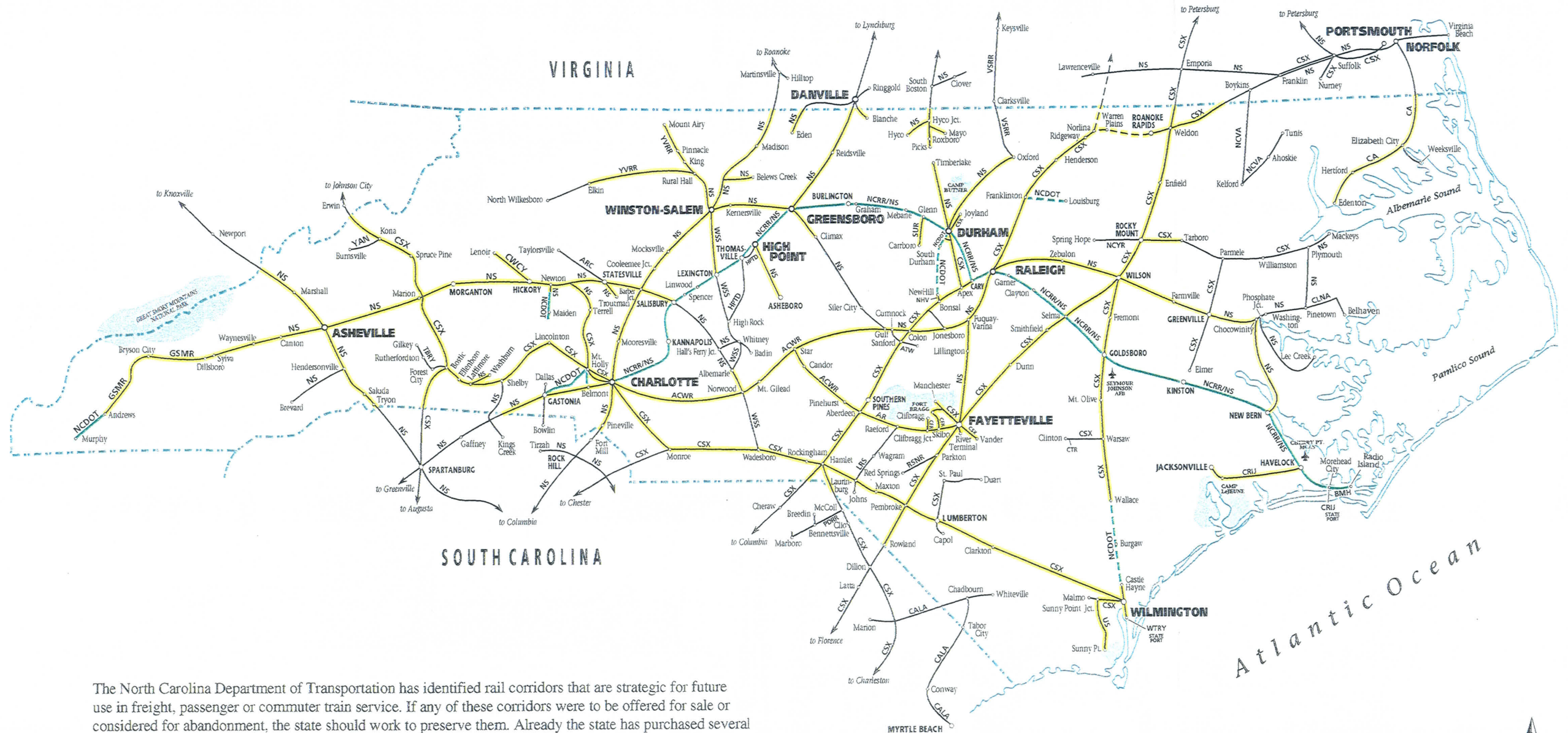
Figure 3



While overall freight traffic in North Carolina increased during the past decade, traffic on some routes decreased. The map depicts overall changes in freight rail traffic patterns.

Strategic Rail Corridors

Figure 4



The North Carolina Department of Transportation has identified rail corridors that are strategic for future use in freight, passenger or commuter train service. If any of these corridors were to be offered for sale or considered for abandonment, the state should work to preserve them. Already the state has purchased several key corridors to preserve them.

- Strategic Rail Corridors
- State-owned Strategic Corridors
- - - Corridor preserved, tracks removed

