

# North Carolina State Rail Improvement Program



NC Department of Transportation  
Rail Division  
November 1998

**FY 1999 to 2006**

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## Preface

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In 1980, 1983, and 1990 the North Carolina Department of Transportation published *Rail Plans* detailing existing and planned rail activities by the department. The North Carolina Department of Transportation's Rail Division is developing an updated version of this in-depth *Rail Plan* to be finalized in early 1999.

This new document entitled *North Carolina State Rail Improvement Program - Fiscal Years 1999 to 2006* is an abbreviated summary of rail activities. It is designed to complement the State Transportation Improvement Program process by providing background on the Rail Division and explaining rail programs included in the State Transportation Improvement Program. This document will not replace the full-length, in-depth *Rail Plan*. Visit our web site at [www.bytrain.org](http://www.bytrain.org) for more information about rail activities in North Carolina.

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## **Introduction**

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Passenger rail and freight planning in the State of North Carolina is undergoing a period of dramatic changes. Significant changes will continue to take place well into the future. With the rising population and growth of highway and air traffic in the state, rail will become increasingly important as an alternative to auto and air transport for both freight and passengers. Significant mergers in the railroad industry have taken place in recent years and will impact future rail freight traffic. The state plans to expand North Carolina's rail passenger network to several locations which are not currently served. The state also will make incremental improvements to reduce travel time along the corridor from Charlotte to Raleigh via Greensboro in an effort to achieve auto and air competitive service. An extension of this high-speed service north from Raleigh to Richmond, Virginia and on to Washington, D.C. is planned, as well as eventual extensions to other cities in the Southeastern United States. This document summarizes major programs the North Carolina Department of Transportation (NCDOT) Rail Division plans to undertake in the coming years. The rail projects from the State Transportation Improvement Program (STIP) for fiscal year (FY) 1999 to FY 2006 are summarized in a separately available rail STIP project list.

## **Enabling Legislation**

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A variety of legislation has been passed over the years defining the roles and responsibilities of the NCDOT with respect to the state's railroad system. The NCDOT began work in 1977 to promote, preserve and develop the state's railroad system as part of an efficient multi-modal transportation network. That year the North Carolina General Assembly passed G.S. 136-44 authorizing the NCDOT *to adopt and implement a State Rail Plan*. Subsequent 1979 legislation authorized the NCDOT to utilize state and federal funding to undertake railroad revitalization projects to include, but not limited to, acquiring a railroad line or other rail property to maintain existing or to provide future rail service; rehabilitating and improving rail property on railroad lines to the extent necessary to permit safe, adequate and efficient rail service on such lines; and constructing rail or rail related facilities for the purpose of improving the quality efficiency and safety of rail service. As discussed in further detail in a subsequent section on rail corridor preservation, legislation passed by the General Assembly in 1988 gave the NCDOT the power to purchase railroads and preserve rail corridors. Legislation passed by the General Assembly in 1995 transferred the rail safety section from the utilities commission to the NCDOT. Legislation passed in 1998 by the General Assembly repealed a variety of outdated railroad legislation and transferred several remaining rail responsibilities from the utilities commission to the NCDOT.

## **NCDOT Organization**

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The NCDOT consists of the following transportation divisions: Division of Highways (DOH), Rail Division, Public Transportation Division, Aviation Division, Ferry Division, and Bicycle and Pedestrian Division. The Rail Division's purpose is to help develop and maintain a safe and effective rail system and to enhance local and statewide economic development. The Rail Division's top priorities include preserving and modernizing railroad tracks, purchasing inactive railroad corridors, improving safety at railroad-highway intersections, performing safety inspections and providing, marketing and improving state-

sponsored intercity passenger rail service. The Rail Division operates through the Engineering and Safety, Planning and Operations Branches.

The members of the North Carolina Board of Transportation (BOT) are appointed by the Governor and are responsible for formulating policies and priorities for all modes of transportation under the NCDOT. The BOT is responsible for approving the STIP, allocating funds appropriated by the General Assembly, as well as federal aid funds that may be available and promulgating rules, regulations and ordinances concerning all transportation functions assigned to the NCDOT. The BOT currently consists of 26 members.

## **Funding**

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Rail Program funding comes primarily from state appropriations. Where available, the NCDOT can also obtain federal grant funding for rail activities through the Transportation Equity Act for the 21st Century (TEA-21) passed by Congress in June 1998, which replaced the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. Associated funding sources for individual rail projects are identified in the FY 1999 to FY 2006 rail STIP project list.

### **State Funding**

Sources of state funding are the Highway Fund and North Carolina Railroad Company dividend payments. The Transit 2001 Commission, discussed in more detail in a subsequent section, was appointed in 1995 to study rail and public transportation needs in the state. In 1997 the North Carolina General Assembly approved funding of \$36 million to implement the Commission's recommendations to make specific investments to improve public transportation and rail transit in North Carolina. Allocations from the State Highway Fund are made available to the Rail Division to implement the Commission's recommendations for the rail program. An annual appropriation from the State Highway Fund finances the Division's Rail Industrial Access and Safety Inspection Programs. The Highway Trust Fund authorizes an annual appropriation from the State Highway Fund to fund economical alternatives to highway construction. Funds from this appropriation are used to pay the costs of marketing, operations and capital improvements for the state-sponsored passenger trains. The NCDOT also receives dividend payments from the North Carolina Railroad Company (NCRR), a state-owned corporation. Funds received from the NCRR can be used for various 'rail purposes' such as passenger services, grade crossing protection and rail rehabilitation.

### **Federal Funding**

North Carolina has received grant funds from the ISTEA's Surface Transportation Program (STP) to fund safety construction activities, station rehabilitation projects and corridor preservation efforts. The Rail Division undertakes Rail Improvement Measures to Provide Alternate Corridor Transportation (Rail IMPACT) to make strategic capital improvements that allow a reduced travel time between Raleigh and Charlotte. Set-aside funds for safety construction activities for the Rail IMPACT program have been provided by ISTEA. The ISTEA STP has also provided funds for Transportation Enhancement Activities including renovation of historic transportation buildings and railroad corridor preservation. The Enhancements program is continued under TEA-21.

A variety of other ISTEA grants has been received by the state for the development of high-speed passenger service in the corridor between Charlotte and Washington, D.C. In FY 1992 the Charlotte to Washington Piedmont High-Speed Corridor (PHSC) was designated by the United States Department of Transportation (USDOT) for future high-speed rail use under section 1010 of ISTEA. Between FY 1993 and 1996 the state received \$1.5 million in ISTEA 1010 grants. Funds from these grants have been used to develop a statewide inventory of at-grade crossings and to make crossing improvements in North Carolina. In FY 1995 ISTEA Next Generation High-Speed Rail grants in the amount of \$2 million were authorized to develop a Master Plan for high-speed rail service. The plan identifies improvements necessary for high-speed rail service between Charlotte and Washington and estimates revenues, benefits and costs. In FY 1997 the state was awarded a \$2.7 million ISTEA Next Generation High-Speed Rail grant to implement the Sealed Corridor project. The Rail Division is working with Norfolk Southern Railway to "seal" the heavily traveled Greensboro-Charlotte portion of the PHSC through consolidation of redundant crossings and use of various protective devices such as median barriers and four-quadrant gates. Sealed Corridor activities are discussed more fully in the Railroad Safety section of this report. A \$200,000 Next Generation High-Speed Rail grant was awarded in 1998 to begin an environmental impact statement on the PHSC.

## **North Carolina Railroad System**

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North Carolina's rail system is extensive and well developed. It serves 90 of the state's 100 counties and consists of 3,396 track miles. The interstate rail system has an overall north-south orientation. The east-west routes reflect state initiatives to encourage freight movement toward the state's port and to link together the state's geographic regions. The rail network is presented with information on ownership along the various lines in Figure 1 on the following page.

### **Railroad Companies**

There are 27 railroad companies operating in North Carolina. Two of these railroad companies, CSX Transportation (CSXT) and Norfolk Southern (NS), are Class I railroad companies with annual operating revenues of \$256 million or greater. In North Carolina, CSXT operates 1,144 miles or 33.7 percent of the state system and NS operates 1,453 miles or 42.8 percent of the state system. The recent acquisition of Conrail significantly impacts the systems of CSXT and NS in the Northeast and upper Midwest. CSXT will remain the largest railroad east of the Mississippi River and will provide rail transportation over 23,000 track miles in 23 states. The NS railroad system will extend over 21,400 miles in 22 states in the Southeast, Midwest and parts of the Northeast. The North Carolina Railroad Company (NCRR) is a private corporation in which the state owns 100 percent of the stock. The NCRR owns 317 of the miles over which NS operates or 9.4 percent of the state system. The lease for this arrangement is currently being negotiated. The remaining 24 railroad companies operating in North Carolina are shortline railroads. These smaller railroad companies operate over 799 miles or 23.5 percent of the state system.

### **Shortline Railroads**

Shortlines are small railroads that operate over a short distance. Shortlines generally move freight less than 100 miles to an interchange point with a mainline railroad and have

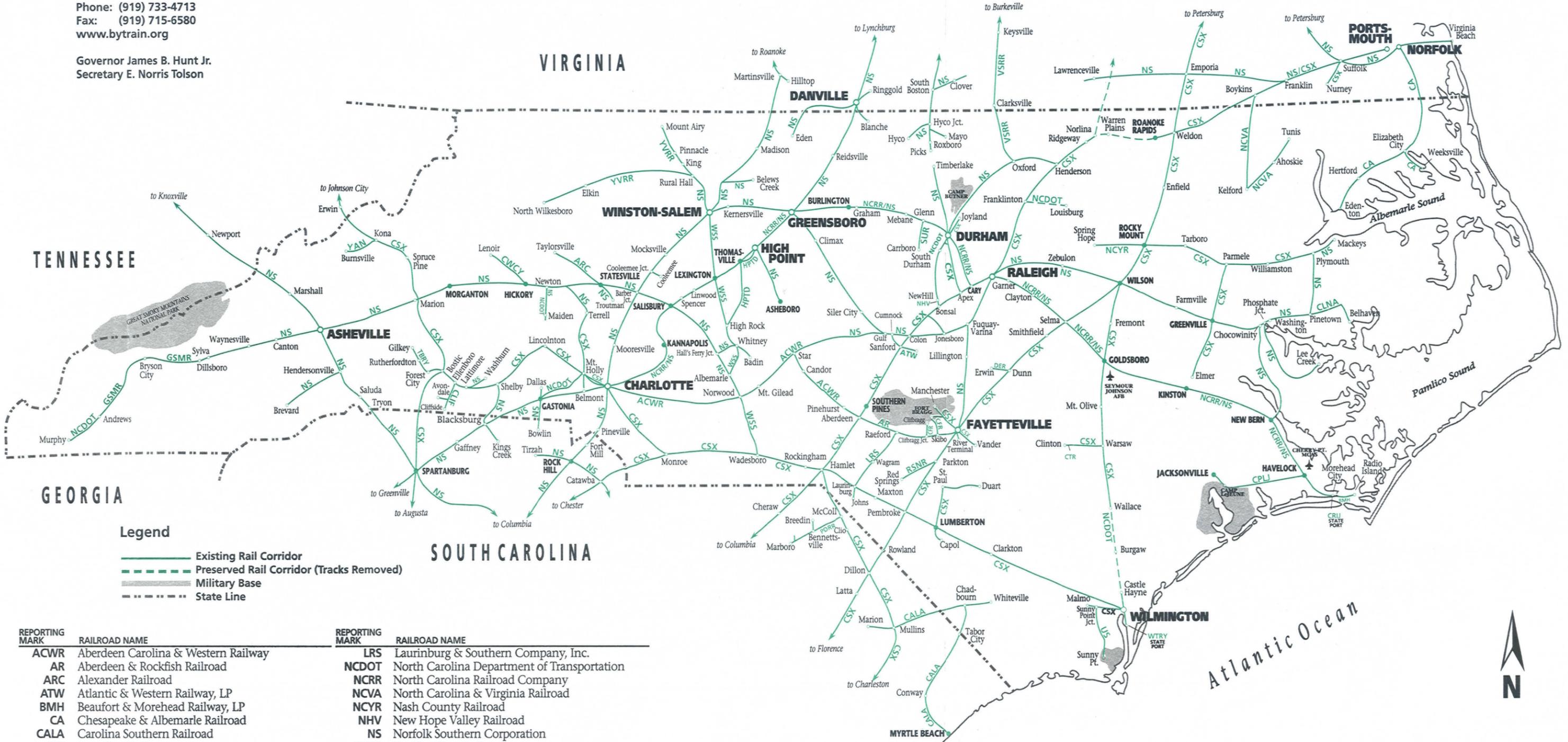


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# NORTH CAROLINA RAILROAD SYSTEM



### Legend

- Existing Rail Corridor
- - - Preserved Rail Corridor (Tracks Removed)
- Military Base
- State Line

REPORTING MARK	RAILROAD NAME	REPORTING MARK	RAILROAD NAME
ACWR	Aberdeen Carolina & Western Railway	LRS	Laurinburg & Southern Company, Inc.
AR	Aberdeen & Rockfish Railroad	NCDOT	North Carolina Department of Transportation
ARC	Alexander Railroad	NCRR	North Carolina Railroad Company
ATW	Atlantic & Western Railway, LP	NCVA	North Carolina & Virginia Railroad
BMH	Beaufort & Morehead Railway, LP	NCYR	Nash County Railroad
CA	Chesapeake & Albemarle Railroad	NHV	New Hope Valley Railroad
CALA	Carolina Southern Railroad	NS	Norfolk Southern Corporation
CFR	Cape Fear Railways	PDRR	Pee Dee River Railway
CLIF	Cliffside Railroad	RSNR	Red Springs & Northern Railroad
CTR	Clinton Terminal Railroad Co.	SUR	State University Railroad
CLNA	Carolina Coastal Railway	TBRY	Thermal Belt Railway
CPLJ	Camp Lejeune Railroad	US	US Military
CRJ	Carolina Rail Service, Inc.	VSRR	Virginia Southern Railroad
CSX	CSX Transportation	WSS	Winston-Salem Southbound Railway
CWCY	Caldwell County Railroad	WTRY	Wilmington Terminal Railroad, Inc.
DER	Dunn-Erwin Railway	YAN	Black Mountain Railroad
GSMR	Great Smoky Mountains Railway	YVRR	Yadkin Valley Railroad
HPTD	High Point, Thomasville & Denton Railroad		

**AMTRAK STATIONS IN NORTH CAROLINA**

Burlington	Fayetteville	High Point	Salisbury
Cary	Gastonia	Kannapolis	Selma
Charlotte	Greensboro	Raleigh	Southern Pines
Durham	Hamlet	Rocky Mount	Wilson

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CROSSINGS

August 1998

annual revenues of less than \$40 million. Shortline railroads primarily serve rural areas and are a growing industry in North Carolina due to CSXT and NS initiatives to abandon or lease light density lines. The NCDOT has played a role in the development of the state's shortline industry. Many of the tracks were neglected and a significant capital investment was required prior to reestablishing service. The NCDOT has funded rehabilitation and capital improvements on 13 shortline railroads and helped public entities purchase four shortline railroads.

### **Freight Traffic**

Railroads provide a vital freight service, transporting a large and varied assortment of commodities. In 1996, approximately 106 million tons of freight were shipped or received by North Carolina railroads. The top seven commodities based on annual gross tonnage originating and terminating in the state in 1996 were coal, lumber and wood products, chemicals, farm products, glass and stone products, non-metallic minerals and waste and scrap.

### **Freight Trends and Issues**

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Several trends in the freight industry are affecting the face of the North Carolina railroad system. Among these trends are significant corporate mergers and acquisitions, line abandonments and subsequent revitalization of such lines by smaller railroads and increasing emphasis on intermodalism.

### **Mergers and Acquisitions**

The most significant acquisition in the recent history of railroad companies is the acquisition of Conrail by CSXT and NS. Conrail was created by the federal government in 1976 and sold through a public stock offering in 1987. Shareholders sold Conrail to CSXT and NS in 1997 and the United States Surface Transportation Board approved the railroads applications for operational control in mid-1998. The operating plan outlined a division of Conrail's routes between CSXT and NS that best fits with their existing systems. Impacts in North Carolina will include increased traffic resulting in increased congestion, reduction in on-time performance and increased safety hazards at grade crossings. The merger also may impact shortline rates, equipment and infrastructure needs.

### **Rail Line Revitalization**

More than 700 miles of track have been abandoned in North Carolina since 1971. The Rail Division is concerned about potential rail abandonment and monitors the status of light density lines that may be subject to abandonment. The Rail Division reviews each abandonment case to determine its impact on communities and shippers. The Rail Division works actively with local communities to develop alternatives to abandonments and where appropriate provide financial assistance. Alternatives to abandonment include establishing a shortline railroad. When preservation of service is not viable, the Rail Division advocates railbanking railroad corridors for future use. Railbanking is the purchase of an inactive rail corridor for future rail use. The Rail Division's comprehensive corridor preservation efforts, which include railbanking, are described in the final section of this report.

## **Intermodal Traffic**

Another nationwide trend that will have an impact on the future of the railroad system in North Carolina is increasing emphasis on intermodalism by freight railroads. Intermodal facilities allow for the interchange of trucks, trains, and ships for the transfer of goods in a seamless system of goods transport. This concept can take trucks off the road and have a positive impact on highway congestion and pollution. Both CSXT and NS both predict that one of the biggest benefits of the acquisition of Conrail will be increased intermodal traffic on the entire East Coast. Intermodal facilities will likely be particularly important in the future for North Carolina because of the state's ports and numerous manufacturing facilities. An increase in intermodal activities will result in heavier train cars, longer trainsets and more trains.

## **Freight Assistance**

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As previously mentioned, the NCDOT has an interest in revitalizing light-density rail lines and providing opportunities for economic development. The Rail Division utilizes a variety of initiatives to support these efforts.

### **Light Density Lines**

North Carolina's rail program continues to focus on the problems associated with light density rail lines. Light density rail lines typically have comparatively light traffic usually less than three million gross ton-miles of freight per mile per year. These lines are often located in rural areas that have struggled to attract economic development. With strategic investments the state can help to preserve and improve rail service to rural communities. Since 1985, 14 new shortlines have been established in North Carolina.

The Local Rail Freight Assistance (LRFA) Program of 1976 established a program of federal grants to states to help fund local rail freight assistance. Eligible projects included acquisition of rail lines, track rehabilitation and rail facility construction and are limited to those that carry annually less than three million gross ton-miles of freight per mile. States submitted applications identifying the benefit-cost of the project and an updated state rail plan. Federal funding under the LRFA Program was limited to 70% for rehabilitation financing and 50% for acquisition funding. Since 1984, the State of North Carolina has received around \$4 million in funding under this program and has preserved railroad service on 274 miles of track. This program has not been funded by Congress since FY 1996.

The TEA-21 program authorizes the Light Density Rail Line Pilot Project designed to provide federal funds to capital improvement and rehabilitation projects on light density lines. Grants made on privately owned rail lines are required to include contributions from the owner of the structure, based on the benefit to the railroad. TEA-21 requires that the United States Secretary of Transportation conduct a study of pilot projects to determine the public interest benefits associated with light density railroad networks and the contribution of these networks to multi-modal transportation. A report on these findings is due to Congress by March 31, 2003. Congress must appropriate funds before the program can be implemented.

To determine priorities for funding from programs such as those described above, the Rail Division ranks potential shortline projects. The principal factor considered in the ranking is the project's benefit-cost (B/C) ratio. The methodology used for the benefit-cost analyses is in accordance with guidelines published by the Federal Railroad Administration. Any project considered for funding must have a B/C ratio greater than 1.0. Other factors considered in the ranking are related to the project's impact on economic development and the condition of the line. These shortline analyses will be presented in the *Rail Plan*.

### **Rail Industrial Access**

Because rail access is vital to many prospective industries, the NCDOT began the Rail Industrial Access Program in July 1993 to help ensure that companies have the track needed to transport their freight and materials. The program uses state funds to pay a portion of the costs to construct or refurbish spur tracks required by a new or expanded industry to encourage economic development. Funding for the projects is contingent upon private and local sources providing matching funds. Local governments, community development agencies, railroad companies and industries are eligible for funds to improve rail access. Approval of requests is based on economic benefit of the project including number of potential new jobs that will be created, amount of capital investment, rail use and the area's economic conditions. Since its inception, the program has helped to bring about 3,594 new jobs and \$562 million in capital investments to the state. Funding for rail industrial access projects are identified in the FY 1999 to FY 2006 rail STIP project list.

### **Railroad Safety**

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The Rail Division employs several programs and initiatives to support the branch's commitment to safe rail operations for passengers, railroad employees and the public. The Rail Division has plans to expand and enhance these programs.

#### **Safety Inspection**

Railroad safety inspection and enforcement is handled through the joint authority of the NCDOT and the Federal Railroad Administration (FRA). The safety disciplines available to the states for enforcement are Track Safety, Motive Power and Equipment Safety, Operating Practices Safety, Signal and Train Control Safety and the Hazardous Materials Safety Regulations. The NCDOT employs two track inspectors, one of whom serves as the State Railroad Safety Inspection Program manager. The Rail Division also employs one motive power and equipment inspector and one signal and train control inspector. The state plans to expand this program to address Operating Practices and Hazardous Materials. Once the plans for commuter rail service in North Carolina (currently being developed or considered for various areas) are implemented, the state portion of the safety inspection program will need to address these services through a commuter rail safety program. Funding for the safety inspection program is identified in the FY 1999 to FY 2006 rail STIP project list.

In March 1996, Congress authorized FRA to formally establish the Railroad Safety Advisory Committee (RSAC) to provide the agency with advice and recommendations from the industry on a range of regulatory issues. The NCDOT has several opportunities for input into the process. The national representative for the American Association of State Highway Transportation Officials presently serving on the RSAC, is the Assistant Director

for Engineering and Safety for the Department's Rail Division. In addition, the State Railroad Safety Inspection Program manager and the motive power and equipment inspector are active with various subcommittees and working groups associated with the RSAC.

### **Crossing Safety**

The Rail Division has several initiatives to improve safety at crossings and reduce the number of at-grade crossings. In North Carolina there are 5,000 public crossings over 3,000 route miles. There are an additional 5,000 private crossings in the state.

The Crossing Safety Program investigates crossings and plans for signal improvements through a systematic approach in the selection of locations to be improved with the most needy crossings to be improved first. Where appropriate closures are recommended and pursued. When the crossing in question 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 closure with improvements at nearby crossings to ensure its implementation.

Through safety guidelines adopted by a BOT policy, the NCDOT may recommend a grade separation for new road projects that cross the federally designated Piedmont High Speed Corridor (PHSC) between Raleigh and Charlotte. This corridor is discussed in detail in a subsequent section on rail passenger planning. The decision to recommend a grade separation depends on a variety of factors including topography, train and vehicular traffic volumes and a cost/benefit analysis.

Through the use of Traffic Separation Studies, the Rail Division invites municipalities and railroads to work with the NCDOT in evaluating and implementing study results from an engineering consultant on potential crossing consolidations, eliminations and improvements for public grade crossings within a municipality.

The Sealed Corridor Project is an initiative of the Rail Division to use innovative crossing safety devices to effectively seal the PHSC. Elements of this project include application of new technologies such as four quadrant gates, long gate arms and articulated gates, and median barriers; improved highway signage and marking; crossing equipment monitoring systems; and video monitoring and violation enforcement systems. The Rail Division also is studying innovative, high visibility active warning devices and low-cost, increased visibility passive crossing warning devices and signage. These elements may be useful in treating either public crossings on light density rail lines or across low volume highways, as well as private crossings.

Funding for the Rail Division's crossing safety initiatives are identified in the FY 1999 to FY 2006 rail STIP project list.

### **Operation Lifesaver**

The NCDOT also works with the North Carolina branch of the national Operation Lifesaver program to educate the public on rail safety. Operation Lifesaver is a private non-profit organization that provides information and education to the public to help prevent and reduce crashes, injuries and fatalities by improving driver performance at grade level crossings. The NCDOT participates through display and distribution of Operation Lifesaver

materials and joint development of some materials. A portion of Operation Lifesaver's funding is provided through the Governor's Highway Safety Program.

## Passenger Operations

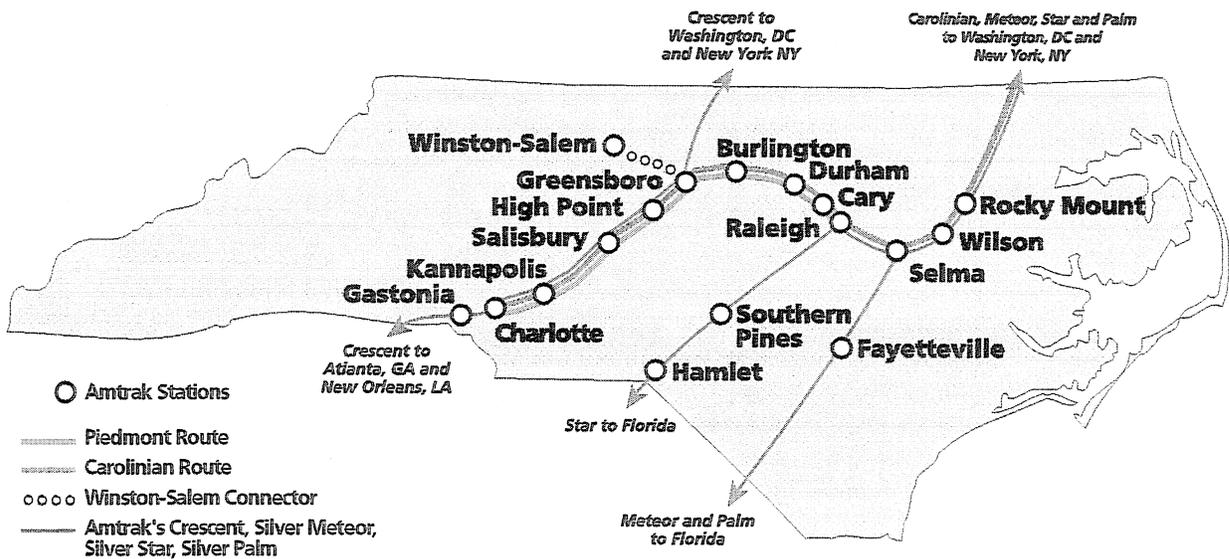
Six passenger trains provide service to North Carolina. These services include two state-sponsored Amtrak-operated passenger trains, the *Piedmont* and the *Carolinian* and four Amtrak-operated national system passenger trains that provide service through the state. Existing rail passenger services are illustrated graphically in Figure 2. The NCDOT supports these existing services and the planned rail passenger initiatives discussed in the subsequent section through marketing, track maintenance, equipment refurbishment, and station rehabilitation and construction efforts.

### Existing Passenger Service

The State of North Carolina sponsors two Amtrak-operated passenger trains, the *Piedmont* and *Carolinian*. The *Piedmont* makes a daily round trip between Raleigh and Charlotte. The locomotives are painted to resemble the state flag and the passenger cars are each named after a different state symbol. The state owns the equipment for the *Piedmont* and contracts with Amtrak for maintenance and operations of the train. The *Carolinian* makes one daily trip each way between Charlotte and New York City. The *Carolinian* uses Amtrak equipment and is Amtrak-maintained. The NCDOT reimburses Amtrak for the in-state prorated portion of Amtrak administrative, operating, station and other costs in excess of passenger and miscellaneous revenues generated by the *Carolinian*. Funding for these two passenger trains is identified in the FY 1999 to FY 2006 rail STIP project list.

Other Amtrak intercity passenger trains providing service to North Carolina are the *Crescent*, *Silver Star*, *Silver Meteor* and *Silver Palm*. The *Crescent* provides service from New York City, Philadelphia, Washington, D.C. through Greensboro, Charlotte and on to Atlanta and New Orleans. The *Silver Star* takes passengers from New York City, Philadelphia,

Figure 2: Passenger Service in North Carolina



Washington, D.C., through Rocky Mount, Raleigh and on to Columbia, Savannah, Jacksonville, Orlando, Tampa and Miami. The *Silver Meteor* provides service from the same northeast corridor, through Rocky Mount, Fayetteville and on to Charleston, Savannah, Orlando and on to Miami. The *Silver Palm* provides service from New York to Miami with stops in North Carolina at Rocky Mount, Wilson and Fayetteville.

### **Marketing**

The Rail Division markets and promotes passenger services to increase awareness and interest in rail passenger services and to encourage rail safety. Rail passenger marketing efforts include designing and producing brochures, schedules, and other materials to promote rail services in North Carolina, particularly for the *Piedmont* and *Carolinian* trains. Many of these materials can be accessed through the Division's web-site, [www.bytrain.org](http://www.bytrain.org). Focused campaigns are developed to promote special rail passenger services or target specific groups. The Rail Division also works to educate the public on rail safety. The Rail Division has worked with the Operation Lifesaver program (described in the section on rail safety) to jointly develop materials promoting rail safety. The Rail Division works with the media to promote rail passenger services and rail safety. The Rail Division also promotes NCDOT rail efforts by attending trade shows and hosting exhibits at special events, such as the State Fair. Funding for the Rail Division's marketing activities is identified in the FY 1999 to FY 2006 rail STIP project list.

### **Track**

The NCDOT Rail Division plans to improve track to increase capacity for existing and additional planned freight and passenger operations. The existing NCRR corridor between Raleigh and Greensboro is unsignalized, single-track with a few short passing sidings and currently has capacity limitations. There are more passing sidings between Greensboro and Charlotte, but this corridor is Norfolk Southern's main line through the state and also is experiencing capacity problems. Improvements to reduce congestion along both of these corridors are planned by the Rail Division as shown in Table 1 in the subsequent passenger planning initiatives section. Funding for track activities is identified in the FY 1999 to FY 2006 rail STIP project list.

### **Equipment**

The state currently operates two passenger diesel locomotives, five 66-seat coaches, two food service cars, and a full-length dome lounge car. The Rail Division also has a caboose used for exhibit purposes. The Rail Division has purchased and plans to refurbish additional equipment to support the planned passenger service expansions discussed in the subsequent section. The state has ordered two new F-59 locomotives that will be introduced into service in early 1999. The exhibit caboose has been rebuilt and will be used as a mobile classroom for rail education. Funding for track and equipment activities is identified in the FY 1999 to FY 2006 rail STIP project list.

### **Stations**

Almost all of the rail stations in North Carolina are inadequate to serve the growing passenger needs stemming from existing and planned rail passenger service in the state. State and local officials need to work cooperatively to improve stations across the state to

meet these passenger service needs. The state has taken an active role in helping local communities implement station rehabilitations and construct new stations served by modern Amtrak service.

The ISTEA program for the first time authorized Federal funding for the rehabilitation of rail stations through the Transportation Enhancements Activities Program. The NCDOT requires that proposed improvements be directly related to a transportation function that can be served by that facility to be eligible for the ISTEA enhancement funds. The NCDOT prioritizes station rehabilitation projects, giving priority to those stations with existing or scheduled Amtrak service over those stations served by excursion trains. There are generally three tiers of rehabilitation improvements which can be considered for each station project:

- rehabilitating the building itself,
- improving the property surrounding the structure to ensure its effective operation as a transportation facility and
- acquiring additional right of way for parking and/or traffic circulation.

Funding for these station rehabilitation projects primarily come from the Enhancement funds set aside by the STP, which requires eligible costs be split 80 percent Federal and 20 percent from state and local sources. The NCDOT requires that state and local sources split this funding requirement equally with an allocation of 10 percent apiece. Rehabilitation items not eligible for Enhancement funding may come from other Federal sources, from other state and local programs or from private contributions. The TEA-21 federal funding program approved by Congress continues the ISTEA Enhancement Program. The rehabilitation of the Wilson station was completed in June 1998 with Enhancement funding.

The NCDOT also has new station construction planned to support the passenger service improvements discussed in the subsequent section. Station rehabilitation and new station construction projects are included in the FY 1999 to FY 2006 rail STIP project list.

## **Passenger Rail Planning**

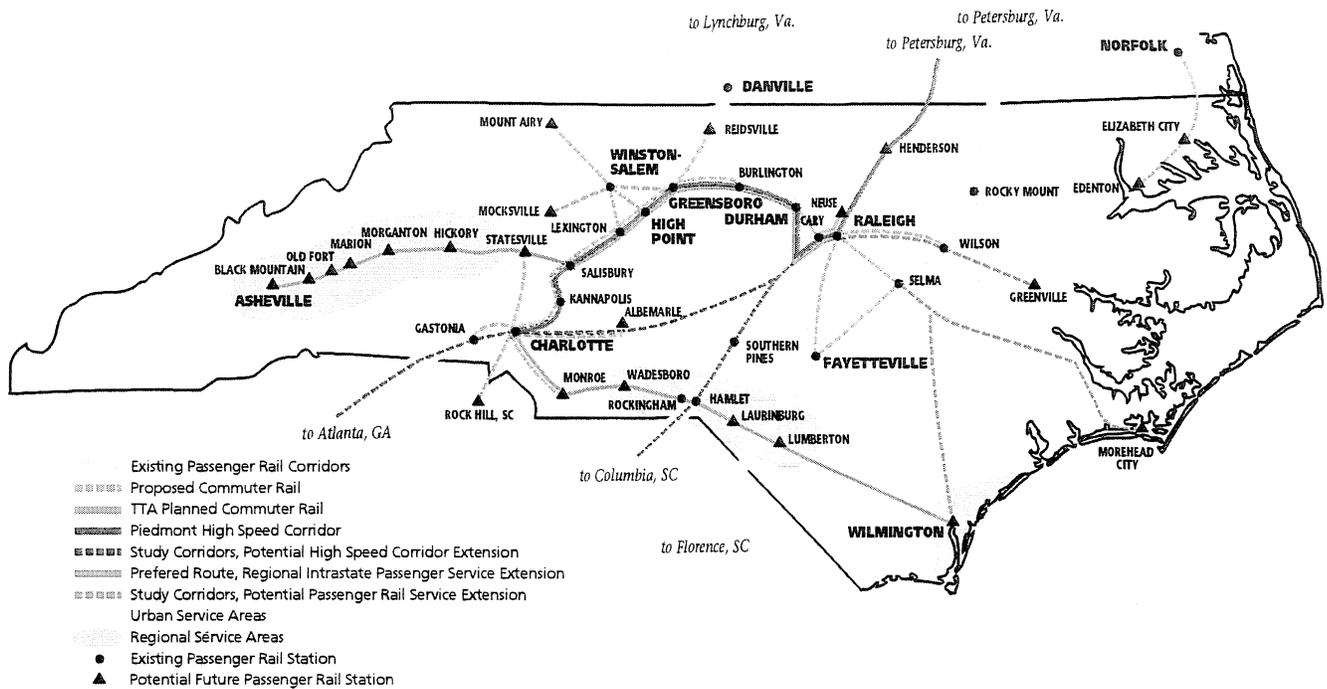
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The Rail Division is investigating a variety of passenger initiatives to improve and extend the existing passenger rail network. The NCDOT is taking steps to incrementally increase speed on the corridor from Raleigh to Charlotte and eventually extend high-speed service from Raleigh to Washington, D.C. to connect to the Northeast Corridor. Additional high-speed service extensions to other destinations in the Southeast also are being considered. The 1998 Session of the General Assembly authorized the NCDOT to plan and implement new passenger service to western North Carolina. The NCDOT also is studying other potential service extensions throughout the state and evaluating the potential for commuter services for major metropolitan areas. These planned and potential passenger services are summarized graphically in Figure 3.

### **High-Speed Service Studies**

The *Southeast High-Speed Rail Market and Demand Study Final Report* of August 1997 examined the market demand for intercity and high-speed rail service in the Southeast, including Virginia, North Carolina, South Carolina, Georgia and Florida. Ridership and revenue forecasted in this study indicate that travelers in the Southeast would use improved

Figure 3: North Carolina Rail Passenger Planning Map



intercity and high-speed rail service in numbers that compare well with ridership on Amtrak's Northeast Corridor. This report supported the concept of high-speed rail service from Washington to Charlotte, referred to as the Piedmont High Speed Corridor (PHSC).

The USDOT and FRA *High-Speed Ground Transportation for America* report of September 1997 discussed the high-speed service from Washington to Charlotte as an extension of the Northeast Corridor. This report indicated that the potential for ridership and revenue along the PHSC would be greater than any other illustrative high-speed route in the United States. A detailed evaluation of the PHSC was summarized in the *Piedmont High-Speed Corridor Rail Study Status Report* of September 1997. The PHSC is a 477-mile federally designated high-speed rail corridor running from Washington, D.C. through Richmond, VA, Raleigh, Greensboro, and on to Charlotte, N.C. This corridor is one of eight national high-speed rail corridors currently designated for improvements to high-speed status under the ISTEA. The PHSC Rail Study found the PHSC to be a viable high-speed rail corridor with many potential transportation and economic benefits for North Carolina. The report recommended that NCDOT work with Virginia and complete the full analysis of the corridor from Charlotte to Washington, begin preliminary engineering and an environmental assessment, analyze additional freight and passenger issues, acquire right-of-way and endangered corridors, make incremental improvements to reduce time and increase frequencies, pursue public-private partnerships to assist with implementation and coordinate with Amtrak and other parties on service improvements in the Southeast.

### Transit 2001

The Transit 2001 (T2001) Commission was appointed by Governor James B. Hunt Jr. in September 1995 to provide recommendations for improving public transportation in the

State for the 21st century. The complete work of the commission is contained in the *Transit 2001* technical report. Report recommendations for rail passenger service planning efforts include:

- Introduce two-hour rail passenger service between Charlotte and Raleigh and work toward subsequent connection to the Northeast Corridor at Washington, D.C.
- Continue to seek federal funding for high-speed rail passenger service in the entire Southeast Corridor. North Carolina serves as the lead state to coordinate development of 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.
- Prepare an eastern North Carolina rail passenger study.
- Provide a source of funding for preserving endangered rail corridors that can be accessed and used relatively quickly when a railroad company decides to dispose of a corridor. Corridors should be preserved for future freight, commuter and high-speed rail uses.

### **Piedmont High-Speed Corridor Implementation**

Using directions from the high-speed rail and T2001 studies discussed above, the NCDOT has developed schedules and costs corresponding to incremental improvements along the PHSC. Table 1 illustrates corridor implementation steps and corresponding service improvement goals, costs, funding sources and planned completion dates. The first set of improvements will take place within the existing right of way and includes capacity improvements and signalization between Greensboro and Raleigh, curve straightening and crossing improvements. The NCDOT also will proceed with corridor right of way acquisition along the S-line in the near term to support the high-speed rail service extension north to Virginia. The second significant set of improvements will require a detailed environmental assessment and includes engineering design, realignment of the corridor outside of the existing right of way and rebuilding of the S-line north from Norlina to Petersburg, Virginia. Anticipated funding for high-speed corridor planning and implementation activities is presented in Table 1 and identified in the FY 1999 to FY 2006 rail STIP project list.

### **Western North Carolina Service**

The *Western North Carolina Rail Passenger Demand Study* evaluated five alternatives for extending rail passenger service to Asheville in a January 1997 report. Based on an evaluation of each alternative's projected ridership, revenue production and costs, the study identified service between Raleigh and Asheville via Salisbury as the preferred alternative for implementation. This service extension is shown on the passenger rail planning map shown in Figure 3. Each day, one train would travel from Asheville to Raleigh and another train from Raleigh to Asheville. The Rail Division plans to initiate service within two years of the time when freight capacity improvements have been agreed to with the host railroad, Norfolk Southern. Track and station improvement projects, as well as anticipated costs for annual operations for the western North Carolina service, are included in the FY 1999 to FY 2006 rail STIP project list.

**TABLE 1 - PIEDMONT HIGH SPEED CORRIDOR  
Implementation Schedule and Construction Costs  
Charlotte (CLT) - Greensboro (GRO) - Raleigh (RGH) - Richmond (RVR)**

Travel Time, Charlotte - Raleigh (hr:min)	Travel Time, Raleigh - Richmond (hr:min)	Measures	Costs <sup>1</sup>	Funding Sources	Comments	Completion Date
3:45	3:35				Current Schedule	1998
3:20	3:35	Signalize Greensboro to Raleigh Straighten some curves within right of way Improve crossings, Charlotte to Raleigh Begin engineering design for additional congestion improvements, Charlotte to Raleigh Acquire right of way, Durham-Apex-Raleigh-State Line	\$ 16 \$ 10 \$ 11 \$ 8 \$ 50	Rail IMPACT <sup>2</sup> Rail IMPACT <sup>2</sup> Sealed Corridor <sup>2</sup> T 2001 <sup>3</sup>	All actions dependent upon completion of NCRR negotiations with NS	1999
2:50	3:35	Add new equipment Complete congestion improvements, Charlotte to Raleigh Begin full engineering design, Charlotte to Richmond Begin right of way acquisition, Charlotte to Raleigh	\$ 40 \$100 \$ 96 <sup>4</sup> \$ 7 <sup>4</sup>	T 2001 and TRA T 2001 and TRA Federal <sup>5</sup> , NC, VA Federal, NC	(Add mid-day frequency, Raleigh to Charlotte, including service to Asheville) Joint venture with Virginia (Begin construction on new stations in Raleigh, Durham, Burlington, Kannapolis, Charlotte)	2001-2002
2:30	2:30	Improve track, crossings & realign right of way, Greensboro to Raleigh Rebuild S-line, Norlina, NC to Petersburg, VA Improve track, crossings, & realign right of way, Raleigh to Norlina	\$218 <sup>4</sup> \$118 \$ 73	Federal, NC, DOH <sup>6</sup> Federal, NC, VA Federal, NC, DOH, TTA <sup>7</sup> ;	Sections 1-32 Joint venture with Virginia Study shared funding arrangement with DOH, TTA Wake Forest to Raleigh (Begin running trains on S-line)	2003
2:00	1:45	Improve track, crossings & realign right of way, Greensboro to Charlotte Complete improvements, Petersburg to Richmond (VA)	\$135 <sup>4</sup> \$ 7	Federal, NC, DOH, TTA Federal, VA	Sections 33-64 Study shared funding arrangement with TTA; Wake Forest to Raleigh	2005

<sup>1</sup> All costs in millions of 1996 dollars.

<sup>2</sup> Funding already secured.

<sup>3</sup> Improvements would be financed in part through additional funding for the NCDOT Rail Division as recommended by the Transit 2001 Commission.

<sup>4</sup> Does not include the cost of bypasses.

<sup>5</sup> The State of North Carolina has requested Federal funding for the construction of the PHSC from Charlotte, NC to Richmond, VA.

<sup>6</sup> DOH = North Carolina Division of Highways. Current Highway funding is available for crossing improvements.

<sup>7</sup> TTA = Triangle Transit Authority. TTA proposes using part of the right of way between Raleigh and Wake Forest for commuter rail. Crossing improvements should be funded by all beneficiaries, including commuter rail and the NC Division of Highways.

### **Additional Passenger Extensions**

The NCDOT expanded the T2001 recommendation to study eastern North Carolina rail passenger extensions and also is studying other identified intrastate rail passenger extensions in addition to the western North Carolina service extension. These studies will evaluate a planned extension from Charlotte to Wilmington and will include, but not be limited to, evaluating potential extensions from Raleigh to Goldsboro to Morehead City, Raleigh to Goldsboro to Wilmington, Raleigh to Wilson to Greenville, and Raleigh to Roanoke Rapids to Hampton Roads, VA. These studies will integrate the service extensions into the state's existing intrastate rail passenger network to the extent feasible. Funding for these passenger extension studies is included in the rail planning activities identified in the FY 1999 to FY 2006 rail STIP project list.

### **Commuter Rail**

The passenger rail planning map presented in Figure 3 identifies potential commuter corridors in specific urban areas. Provided adequate funding and staff resources, the state will work on commuter rail corridors with communities that have a need for such services in developing plans for structuring the services and identifying the respective roles to be taken by the NCDOT and the municipalities in such areas. The Triangle Transit Authority is developing plans to provide commuter rail services between Durham, Cary and Raleigh by 2004. The Triad Transportation Authority recently was formed to investigate transportation options in the Piedmont Triad. Charlotte also is evaluating transit options for the city's metropolitan area. Funding for NCDOT commuter rail studies is identified in the FY 1999 to FY 2006 rail STIP project list.

## **North Carolina Railroad Corridors Program**

Since the 1920s, many miles of valuable rail corridors have been lost in North Carolina. This loss could have a detrimental impact on both economic development and the state's ability to meet future transportation and economic development needs through the passenger and freight planning initiatives outlined in the previous sections. With scarce public finances and rising costs of highway construction and maintenance, preserving and revitalizing existing railroad infrastructure has become a more attractive and cost-effective option, especially since the current freight rail system serves every major city and most counties in the state.

The Rail Corridor Preservation Act, passed by the General Assembly in 1988, gave the NCDOT the power to purchase railroads and preserve rail corridors for future rail use and specifically defined 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. Examples of potential interim uses on preserved railroad corridors include community bicycle and pedestrian trails.

The STP Enhancement funds provided in the past through ISTEA and continued under TEA-21 can be used to preserve railroad corridors and convert them to a pedestrian or bicycle interim use. Enhancement funding recently was used to acquire a 6.9-mile rail right of way from Norfolk Southern in Durham and Chatham Counties. This right of way is the

middle segment of a 26-mile rail right of way, known as the American Tobacco Trail extending through Chatham, Durham and Wake Counties. The City of Durham has leased this entire right of way for interim use as a bicycle and pedestrian trail, with a small section at the southern end left as natural surface for use as an equestrian trail. Enhancement funding also was used to acquire 3,700 feet of rail right of way in Lincolnton from Norfolk Southern. The rail corridor was developed by the city as a paved recreational greenway for pedestrians and bicyclists and runs through the city's central business district.

The NCDOT currently owns 96 miles of rail corridors preserved for future rail use. These state-owned corridors are illustrated on the rail network map, Figure 1. The Rail Division currently has planned the acquisition of an additional 150 miles of key rail corridors. These planned acquisitions include rail right of way along the previously discussed S-line from Durham through Apex, Raleigh, Ridgeway and Norlina on to the Virginia state line. Funding for rail corridor acquisitions are identified in the FY 1999 to FY 2006 rail STIP project list in Appendix A. As discussed previously, the NCRR in which the state has 100 percent stock ownership, owns 317 miles of rail corridor in North Carolina, as illustrated on Figure 1.

The Rail Division also provides technical assistance to local governments and economic development groups to preserve freight rail service to customers along light-density branch lines. State and federal funds are used to assist short-line railroads for improvements to track and bridges to preserve the line as an active railroad. The growing interest in revitalizing North Carolina's railroad industry is evident from the growth in small railroads and the continuing public investment in railroad freight and passenger service.

